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PHILOSOPHICAL PERSPECTIVES ON EMBODIED COGNITION AND INTERACTION. SOME INTRODUCTORY REMARKS

Ion COPOERU*

ABSTRACT. The paper outlines a series of introductory remarks on the dossier "Philosophical perspectives on embodied cognition and interaction." The first section identifies two major philosophical issues emerged as crucial in the investigations related to embodied cognition and challenged their conceptual limits: (1) situated action and interactions, and (2) the interface problem. A discussion of the way in which the embodied-enactivist accounts might improve our understanding of diverse forms of embodied cognitive practices can be found in the following section. It ends with a short overview of the key topics and arguments of the papers selected in the dossier.

Keywords: embodied cognition; enactivism; interaction; meaning; affectivity; higher order cognition; embodied language; thinking; embodied education; Heidegger, Martin; Richir, Marc; Gadamer, Hans-Georg; Merleau-Ponty, Maurice; Gibson, James; Varela, Francisco; Di Paolo, Ezechiel; Gallagher, Shaun.

It[1] is obvious now that the embodied cognition approach is able to address a large variety of topics: from sensorimotor capacities, drives, needs, emotions and affectivity, to language acquisition, embodied learning, semiotic bodies and conceptual understanding. Aspects of epistemology and methodology are also largely discussed in this new paradigm, while debates on the philosophical basis of embodiment already cover already a large part of the philosophical landscape. The perspectives offered by the paradigm of embodied cognition open new paths for conceptualizing and exploring the dynamics of cognitive processing. Also, they strive to push forward rigorous and well-grounded lines of research in various scientific areas of expertise. The philosophers involved in this movement share the

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[1] The papers contained in this thematic dossier have been submitted and presented at the conference "Speaking bodies. Embodied Cognition at the Crossroads of Philosophy, Linguistics, Psychology and Artificial Intelligence", which was supposed to be held in Cluj-Napoca in May 2020, but in the end the conference became an online event and took place on May 13-15, 2021. More than 100 participants from all over the world, from Peru to Philippines, presented a large variety of papers, grouped in 18 sections and panels. Please visit the conference site at http://embodiedcognition2020.devpsychology.ro/. I am grateful to my colleagues in the organizing committee for their sustained work and dedication.

In short, we aimed for an in-depth analysis of the link between cognition and body. We have been – and we still are – convinced that the conference topic is new and provocative, and that the embodied approach in cognitive sciences (See Gallagher 2011, p. 59) might be seen as a significant turn, if not a revolution, both in human and social sciences.

hope that together they will create concepts and theories susceptible to make a breakthrough in the nowadays philosophical practice while being compatible with scientific advances and rigorous analysis.

I.

Two major philosophical issues emerged as crucial in the investigations related to embodied cognition and challenged their conceptual limits:

1. situated action and interactions

From the beginning, the various strains of embodied cognition theories acknowledged to different degrees the role of interactions in cognitive processes. Natural cognitive systems of any sort do not passively receive information from the environment, but they "participate in the generation of meaning … engaging in transformational and not merely informational interactions: they enact a world." (Di Paolo et al. 2014) We may say that experiencing the world results from both the mutual interaction of agents and the world, and of agents themselves. The manner in which this is happening and the consequences for the theories of cognition and, more generally, for our worldview – these are key research questions that future research will have to address.

It was believed that embodied-enactive accounts of cognition, which consider finally as a series of skillful interactions, face a problem when accounting for 'higher' forms of cognition. In recent years some important steps have been taken in addressing this issue. According to Gallagher (2011), an "interaction theory" should be added to this kind of approach. He assumes that our attitude towards other people is not a detached observation, but the result of embodied interactions and communicative actions. In Gallagher's view, understanding others is a direct and spontaneous activity. In order to ground his view in cognitive science, he adopts a developmental model according to which adult communicative and narrative practices stem from strong embodied interactions with other people during childhood. This view was developed in an interdisciplinary account of human action, in which he showed that in order to understand human agency and the aspects of mind that are associated with it, we need to take into account the concept of context.

The complex integration of primary and secondary intersubjective capacities, situated within a pragmatic and social context, that is both supplemented with and supporting communicative processes, can be mapped onto the model of a "meshed architecture" (Gallagher & Varga 2020, pp. 1-9). In their analysis Gallagher and Varga showed that cognition plays a key role in performance and how other factors situate performance. Through a more detailed view of how functional integration (the coupling of agent and world) and task dependency (a notion that pertains to organization and coordination) work in situated cognition, the concept provides a fertile framework for taking into account the specific form of engagement of the agent in knowing how to perform an action as simultaneously motoric and epistemic (Gallagher and Aguda 2020; Copoeru and Ludusan 2020).

2. the interface problem

Traditionally, "higher cognitive levels" have been viewed as wholly different from "sensorimotor" ones. Many results in cognitive science and philosophy indicate that

this distinction is obsolete. Either we accept the idea that the sensorimotor level is in fact more sophisticated than we supposed or we entirely abandon the categories that we used so far. Nevertheless, the research on this topic seems to go rather in the direction of thematizing the types of relationships between "higher" and 'lower" levels of cognition - the "interface problem" (see Burnston 2017). Actions seems to require sophisticated semantic and causal interactions between cognitive and sensorimotor levels. Recent trends in research seem to take into account different kinds of relations between lexical and sensorimotor representations and to explore them in a more nuanced way. Moreover, a developmental pathway has to be defined as the unfolding of a chain of events through which the new structures of embodied interaction are forming themselves.

II.

Based on Merleau-Ponty's idea of a meaning that is inseparable from its realization through the embodied agency, the embodied-enactivist accounts might improve our understanding of the diverse forms of embodied cognitive practices. They do not assume a foundational role by considering these practices as emerging from one type of cognition or another, but rather aim at describing practices accurately and identifying the occurrences where the meaning constitution of some sequences structurally requires an embodied-enactivist concept of action and interaction.

As some authors recently highlighted (e.g. Zahavi and Martiny, 2019) enactive concepts are rarely used in investigations of complex clinical phenomena, including the evolving sense-making of people living with various health conditions and of the ways in which they engage in managing their health (Stilwell and Harman 2021). There is a strong need to investigate the mechanisms and the contexts that enable successful patient-centered care.

The embodied-enactive approaches consider intellectual and bodily activities as being on the same level and strongly interdependent (see Varela, F. J., Thompson, E., & Rosch, E. (1991)). Therefore, the body is structurally involved in learning, which is seen as a form of engagement. The embodied-enactivist understanding of embodied cognition takes into account the learning environment (see Gallagher & Lindgren 2015), which need to be investigated as specific ways of engagement, in which the situatedness of actions and interactions and the interplay of bodily and intellectual processes significantly affect skilled performance.

III.

This issue contains a selection of texts which approach, in accordance with the journal's profile, a series of philosophical topics. They are ordered alphabetically, but the reader can find below a short overview of their key topics and arguments.

1. historical explorations and re-interpretations

Several papers are dedicated to the exploration of the work of significant philosophers, which come into discussion when we try to build a new conceptual framework for embodied cognition and interaction. Ekweariri (2021) chooses to compare Heidegger's "dense ontology" to Richir's account of affectivity, which favours the indeterminate

background feelings. But Heidegger is "targeted" from another direction as well. Declerck (2021) compares his concept of equipment (*Zeug*) to James Gibson's theory of affordance perception. In contrast to mainstream interpretations, he shows that equipment and affordance have in fact little in common. His conclusion is that we need a more comprehensive account of perception in order to adequately describe the possibilities offered by the environment.

Moving from Heidegger to Gadamer and back, Noveanu (2021) underlines that both philosophers agree on the fact that human sciences involve more than the epistemic subject and that the context i.e. the phenomenological concept of 'world' becomes part of the understanding process. Nevertheless, Gadamer insisted on the idea of a practical knowledge (*Wissen*), which surpasses the separations between theory and praxis, while Heidegger pushed the idea of (active) thinking to its limit, going beyond subjectivity. Thinking (*wesentliches Denken*) is for him *Vernehmen* - receptive thinking.

In her paper, Kiss (2021) attempts to connect the phenomenological approach of intersubjectivity to the psychological approach to embodiment. For this, she relies on Maurice Merleau-Ponty's work in an attempt to dissolve the classical mind-body dualism. She enlarges the conceptual discussion by taking into account the therapeutic process, as it appears in Ben Rumble's psychological approach and Sándor Ferenczi's psychoanalytic theory.

2. co-creation of meaning

How does the body-mind relationship function in the act of creation? Patricia Apostol shows that, while the construction of meaning starts from the subject, in the sense that it is the subject who by his embodied cognitive activity produces meaning, the construction of a concept or a work of art solicits a "super-personal force that engenders the subject himself: a heccéité, in the sense of Deleuze." (Apostol 2021, p. 15). She underlines that, taking into account the act of creation, the embodied cognition uncovers a level of de-subjectivation and thus mobilises the power of passivity.

Anne Gelhardt's paper focuses on the reciprocal intercorporeal attunement and co-creation of meaning *in a specific environment*: the interaction of d/Deaf persons and animals. The enactive approach opened new perspectives on the mechanisms of interaction as well as new approaches to respective research options. She is championing a qualitative approach combined with a quantitative research approach in a mixed-methods design. It is essential – she points out - to leave the anthropocentric perspective behind in order to capture the animal's perspective and the 'In-Between`. (Gelhatdt 2021, p. 97)

Bringing forward characteristics such as the autopoietic feedback loop, the spectator - performer exchange, and oscillation of the dichotomous subject-object pair, Ianniello (2021) proposes performing arts as a model for the investigation of the nature of our perception, seen as essentially relational, participative, and transformative. As Sara Incao and Carlo Mazzola (Incao and Mazzola, 2021) noticed, new technologies are progressively involved in art creation and exhibition, questioning the body and the human body's capabilities and motor potential. The Virtual Reality aesthetic experience is then susceptible to produce a new bodily configuration: hybrid and split into the virtual realm.

3. embodied affectivity

Two contributions to this dossier describe the transformations of the concept of affectivity in the context of the embodied cognition paradigm. In an investigation of the dialogical form of philosophical practice, Cosmescu (2021) brigs forward the *inter-affection* as a specific form of interaction. Taking another path, Dominic Nnaemeka Ekweariri (already mentioned above) points out that Richir's account of affectivity, "where indeterminate background feelings (affections) could give rise to a determinate and occurent emotion (affects)." (Ekwaeriri 2021, p. 55). In both papers we have not only a pladoyer for a richer account of affectivity, but also for a greater role of embodied affectivity in the description of human phenomena.

4. "higher order cognition": embodied language, thinking, and education

Outlining Merleau-Ponty's interpretation of higher-order cognition as a fundamentally embodied process that is enacted by a motor subject situated in a natural and cultural environment, Jan Halák showed that the body is involved in cognition as an operator of the phenomenal structuration of the environment even at the level of linguistic, rational, and abstract experience. He convincingly argues that Merleau-Ponty's dynamic structural interpretation of cognition offers us new insights on the relationship between "lower" and "higher" types of cognition. Merleau-Ponty was able, in his view, to pinpoint the articulatory power of language as a "finer differentiation of the articulatory power that we find in perceptual experience in the form of motor intentionality." (Halák 2021, p. 118)

Prakash Mondal's paper discussed the role of specific natural languages in structuring and shaping cognition in the context of language-thought relations. He advocated the need to take into account the constraints of body-world interactions that operate on modes/modalities of cognition. Thus, language-specific influences on thought, thinking and cognition are regulated by the constraints of embodiment. (Mondal 2021)

Inspired by an experimentalist conception of school and life, as well as the method of inquiry developed by Dewey, Anda Fournel and Jean-Pascal Simon (Fournel and Simon 2021) invite us to conceptualize and reason philosophically in a collaborative manner with the children involved in a P4C programme. In order to find out if these practices implement an embodied cognition approach, they selected a case study and analyzed it with the means of the analysis of verbal and co-verbal interactions. The study contributes to the definition of a framework of analysis of a corpus that could be applied to other topics. It is supposed to allow a better understanding of the way in which the participants are mobilising the image-schema in abstract collective reasoning and more specifically in a philosophical conceptualization. It will be a future task to determine if they play a role in the interactional dynamic.

Enactivism in education, especially in mathematics education, is currently a well established topic. Andrei Simionescu-Panait makes from the cases described by Davis, Proulx and Simmt a showcase for the idea that the enactivist approach is a viable alternative to constructivism or to classical views of learning. It proposes the idea that "the student collaboratively produces the problem, being able to see multiple solutions, and eventually becoming a performer of

knowledge." (Simionescu-Panait 2021, p. 191). The paper discusses the students' problem of being unable to link a new philosophical text discussed in class with their intuition and offers an example of a lesson design.

Martina Properzi's paper (Properzi 2021) deals with the issue of the embodiment of computing systems from the point of view of Unconventional Computation, focusing on the paradigm known as Morphological Computation. She expresses the view that Embodied Artificial Intelligence may be seen as embracing both conventional and unconventional approaches to the artificial emulation of natural intelligence and draws attention on the concept of "organic reconfigurability". Two advanced cases of study of organic or living morphological computers are discussed and the progress made in understanding the embodiment of computing systems is evaluated.

As a conclusion, I consider that the papers reunited in this issue of Studia UBB - Philosophia might be seen as a contribution to the philosophical framework for the study of interaction and embodied cognition. The implications of this approach for other philosophical or culturally relevant topics are still to be determined.

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DE LA COGNITION INCARNÉE AU CORPS COGNITIVISÉ

Patricia APOSTOL*

ABSTRACT. From Embodied Cognition to the Cognitivised Body. The construction of meaning, before being a linguistic or neuronal phenomenon, is a sensitive phenomenon, indebted to the bodily experience of the world, the lived body. Varela's neurophenomenological approach, which is inspired by the intertwining of the subject and the world as proposed by Merleau-Ponty, can only take in charge an ordinary production of meaning. What about when one produces a concept or a work of art? In other words, how does the body-mind relationship function in the act of creation? If the construction of meaning starts from the subject, in the sense that it is the subject who by his embodied cognitive activity produces meaning, the construction of a concept or a work of art solicits a super-personal force that engenders the subject himself: a heccéité, in the sense of Deleuze. What does this engendering of the subject mean and how does it intervene in the act of creation? In other words, why must the subject be somehow "recreated" in order to create? It is only when thought is destabilized by a point of crisis that it becomes a creative device that plays out between the chaotic intensities from which it tears itself away and the composition of a consistency. The starting point of the creative thought is the stopping of the thought and its continuation on another plane: a thought that leaves the field of cognition and recognition and derails, carried away by a sensitive line of flight, produced in the body, towards the inorganic and impersonal plane of a super-personal power. With the act of creation, the embodied cognition swings towards a de-subjectivation: the cognition becomes then a "chaognition", an impersonal faculty mobilizing the power of passivity.

Keywords: cognition, embodiment, subject, meaning, creation, heccéité, de-subjectivation.

1. La cognition incarnée

Du modèle fonctionnaliste *cognitiviste* de la cognition comme *langage de la pensée* (Fodor) - programme linguistique déclenché au contact du monde, par lequel la pensée convertirait la représentation d'un monde pré-donné en une représentation symbolique qui en reconstituerait les traits -, en passant par la cognition vue comme une *société* (Marvin Minsky) formée d'agents regroupés dans des agences formant des réseaux, donnant lieu à des processus cognitifs qui s'auto-organisent, à l' approche *connexionniste*, proposant un modèle associationniste dynamique du système cognitif, un processus auto-organisateur qui ne fonctionne plus comme un langage, mais comme un réseau neuronal - neuromimétique, un réseau de neurones formel - la cognition reste un activité désincarnée, coupée du vivant.

Pour le connexionnisme, pourtant, la cognition, qui ne représente plus un monde prédonné, mais se déclenche au contact du

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monde, par l'interaction des ressources cognitives minimales de l'univers cellulaire et des informations venant du monde, dans une interconnexion mutuelle des opérations cognitives et de l'environnement, la structure des connexions est modifiée par le monde et, dès lors, les processus cognitifs se réorganisent et se redéfinissent eux-mêmes, en modifiant ainsi en permanence l'activité cognitive. Faisant intervenir donc le corps humain dans son interaction avec l'environnement et analysant l'auto-organisation du système cognitif selon les informations venant de cet environnement, le connexionnisme s'approche d'une conception de la cognition comme activité incarnée, en même temps qu'elle s'en éloigne: si pour le cognitivisme le cerveau fonctionne comme une machine, métaphoriquement, pour le connexionnisme le cerveau fonctionne comme une machine, littéralement.

C'est Francisco Varela qui, dans *L'inscription corporelle de l'esprit*, élabore un modèle de la cognition redevable à l'expérience corporelle du monde, par une critique conjointe du cognitivisme - un système essentiellement syntaxique ne peut pas rendre compte de la production du sens - et du connexionnisme - un réseau neuronal qui traite de l'information reste insuffisant pour expliquer la production du sens à partir des informations reçues par les neurones. En fait, ce qui sous-tend l'approche de Varela est une critique de la cognition vue comme une représentation mentale d'un monde prédonné. Certes, nous sommes inscrits corporellement dans un monde qui est là avant la réflexion, mais dans ce monde pré-réflexif mon corps n'est qu'un corps objectif parmi d'autres et n'est pas encore *mon* corps, le corps vécu par l'être vivant que je suis ici et maintenant. C'est justement l'être-dans-ce-monde que je suis qui peut se représenter le monde mais, comme il n'est pas une simple machine symbolique ou neuromimétique, un paquet de symboles ou de neurones, un observateur désincarné du monde, mais est immergé corporellement dans ce monde et son corps sentant entretient des rapports avec le monde senti, il fait également quelque chose de plus: il *construit du sens* qui, avant d'être un phénomène linguistique ou neuronal, est un phénomène sensible. Seul peut produire du sens l'être inscrit dans une situation particulière et dans l'histoire des ses expériences par son *corps vécu*, dont les fonctions sensori-motrices ne sont pas *assignées* à l'esprit, mais participent pleinement à l'activité cognitive, puisque la manière dont on pense le monde est tributaire du fonctionnement de nos systèmes sensoriels et moteurs: tout concept peut être non seulement décrit par une représentation symbolique mobilisant une analyse sémique, mais aussi selon ses informations sensorielles et motrices mobilisées par notre corps situé et mettant en œuvre une (re)connaissance d'ordre corporel, pré-réflexive, qui intègre donc ces données sensorielles et situationnelles dans la définition d'un concept (dans le cas de la conceptualisation d'un objet concret - une aiguille, par exemple); enfin, un concept peut être non seulement reconnu, décrit, défini, mais aussi construit, et nous verrons dans la deuxième partie de cet article que la création de concepts passe, elle aussi, et d'autant plus, par le corps.

Puisqu'on ne peut pas couper la réflexion de l'immédiateté de l'expérience, du vécu, comme si la cognition était une simple affaire syntaxique ou computationnelle, l'activité cognitive intègre le monde et l'investit de sens. Pour Varela, qui s'inspire de l'entrelacs du sujet et du monde tel qu'il

avait été proposé par Merleau-Ponty, l'esprit ne représente pas le monde, mais le construit, et ceci précisément en raison de la dimension corporelle et mondaine du sujet, situé dans cette réalité à la fois comme corps qui sent et comme corps senti: « La cognition est, dès lors, est l'avènement conjoint d'*un monde* et d'un esprit à partir de l'histoire des diverses actions qu'accomplit un être *dans le monde* »[1] (n.s.).

1.1. Pathos et cognition

Cette approche neurophénoménologique de la cognition comme expérience subjective d'un être incarné - et voué, selon nous, non seulement à reproduire *ce qui apparaît* dans le monde, mais également à produire du sens à partir des effets de *l'apparaître* du monde sur lui -, qui sollicite donc une capacité non pas tant représentationnelle que constructiviste, vaut à Varela le mérite d'avoir pris en considération la conscience, mise de côté par les sciences cognitives. Certes, il s'inspire explicitement de Merleau-Ponty, qui avait mis en oeuvre dans *Le Visible et l'invisible* un rapport oppositionnel réversible au sein du Sensible (annoncé d'ailleurs dès la *Phénoménologie de la perception*) - mon corps sent en même temps qu'il est senti - lorsqu'il appréhendait le corps comme étant en même temps le siège du point de vue sur le monde et objet de ce monde, en ce sens que cet objet qu'est mon corps se refuse à mon exploration, n'étant jamais vraiment devant moi, car inséparable d'un corps-sujet. Pourtant, Varela nous semble plus proche de la *phénoménologie de la vie* de Michel Henry. Dans *Incarnation. Une philosophie de la chair*, Henry souligne que mode intentionnel selon lequel le corps transcendantal[2] donne à sentir et constitue le corps sensible, ou son rapport intentionnel au senti, n'épuise pas sa possibilité. La possibilité originaire du corps transcendantal réside dans son *auto-affectation pathétique*. Une vision qui ne se sentirait pas elle-même voyante serait incapable de voir, dit Henry, appelant cette auto-révélation originaire de l'intentionnalité de la chair tout simplement *la vie*.

En fait, l'opposition corps-chair analysée par Henry[3] repose sur une distinction qui est au cœur même de l'objet de la phénoménologie, prise en charge par ce qu'il appelle « le renversement de la phénoménologie »[4]: celle entre le contenu du phénomène et sa phénoménalité, entre ce qui apparaît et la manière dont cela nous apparaît. Le véritable objet de la phénoménologie serait l'acte d'apparaître, le « Comment » husserlien,

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[1] Francisco J. Varela, Evan Thompson, Eleanor Rosch, *L'inscription corporelle de l'esprit. Sciences cognitives et expérience humaine*, Seuil, Paris, 1993, p. 35.

[2] Au sens où le corps qui sent se dépasse soi-même vers les corps-objets et constitue ainsi la condition de possibilité de ces derniers.

[3] V. la Deuxième partie, « Phénoménologie de la chair » (pp. 135-236), dans *Incarnation. Une philosophie de la chair*, Éditions du Seuil, Paris, 2000. Michel Henry reprend la distinction husserlienne *Leib - Körper* et réserve le terme « chair » au corps qui éprouve ce qui lui est extérieur en s'éprouvant d'abord lui-même (un corps-sujet) et le terme « corps » - au corps inertes semblables aux objets de l'univers matériel (des corps-objet).

[4] *Ibidem*, dans la partie homonyme (Première partie, pp. 35-122).

ou ce que Heidegger appelait la « vérité originaire » (le dévoilement de la vérité seconde: de « ce qui est dévoilé »), lui-même phénomène, puisqu'il doit apparaître lui-même pour pouvoir faire apparaître : rien n'apparaîtrait jamais sans l'apparaître de l'apparaître.

> Le dévoilement dévoile, découvre, « ouvre », mais ne crée pas (…). L'étant, ce qui est, se donne dans son dévoilement même comme indépendant du pouvoir qui le dévoile, comme antérieur. Le « il y a », le « il est » ne peut dire ce qui « est », ce que « il y a », et cela parce qu'il n'est jamais en mesure de le poser dans l'existence. (…) En ce cas, ce qui apparaît dans le monde, bien qu'apparaissant effectivement en lui, n'existe pas pour autant. Il y a plus : c'est parce qu'il apparaît dans le monde qu'il n'existe pas[5],

voilà comment entend Henry le renversement du principe fondamental de la phénoménologie, la préséance de l'apparaître sur l'être. Proposant l'indigence ontologique de l'apparaître (l'impossibilité de l'apparaître à poser dans l'être ce à quoi il donne d'apparaître), ce renversement de la phénoménologie assimile le mouvement interne de l'apparaître, qui s'éprouve soi-même et s'engendre soi-même, à la « Vie », opposé à l'apparaître ek-statique du monde. Le renversement de la phénoménologie revient alors à substituer à la phénoménologie du monde une phénoménologie de la Vie, et c'est précisément cette dernière qui peut servir de voie d'accès à l'incarnation de la cognition.

Cette approche du corps non plus à partir du monde, mais de la vie, ramène l'opposition corps-objet / corps-sujet à celle entre *ce qui apparaît* / *l'apparaître*, qui n'est rien de moins que l'opposition entre un corps qui nous apparaît dans le monde mais qui ne doit pas son existence à l'apparaître (il préexiste à son apparaître dans le monde), et un corps qui s'apparaît à lui-même dans le pathos de la vie et qui, au contraire, doit son existence à cette dernière:

> Lorsque la vie révèle la chair (...), elle ne se borne pas à la révéler comme si nous étions là encore en présence de deux termes, l'un qui révèle et l'autre qui est révélé. Et c'est pourquoi nous disons que le premier ne se borne pas à révéler le second, à la façon dont un monde dévoile un corps qu'il ne crée pas. *La vie révèle la chair en l'engendrant, comme ce qui prend naissance en elle, se formant et s'édifiant en elle, tirant sa substance phénoménologique pure, de la substance même de la vie. Une chair impressionnelle et affective, dont l'impressionnalité et l'affectivité ne proviennent jamais d'autre chose que de l'impressionnalité et de l'affectivité de la vie elle-même. »*[6] (sic),

à ce point qu'Henry est amené à identifier le moi à la chair: « Moi et Chair ne font qu'un. (…) ils proviennent l'un et l'autre de la Vie (…). [7]

Au premier abord, l'idée de l'engendrement du sujet par la vie peut sembler parfaitement opposable à l'idée de Varela, selon lequel c'est le sujet qui par son activité cognitive incarnée construirait un monde. Mais c'est précisément ce sujet engendré par la vie qui construit un monde: puisque le sujet s'apparaît à lui-même, qu'il s'auto-affecte, il est en même temps ce qui apparaît (un corps) et l'apparaître de son corps (une chair): son corps est inscrit dans le monde

[5] Michel Henry, *op. cit.*, p. 61.

[6] *Ibidem*, pp. 173-174.

[7] *Ibidem*, p. 178.

(dans tout ce qui est, et qui est fait aussi d'autres corps, donc de ce qui apparaît), sans lui devoir son existence, sa chair est engendrée par la Vie (par son propre apparaître) et lui doit son existence; or, envisager la cognition en tant qu'activité génératrice de sens revient bel et bien à dire que le sujet inscrit par son corps dans le monde (le sujet qui apparaît), s'éprouvant lui-même comme chair (comme apparaître) ne peut penser le monde (ce qui est) et l'investir de sens qu'à partir de son auto-affectation pathétique, de sa Vie.

Qu'en est-il lorsque ce sens construit par le sujet incarné est de l'ordre d'une oeuvre d'art, d'un concept ou d'une théorie scientifique, quand l'acte de pensée n'est plus la faculté naturelle d'une *quiddité* mais l' acte de création d'une *heccéité*?

2. Apathie et création

Pour Spinoza, la force de l'esprit réside dans la puissance du corps d'affecter et d'être affecté: « *Autant un corps est plus apte que d'autres à accomplir simultanément un plus grand nombre de choses ou à les supporter, autant son âme* (*son esprit*[8], n.n.) *est plus apte que les autres à percevoir simultanément un plus grand nombre de choses.* Et d'autant plus les actions d'un corps ne dépendent que de lui seul et d'autant moins d'autres corps concourent avec lui dans l'action, d'autant plus son âme est apte à comprendre distinctement. C'est en partant de là que nous pouvons reconnaître la supériorité d'une âme sur les autres (…)» [9] (*n.s.*).

C'est pourquoi Spinoza est amené à dire que nos idées sur la réalité n'en rendent pas compte, mais rendent compte de l'état de notre corps: « (...) les idées que nous avons des corps extérieurs indiquent plutôt la constitution de notre corps que la nature des corps extérieurs (...) »[10].

Deleuze entend cette conception spinozienne de l'individu comme une composition cartographique de rapports de forces en mouvement et en repos (longitude) et de variations de puissance ou affects dont il est capable (latitude)[11]. Pourtant, l'individualité n'est pas, pour Deleuze, le sujet, mais quelque chose qui engendre le sujet: une *heccéité*, une singularité dépersonnalisée, désubjectivée, décentrée[12]. Quelqu'un

[8] Spinoza écrit *mens* et non *anima*. Les traducteurs plus récents, dont Bernard Pautrat, par exemple, choisissent de traduire *mens* par « esprit » - à juste titre, nous semble-t-il, autant pour des raisons d'ordre philosophique que culturel (une traduction par « âme » étant un choix très discutable pour un texte du XVII[e] siècle destiné à un public français nourri de Descartes). Remplaçons, donc, « âme » par « esprit » dans toutes les citations de Spinoza qui apparaissent dans notre article, au regret de ne pas avoir disposé d'une traduction française plus récente de l'*Éthique*.

[9] Baruch Spinoza, *Éthique*, trad. par Raoul Lantzenberg, Flammarion, Paris, 1908, II, *Scholie du Théorème XIII*, p. 79, *passim*.

[10] *Ibidem*, II, Théorème XVI, corollaire II, *op. cit.*, p. 87.

[11] Gilles Deleuze, *Spinoza. Philosophie pratique*, Paris, Minuit, 1981, p. 166.

[12] Déjà dans *Différence et répetition*, Deleuze note que le système psychique Je (une *forme* d'identité, la spécification proprement psychique d'un sujet humain) - Moi (une *matière* faite d'une continuité de ressemblances, l'organisation psychique de ces ressemblances) n'appartient pas

qui rencontre une force qui le déstabilise, l'affaiblit, faisant monter en lui l'impersonnalité intensive de l'*heccéité*, tels l'artiste, le philosophe et le scientifique (selon la théorie des trois Chaoïdes de Deleuze - l'art, la philosophie et la science, les trois "filles du Chaos"), se doit au chaos pour qu'il y ait œuvre de création : « Ce qui définit la pensée, les trois grandes formes de la pensée, l'art, la science et la philosophie, c'est toujours affronter le chaos, tracer un plan, tirer un plan sur le chaos. (...) La philosophie fait surgir des événements avec ses concepts, l'art dresse des monuments avec ses sensations,

au domaine de l'individuation et que l'individuation commence une fois l'identité (le Je) et la ressemblance (le Moi) dépassées, par l'entrée dans le champ de la différence et de la dissemblance. Les facteurs individuants sont des différences portées par l'individu (par le Je et le Moi) mais qui ne sont plus pensées par rapport à l'identité (ou au Je) et à la ressemblance (ou au Moi): l'expression d'une individualité est multiplicitaire et ce qu'elle exprime est une multiplicité constituée de rapports différentiels et de singularités pré-individuelles (*Différence et répétition,* Paris, PUF, 1968, pp. 330-335).

Dans *Logique du sens*, ces « facteurs individuants » seront vus comme des « émissions de singularités », ni individuelles, ni personnelles, qui engendrent les individus et les personnes; pourtant, ces singularités ne forment ni un champ empirique (n'étant pas les différences déjà prises dans les individus), ni un champ transcendantal au sens d'un « Universel abstrait » (dans *Différence et répétition, op. cit.*, p. 332) ou d'une « profondeur indifférencié » (dans *Logique du sens*, Minuit, Paris, 1973, p.139), ni le champ de la conscience dont le principe de fonctionnement - la synthèse d'unification (et ses conditions de distribution fixes, sédentaires) - ne pourrait tenir debout que dans la forme d'un Je et le point de vue d'un Moi. Elles appartiennent à un plan *superficiel* et *inconscient*, dont le principe de fonctionnement immanent - l'auto-unification par distribution nomade - est une énergie potentielle, l'énergie de l'événement (et non une actualisation correspondant à l'effectuation de l'événement), qui dépasse la synthèse d'unification de la conscience. C'est ce principe immanent de l'auto-unification des singularités (par déplacements à partir d'une ligne de fuite qui les traverse en les emportant vers un point aléatoire) qui hantent la surface, sans l'occuper, qui préside, pour Deleuze, l'entrée dans le champ transcendantal compris comme champ de l'impersonnel et du pré-individuel (*Logique du sens*, *op. cit.*, « Quinzième série. Des singularités », pp. 139-141). Voilà, donc, un pan de l'*empirisme transcendantal* deleuzien.

Ces « facteurs individuants », ce mode d'individuation sans sujet, sont des « heccéités » - « ces individuations qui ne constituent plus des personnes ou des ''Moi''. Et la question surgit : ne sommes-nous pas de telles eccéités plutôt que des ''moi'' ? (...) Nous croyons que la notion de sujet a perdu beaucoup de son intérêt au nom des singularités pré-individuelles et des individuations non-personnelles. » (Gilles Deleuze, « Un concept philosophique », Cahiers Confrontation, n° 20, hiver 1989, pp. 89-90); « Il n'y a plus de formes, mais seulement des rapports de vitesse entre particules infimes d'une matière non formée. Il n'y a plus de sujet, mais seulement des états affectifs individuants de la force anonyme » (« Spinoza et nous », Revue de synthèse, Janv.-Sept. 1978, p. 172) », apud Anne Sauvagnargues, « Heccéité », in *Le vocabulaire de Gilles Deleuze* (sous la dir. Robert Sasso et Arnaud Villani), Les Cahiers de Noesis n° 3, Printemps 2003, p. 173); « Les heccéités sont seulement des degrés de puissance qui se composent, auxquels correspondent un pouvoir d'affecter et d'être affecté ; des affects actifs ou passifs, des intensités. » (Gilles Deleuze et Claire Parnet, *Dialogues*, Flammarion, 1996, p. 111).

la science construit des états de choses avec ses fonctions »[13].

Cet affrontement du chaos est mobilisé par l'acte de création en tant qu' acte de résistance[14] mis en œuvre devant quelque chose de « trop grand » pour le sujet:

> Les artistes sont comme les philosophes (...), ils sont souvent une petite santé fragile, mais ce n'est pas à cause de leurs maladies ni de leurs névroses, c'est parce qu'ils ont vu dans la vie quelque chose de trop grand pour quiconque, de trop grand pour eux, et qui a mis sur eux la marque discrète de la *mort*. Mais ce quelque chose est aussi la source ou le souffle qui les font *vivre* à travers les maladies du vécu (...). »[15] (n.s.); « Il [l'artiste] a vu dans la vie quelque chose de trop grand, de trop intolérable aussi, (...) faisant éclater les perceptions vécues (...) le romancier ou le peintre reviennent les yeux rouges, le souffle court.[16]

Cet écueil « trop grand » que doit nécessairement rencontrer la pensée pour devenir une pensée créatrice n'est pourtant pas ce à quoi la pensée doit résister pour devenir un acte de création: au contraire, le sujet qui pense doit absolument s'y soumettre pour devenir un sujet qui crée, mais il ne peut pas le faire sans se résister à lui-même, à la puissance édifiante du Je; pour devenir une pensée créatrice, la pensée doit absolument se soumettre à ce « trop grand » pour elle, mais elle ne peut pas le faire sans se résister à elle-même, sans se dissoudre et épouser le chaos.

Spinoza semble ici contredit: cette auto-affection « trop grande » qui conduirait à un esprit « plus grand » ne va pas de soi, puisque le sujet heurté à une surpuissance du sensible tombe, au contraire, dans un état a-cognitif. Selon Deleuze, justement, « C'est toujours à partir d'un signal, c'est-à-dire d'une intensité première, que la pensée se désigne. (...) nous sommes conduits de la limite des sens à la limite de la pensée (...) »[17].

Mais qu'arrive-t-il une fois atteinte cette limite de la pensée? On répondra à cette question par le schéma suivant, qui s'avérera être en accord avec les propos de Spinoza:

limite des sens → limite de la pensée → création (pensée créatrice)

Une fois le sujet devenu heccéité, ou le *moi* devenu *il*, et sa pensée - arrêtée, la libération d'une puissance sur-personnelle peut donner lieu à un acte de création.

Cette force intrusive du « trop grand pour moi » n'est pourtant rien d'extérieur au sujet: c'est le *dehors* deleuzien, compris ici comme une force réactive interne, c'est-à-dire une force qui n'est victorieuse que par une volonté de puissance - au sens de Nietzsche dans le recueil homonyme - négative: en ôtant le pouvoir à la force active, la force réactive ne triomphe pas en composant une force supérieure, mais en décomposant la force active (le Sujet) ; possédée par l'esprit du négatif, elle ne triomphe

[13] G. Deleuze, F. Guattari, *Qu'est-ce que la philosophie?,* Paris, Minuit, 1991, p. 174, *passim*.

[14] Dans sa conférence « Qu'est-ce que l'acte de création» prononcée le 17 mai 1987 dans le cadre des Mardis de la Fondation FEMIS, Gilles Deleuze assimile l'acte de création à un acte de résistance.

[15] G. Deleuze, F. Guattari, *Qu'est-ce que la philosophie?, op. cit.*, p. 163.

[16] *Ibidem*, pp. 161-162 et 163.

[17] Gilles Deleuze, *Différence et Répétition*, *op. cit.*, p. 313.

pas par addition, mais par soustraction, et, en même temps, elle dote la force active d'un nouveau pouvoir – un pouvoir que Deleuze qualifie d' « étrange », d'« inquiétant », d'« intéressant »[18].

Cet excès débordant que peut rencontrer le sujet dans son auto-affection pathétique, cette force réactive qui le déstabilise ne se manifeste donc pas comme un surplus affectif, mais comme une réduction, un vide affectif, et c'est précisément cet affect non-affectif, apathique d'un sujet dessaisi de son pouvoir d'action qui conduit la pensée à sa limite.

Lorsque la pensée est ainsi soumise à la rencontre violente d'un signe sensible intensif, invivable, qui la rompt, elle peut s'ouvrir à l'impossible et au silence (à l'absence d'œuvre), ou bien, par cela même, à une consistance contenant cet impossible et ce silence: à la création[19]. Le point de départ de la pensée créatrice c'est la sensibilité. « (...) sur le chemin de ce qui mène à ce qui est à penser, tout part de la sensibilité. De l'intensif à la pensée, c'est toujours par une intensité que la pensée nous advient.»[20], note Deleuze. Ce qui donne lieu à la création c'est précisément une affaire de corps, mais d'un corps vu comme désorganisation de son organicité par l'intensité qui le traverse, d'un corps d'autant plus vivant qu'il sera désorganisé d'un plus grand nombre d'intensités. C'est, évidemment, le « corps sans organes » deleuzien, un corps intensif, libéré de son organisation organique, puisque « Le corps souffre d'être ainsi organisé, de ne pas avoir une autre organisation, ou pas d'organisation du tout: (…) « Pas de bouche. Pas de langue. Pas de dents. Pas de larynx. Pas d'œsophage. Pas d'estomac. Pas de ventre. Pas d'anus. »[21]. Cette dissolution du sujet dominateur, de la force active qui perd son pouvoir pour atteindre ainsi une puissance sur-personnelle, créatrice (le « nouveau pouvoir » dont parlait Nietzsche), qui passe nécessairement par la montée de la vie organique à la vie inorganique, signale l'affinité de la pensée créatrice avec le chaos.

Le sujet séparé de son *pouvoir* par l'annihilation de ses perceptions et affections ordinaires - qui deviennent ainsi indépendantes de toute subjectivité, impersonnelles, faisant monter dans le Je la *puissance* de la troisième personne -, une fois expulsé de sa sensibilité, s'ouvre à une autre sensibilité: à ce que Deleuze appelle *affects* et *percepts*, des blocs de sensations dépourvus des opinions et significations ordinaires, des forces a-signifiantes du sensible qui *forcent à penser*, mettant à jour la pensée comme mouvement par lequel on recontacte la genèse de son engendrement. Par l'affrontement avec le chaos, l'indéterminé, la pensée devient un dispositif créateur qui se joue entre les intensités chaotiques dont elle s'arrache et la composition d'une consistance. Véronique Bergen souligne, justement, que « Ce n'est que sous l'impact d'un point d'excès raturant la concorde des facultés, implosant tout rapport intentionnel que la pensée est

[18] Gilles Deleuze, *Nietzsche et la philosophie*, PUF, Paris, 1962, p. 75.

[19] Sur ce point, nous nous permettons de renvoyer à notre article « La main passive: absence d'œuvre, résistance et désœuvrement», dans *Studia UBB Philosophia*, vol. 63, n° 1 / 2018, pp. 39-58.

[20] Gilles Deleuze, *Différence et Répétition*, *op. cit.*, p. 188.

[21] Gilles Deleuze, Félix Guattari, *L'Anti-Œdipe*, Paris, Minuit, 1972, p. 14.

à même, au sein même de la défaisance du rapport ontique entre sujet et objet (...) d' « illimiter ses pouvoirs », de « transmuer son impuissance en puissance »[22].

La traversée de la sensibilité par le dehors produit, donc, un point de crise qui fend la sensibilité en deux, qui ouvre dans la sensibilité ordinaire, soumise aux lois de la signification, de l'entendement et de la représentation, une autre sensibilité, extraordinaire (les affects et percepts deleuziens); ce point de crise qui violente ainsi la pensée c'est le point de départ de la pensée créatrice. La pensée créatrice commence à la marge de la pensée. On pourrait même dire que le point de départ de la pensée créatrice c'est l'arrêt de la pensée, une pensée qui se stoppe, qui quitte le champ de la cognition et de la recognition et déraille, emportée par une ligne de fuite produite dans le corps[23], vers le plan inorganique et impersonnel d'une puissance sur-personnelle.

3. Conclusion

La pensée créatrice peut-elle être légitimement prise en charge par le concept de *cognition incarnée*, dès lors qu'elle suppose une incarnation dans le corps sans organes et une anti-production de sens, un éclat du sens vouant le sujet à l'a-pathie? Nous pensons qu'on peut affirmer qu'avec l'acte de création, la cognition incarnée bascule non vers une désincarnation, puisque le corps y est d'autant plus sollicité qu'il est le point même d'engendrement du processus créateur, mais vers une désubjectivation: elle a lieu dans la corps, certes, un corps qui reste le lieu d'inscription de la pensée, mais qui en même temps se cognitivise, devenant une émission de pensée: il arrête le sens produit par la pensée, il y produit du chaos, pour créer du sens sensible en tant que blocs sensibles qui n'expriment plus rien (anti-sémantiques) et ne dévoilent plus rien (anti-phénoménologiques). La cognition devient alors ce qu'on pourrait appeler une « chaognition », faculté impersonnelle et par là, sur-personnelle, qui mobilise non le pouvoir de l'activité, mais la puissance de la passivité.

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[22] Véronique Bergen, « La création chez Deleuze: du sensible à l'empirisme transcendantal » pp. 77-93, dans *Gilles Deleuze, la logique du sensible. Esthétique et clinique* (sous la direction d'Adnen Jdey), De l'incidence éditeur, 2013, p. 81.

[23] Plus précisément: *sur* le corps, à sa surface qu'est la peau, ce point de contact entre l'espace intérieur et l'espace extérieur, hanté par les singularités, par l'*énergie potentielle* de l'avènement du sens, selon Deleuze (*Logique du sens*, *op. cit.*, pp. 140-142).

Corpus Gilles Deleuze

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THE DIALOGICAL FORM OF PHILOSOPHICAL PRACTICE: STRUCTURING THE DISCURSIVE FLOW IN SOCRATIC DIALOGUE

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ABSTRACT. Based on the transcript of a fragment from a philosophical practice session carried by Oscar Brenifier, I flesh out several aspects of this dialogical form of philosophical practice. First, it is a form of interaction grounded in the interlocutors' interaffection. Second, the main mechanism of carrying through the dialogic interaction is the practitioner's repeating the other's words, writing them down, and then questioning them, thus extracting them from the other's discursive flow and making them shared objects for an intersubjective gaze. Third, this form of dialogue is asymmetrical: while the other is providing the "content", the practitioner is responsible for explicating it.

Keywords: Socratic Dialogue; Philosophical Practice; Discursive Flow; Discourse Analysis; Intersubjectivity

The account presented in this paper derives mainly from my exposure to Oscar Brenifier's version of philosophical practice. Brenifier, a contemporary French philosopher active in the field of philosophical practice, is committed to a form of oral and improvisational philosophical discourse, anchored in mutual presence and response to the other's presence. The response is not only to the other's explicit words – but to the whole intricacy that is implicit in the other's bodily presence, moods, hesitation.[1]

The main "role model" that Brenifier tries to embody in this form of philosophical practice is Socrates. He explicitly uses Socratic strategies of questioning, derived from Plato's dialogues, adapted to various communicative contexts, including the format of a "private meeting", but also that of a workshop.

For this paper, I transcribed the opening fragment of a dialogue between Brenifier and a person who accepted to have a public dialogue with him during one of his one week seminars. The approach I am going to use for analysis derives from Wallace Chafe's take on discourse analysis[2], emphasizing the phenomenologically relevant aspects of the conversation slightly more than Chafe does and adding philosophical reflection to the analysis of the discursive flow. Typically,

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1 For a recent account of Brenifier's practice, see Oscar Brenifier, *La consultation philosophique,* Alcofribas, 2018, available on http://www.pratiques-philosophiques.fr/wp-content/uploads/2018/03/LA-CONSULTATION-PHILOSOPHIQUE.pdf

2 Wallace Chafe, *Discourse, Consciousness, and Time. The Flow and Displacement of Conscious Experience in Speaking and Writing*, University of Chicago Press, 1994.

Brenifier's dialogues in the genre of "philosophical consultations" are recorded for the use of participants. The one I am analyzing was also uploaded on youtube – so, if you are interested in what followed the segment I transcribed, you can watch the full hour[3]. In the transcript, I divided the segment that I am analyzing in seven "moves" or interaction sequences, each of them with a definite beginning and ending, and which can be assigned a "topic". These seven moves, as we shall see, are not isolated and discrete; what appears in one leaks into the next one, and everything that *was* said continues to shape the newer discursive interventions through mechanisms of "fixating" what was said, repeating it and "offering it back" to the interlocutor.

The context, as it can be seen from watching the first moments of the recording, is an ambiguous one. Two people are sitting on a couch. The first reaction to witnessing a scene like that would most likely be "they are having a private conversation". Only the conversation is not private: it is done in front of a camera, and it was uploaded later online. Both participants seem to be aware of that, even if this is not mentioned explicitly in the video. So, with a term I borrow from Alva Noe, it is already a "second-order practice"[4] – a practice that presupposes the familiarity with an the "everyday practice" of "having a conversation", but is not *only* a conversation. It is at least a *showing* of something that is possible in conversation by exhibiting the features that a conversation has, by making them visible / "watchable" at a later point.

1.

(a) Oscar:	Ok.
(b)	So, Janet.
(c)	So...
(d)	do you have a question right now
(e)	something like a question
(f)	or not really a question?
(g) Janet:	A=h
(h)	I have a question about smoking.
(i) Oscar:	Ok go ahead
(j)	what is your question.

I would characterize what is happening in the initial sequence as a kind of "checking for a starting point". The form of the starting point can be "a question", "something like a question", or even "not really a question", but it is still presented as something related to questions. Janet announces it as a question – but does not state it as such: she states the *topic* of a question. So, she does not take Oscar's initial invitation as an *invitation to state her question*, but as a *preliminary check whether she has thought of something that can work as a starting point for the following dialogue*. In a way, this first sequence is similar to sound check at a concert. In (1 i-j), Oscar accepts to go with the starting point that Janet announced – inviting her to explicitly state her question.

What is implicit in an interaction like this? First of all, both participants are responding to each other, and their responses are affected by what the other is saying. The speech of both conversation partners is made possible by the presence and speech

[3] Oscar Brenifier. Why Do I Keep Smoking when there Is No Reason to Smoke, https://www.youtube.com/watch?v=Y8c_6R5exx0

[4] Alva Noe, *Strange Tools: Art and Human Nature*, Macmillan, 2015.

of the other. Both participants have an implicit understanding of these roles, and of the shape of such an interaction.

Also, we can notice that, although the *form* of the interaction is established through Oscar's invitations / elicitations of Janet's speech through the asking of questions, the *topic* or *content* is brought to the conversation by Janet.

2.	
(a) Janet:	...Why do I
(b)	why keep smoking when...
(c) Oscar:	(*writes down the question, speaking at the same time*)
(d)	Why do I keep smoking
(e)	when
(f) Janet:	when
(g)	there is no reason to smoke.
(h) Oscar:	when there is
(j)	no reason to smoke.
(k)	When there is
(l)	no reason to smoke.
(m)	(*long silence, finishes writing*).
(n)	So
(o)	I'll read you again the question
(p)	Why do I keep smoking
(q)	when
(r)	there is no reason to smoke.
(s)	Is that it?
(t) Janet:	Yea.
(u) Oscar:	Ok.
(v)	We're good.
(w)	Yes.

In sequence 2, we have, first of all, the introduction of writing into conversation. According to Noe's analysis, writing is already a second-order practice itself – something that presupposes the previous engagement with the first-order practice of speaking. The most elementary function of writing is to record something that was said or thought. At the same time, writing – with the exception of stenography – is slower than speech. And Oscar takes full advantage of that, both slowing down the tempo, and recording the said. Another thing we might notice here is the repetition of the other's words: they are both written down and repeated *at the same time*, even several times. In hearing his interlocutor, writing down what she is saying and repeating it to her, Oscar is *at the same time* checking whether he got the other's words and having his interlocutor hear what she is saying in another's voice. We might also notice that this segment of the interaction closes just like the previous one, by Oscar's approval. A *movement* in the sequence of the conversation is *finished*, and Oscar is stating that it is finished, so it is possible to move on to the next one. In this sense, he is also taking upon the role of *managing the flow of the conversation*. An important aspect related to this managing of the flow is the choice of what to record. In (2 a-b), Janet hesitates between two versions of the question she is going to ask – "Why do I [keep smoking when there is no reason to smoke]" and "Why keep smoking [when there is no reason to smoke]". In effect, this is a hesitation between asking the question as a *personal* one versus an *impersonal* one: she starts it as a question related to "I" and then, without finishing it, attempts to reformulate it as an impersonal question. The break of the writing into her speech makes possible both a pause and the recording of the initial version of the question – a version she then accepts as a starting point implicitly in (2 f) and explicitly in (2 t), without ever returning to the version present in (2 a).

The two most important aspects that we can notice in this segment – added to the question-orientation that was already obvious in the first sequence – are the intrusion of writing into conversation and the

repeating of the other's words. In repeating the other's words and writing them down, they become something that does not simply belong to the other, but is *shared* by both. It is not a practice of "simple listening" to the other, like in other forms of dialogic practice, or letting the other speak and "inhabit" her discourse. Writing them down and repeating them makes them intersubjectively acknowledged as *being there*, as objects for both interlocutors to dwell with.

3.	
(a) Oscar:	But
(b)	Let me first ask you something.
(c)	Why
(d)	do you want to ask
(e)	such a question?
(f) Janet:	Because I have many reasons
(g)	to NOT smoke.
(h) Oscar:	Ok.
(i)	(*writes down, speaking at the same time*)
(j)	So I have many reasons
(k)	not to smoke.

This making of the other's words into objects is carried forward in the third segment of the interaction: Janet's question is itself called into question, and this presupposes its *becoming-object* for both her and Oscar. Questioning about the reasons for asking the initial question becomes possible through *putting aside* Janet's question which has become an object – what Oscar does in (3. b) by saying "let me first ask you something" – and asking a new question of his own. In asking what is Janet's reason for asking that question, Oscar *relates the question back to her subjectivity as that in which her question originates*. When a question is asked, it carries within itself more than it is as such; it appears in a context of relevance for a subject. It contains and brings forward, without stating it, something implicit, which is explicated in the response to Oscar's question. In being written down and repeated, Janet's words become objects again.

4.	
(a) Oscar:	Now. . .
(b)	Let me ask you something. . .
(c)	Suppose somebody
(d)	has many reasons
(e)	NOT to do something
(f)	and no reasons
(g)	to DO that thing
(h)	ok.
(i)	Anything.
(j)	Right?
(k) Janet:	Yea.
(l) Oscar:	But that person
(m)	in spite of many reasons
(n)	not to do it and no reason to do it
(o)	still DOES that thing.
(p)	Anything.
(q)	How do you qualify
(r)	that kind of person
(s)	or that kind of thinking.
(t)	How do you call it?
(u)	In general?
(v) Janet:	...Crazy.
(w) Oscar:	Crazy.
(x)	Ok.
(y)	(*writes down*)
(z)	Crazy.

In the fourth segment of the interaction, Oscar again initiates a question of his own through saying "let me ask you something". But if in the third segment he was relating Janet's question back to her subjectivity, now he is moving in the opposite direction through presenting a hypothetical "other" – "somebody" – that would be in the situation described in her previous response. It is not the same kind of "free-

floating" impersonality of no one in particular that was implicit in (2 b). In the "othering" carried through in (4 c-u), he is inviting Janet to think about herself *as if she were another*. Not only her words become objects for both, but the part of her subjectivity that was explicated in the previous segment is transformed, through discursive means, into a "somebody" she is invited to label "in general". The response is a harsh judgment: Janet would label someone else that would be in her position as "crazy". We notice that Oscar is, again, using her words in building the "picture" of that somebody, in inviting Janet to think of herself as if she were a stranger – and, again, is checking whether they are intersubjectively on the same page.

In the next segment, Oscar is again feeding an object – "the crazy one" – back into Janet's subjectivity, asking her if she would attribute the label "crazy" to herself.

5.
(a) Oscar: So
(b) somebody who does a thing
(c) with no reason to do it
(d) and many reasons against it
(e) is a crazy person.
(f) Ok?
(g) So right now
(h) are you a crazy
(i) in what you're describing?
(j) Janet: Yea.
(k) Oscar: Yes. Ok.
(l) (*writes down*).

Then, aware that the way we appear to ourselves when we think about ourselves (or others) "from the outside" – what Janet just did – and the way we *feel* ourselves from the inside are usually incommensurable (we can note that this incommensurability of perspectives is elaborated at length by Michel Henry, who takes it as central for his account of subjectivity[5]; the same distinction is operative in philosophical practice, but, unlike in Michel Henry's work, the "truth" of one's subjectivity is taken as what appears in the "cold light" of the intersubjective gaze, instead of what remains restricted to the autoaffection), Oscar asks whether she would assume the label of "crazy" *in good faith* in thinking about herself *as herself*. This is introduced through a "but", in (6.a), with an intonation break that makes obvious the fracture in what the other is expressing:

6.
(a) Oscar: But
(b) do you think you're crazy?
(c) Janet: (*smiling, with a playful tone)* No.

Aware of the contradiction and of the playful character of the interaction – and expressing bodily this awareness through her smile and playful tone – Janet denies it. Oscar expresses the *joint awareness* of this contradiction in the next segment, mirroring its embodied recognition through a gesture of his own, as if the shared complicity of discovering a contradiction is enlivening the interaction:

[5] cf. Michel Henry, *The Essence of Manifestation,* Martinus Nijhoff, 1973.

7.
(a) Oscar: Do we have
(b) a contradiction here?
(c) (*gestures with both hands in parallel*)
(d) Janet: (*playfully)* We do.
(e) Oscar: We do.

Even the analysis of a short a segment as this can enable us to formulate a few statements which pertain to the dialogical form of philosophical practice itself and which might illuminate several of its characteristics.

First, both its beginning and unfolding would be impossible without the *words of the other*, anchored both in the practitioner's invitation to speak and in his interlocutor's embodied presence. Speaking is grounded in what is implicit, in what makes it possible. The other's embodied, speaking presence carries with itself all the background of what is said: motivations, interest, lived experience. Not only is the saying irreducible to the said, as Levinas noted[6], but the said *as such* is also irreducible to itself: it still carries in itself what was implicit when it was said, and would usually remain implicit. The practitioner's response to their client is a response that takes into account what is implicit in their speaking embodied presence *together with* what is explicitly stated. In this play of interaffection, both participants in the dialogue respond not only to each other's words, but to what is implicit in them, bringing the implicit into the observable flow of the conversation. Even if the unfolding of the interaction includes a discursive element, the interaction itself is irreducible to it and it is carried forward by what lies implicit in the other's words and by the intention to inquire into it.

Second, the said itself is *public* and *intersubjective*, and in the structure of the philosophical practice session, this is emphasized through repeating back to the other her own words and writing them down. Once they are repeated and "fixated", they don't simply *belong to the subject that spoke them*, but *belong in the space opened through the interaffecting of both the interlocutors.* Repeating the other's words back to them and writing down what was said makes them into objects that can be inquired about. Through questioning / inquiry about the words that have become objects, what was implicit in them becomes part of the same cycle of mutual speaking and listening, acknowledging what was said and making it into a new object, available for both. The "forward movement" of the conversation is accomplished, paradoxically, through temporarily "putting aside" what was said and inquiring about what was implicit in its saying. In order to do that, "the said" is objectified through repeating it or writing it down and letting it be there, acknowledged by both. This putting aside does not mean discarding what was said in favor of a "deeper meaning" coming from the other's inaccessible subjectivity: the presence of what was said continues to shape the interaction, but through the transformation that the other's speech suffers through being repeated / written down, it becomes part of what is shared, and the character of its presence changes.

[6] cf. Emmanuel Levinas, *Otherwise than Being or beyond Essence*, Kluwer Academic Publishers, 1999.

Third, this movement is asymmetrical. The practitioner *invites* his interlocutor to speak, and then *develops* her speech in the direction of what was implicit in it. In the same way as the words of the other are that without which the flow of the Socratic dialogue would be impossible, the practitioner's repeating of these words and questioning them are ensuring the continuation of this flow. This process of deepening and questioning, of detaching from oneself and going back to oneself is grounded in the inter-affecting presence of the interlocutors, going through a series of "movements" (initial saying by the practitioner's interlocutor, repeating and questioning by the practitioner, response of the interlocutor, etc.) with ever renewing content. At the same time, this development is carried on *by the practitioner*, who assumes the role of managing the discursive flow through these interventions. A set of "roles" and "rules" are also operating implicitly in the shaping of the discursive flow – and these rules are anchored in the structure itself of interaction: in order for the dialogue to accomplish this "carrying forward" of the implicit, it *requires* a *focus* on the other and a set of *strategies* for changing the emphasis from "what was just said" to "what was implicit in what was just said".

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HEIDEGGER'S EQUIPMENT VS. GIBSON'S AFFORDANCES. WHY THEY DIFFER AND HOW THEY ARTICULATE*

Gunnar DECLERCK**

ABSTRACT. My main objective in this article will be to compare Heidegger's description of the way we perceive our environment in everyday coping – which is based on the concept of *equipment* (*Zeug*) – and James Gibson's theory of affordance perception. More precisely, I will discuss whether equipment and affordance can be equated. In contrast to some interpretations, I will defend that they cannot: equipment and affordances refer to different ontological kinds and the perceptual or cognitive processes that are implied in each case have nothing in common. In addition, I will defend that distinguishing equipment and affordances is a key step towards a more comprehensive account of the way we perceive and deal with the possibilities offered by our environment, and that Heidegger's and Gibson's accounts, far from being mutually exclusive, complement each other. Some work has however to be done in order to articulate them in a coherent theoretical framework.

Keywords: Heidegger, Gibson, affordance, equipment, perception

I. Introduction

Heidegger's phenomenology and Gibson's theory of perception are two important theoretical resources that have been extensively used in embodied, enactive and – more generally – 4E approaches to cognition. And scholars have often noted that, despite their belonging to different domains, they converge on several claims and share important theoretical commitments (Kadar & Effken, 1994; Zahorik & Jenison, 1998; Dreyfus, 2005; Turner, 2005; Dotov et al., 2012; Blok, 2014).

For instance, both Heidegger and Gibson reject the subject-object dichotomy as a relevant model to account for our ordinary experience and focus instead on a type of relation to the world where the subject-object divide hasn't been operated yet and which is, they claim, more original (Heidegger, BT, §12 and §13; Gibson, 1986, p. 129)[1]. Both

* This is an extended version of the talk that I gave at the conference "Speaking bodies. Embodied Cognition at the Crossroads of Philosophy, Linguistics, Psychology and Artificial Intelligence". May 13-15, 2021, Cluj-Napoca, Romania. This article is an elaboration on ideas that I have presented in Declerck (2020).

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1 I use the following abbreviations for Heidegger's works: *Being and Time*: BT; *History of the Concept of Time: Prolegomena*: HCT; *The Basic Problems of Phenomenology*: BPP.

defend that perception, in its most ordinary form, is not of substances ("things") with properties, but that what we first and foremost perceive is already interpreted and meaningful for the kind of activity we are engaged in. Especially, both defend that we perceive *possibilities for action*: we see beings through the lens of what can be done with them, what they offer to do. When absorbed, Heidegger says, in one's everyday activities – what he calls concerned coping (*besorgenden Umgang*) –, the intraworldly beings do not present themselves as objects with properties, but as equipment (*Zeug*) for this or that, things to do things (BT, §15, p. 97 [68]). And what one "sees" (or foresees) first is *what they are for*, what can be done with them, what support or service they provide, or how they could help achieve one's goals (BPP, §.15, pp. 163-164). Gibson claims, in a similar way, that "what we perceive when we look at objects are their affordances, not their qualities. […] The meaning is observed before the substance and surface, the color and form, are seen as such." (Gibson, 1986, p. 134) The way Heidegger and Gibson describe the process of perception also shows striking similarities. In particular, both explicitly reject projective models of values or meaning, viz., the idea that the meaning that the environment presents to the perceiving agent (what makes it intelligible and readily actionable to us) is the result of a mental projection of representations (functions or values) on an initially neutral exteriority (bare spatial objects) (BT, §15 and §20; Gibson, 1982, p. 410; 1986, pp. 138-139). Accordingly, both reject sense-data models of perception, i.e. the view that the perceptual access to worldly objects is mediated by contents of sensation that are informed by some interpretative act of the mind. Gibson famously claims that the perception of affordances has a *direct* character: one does not have to "think", i.e. proceed to inferences or any other reasoning process, to perceive that an object affords doing something. The detection of affordances is solely based on the –generally merely automatic– extraction or "pickup" of informational invariants (Gibson, 1986, p. 238 sqq.). No top-down processing (involving, typically, semantic memory content) of incoming sensory data has to intervene.

Now, based on these convergences, a widespread view is that Heidegger's concept of equipment and Gibson's concept of affordance are roughly equivalent and refer to the same sort of thing. Kadar & Effken (1994, pp. 310-311), for instance, claim that "Heidegger's equipment concept can be understood as synonymous with Gibson's affordance structure". There are also authors such as Bruineberg & Rietveld (2014) who, without mentioning Heidegger, give the concept of affordance an extension that makes it very close to Heidegger's concept of equipment and – in my opinion – very far from Gibson's concept. That is, they use the term affordance, but they speak in fact of equipment[2].

[2] See also Rietveld & Kiverstein (2014) and Costall (1997, 2012). Authors such as Dreyfus (1996) and Dings (2018), in contrast, make a cautious use of the concept of affordance by distinguishing the affordance as such – which exists be it detected or not –, and whether this affordance solicits action, which depends on contextual, cultural and biographical factors.

In the following, I would like to show that these obvious convergences between Heidegger and Gibson do not justify this sort of crude equivalence. In addition, I will defend that distinguishing equipment and affordances is a key step towards a more comprehensive account of the way we perceive and deal with the possibilities offered by our environment, and that Heidegger's and Gibson's accounts, far from being mutually exclusive, complement each other. Some work has however to be done in order to articulate them in a coherent theoretical framework.

II. Affordances are for someone. Equipment is for anyone

A first important difference between equipment and affordances is related to the nature of their functional reference. Equipment is always equipment for something, it is constituted by an in-order-to reference to a *for-which* or *towards-which* (*Wozu*), that corresponds basically to the possible uses one can make of it (BT, p. 97 [68])[3]. In a seemingly similar way, affordances are constituted by a reference to some behaviour that the affording structure potentiates,[4] something that the agent could do with –or based on– that structure: reach it, grasp it, lift it, walk on it, climb it, pass through it, avoid it, bump into it, etc.

Beyond these surface similarities, however, it is obvious that the functional references implied in each case are different. A fundamental difference is that the *for-which* of equipment –what it is serviceable or usable for (BT, §31, p.184 [144])– has a normative and standardized character: equipment refers to the way it is used *by people in general*, the way it is used *normally* (Haugeland, 1982; Dreyfus, 1991; Carman, 1994; Malpas, 2008; Slama, 2018)[5]. The functional references characterizing equipment

[3] Heidegger uses the term *Bewandtnis* to refer to the referential structure through which equipment refers to what it is for, its *Wozu* or *Wofür*. *Bewandtnis* is generally translated as "involvement" (of the item of equipment in this or that activity) (Macquarrie & Robinson, in BT; Dreyfus, 1991), but could also be rendered as "functional reference", "assignment-relation" (Mulhall, 2001), or, as suggested by Sheehan (2018) and Guignon (1983, 95-99), as "means-to-end relation".

[4] In Gibson, the concept of affordance refers basically to the behavioural opportunities offered by an object – or more generally structure – of the environment. An object O affords a given behaviour to some agent S (is A-able for S), i.e. it makes it possible to realize this behaviour (O can be A-ed by S). In that respect, affordances can basically be interpreted as dispositional properties (Heft, 1989; Turvey, 1992). However, contrary to dispositional properties such as liquidity or solidity, affordances are properties of the environment *taken by reference to an agent* and having a *behavioural significance* for that agent (Gibson, 1977, p. 67; 1986, pp. 157-158) – what Gibson expresses by saying that, strictly speaking, affordances are not properties of the environment, objects, layouts or structures, but properties of the animal-environment system taken as a functional unity (Stoffregen, 2003).

[5] This "socionormative" analysis of the functional reference of equipment is not always explicit in *Being and Time*, which may sometimes give the impression that equipment is very close to affordances. But it is directly supported by Heidegger's analysis of the "they" (das *Man*) –or, as Haugeland (1982, p. 17) suggests,

are consequently only indirectly about what *I* can do right now in the situation of my activity. The in-order-to of equipment is foremost a *what-it-is-used-for* (in general), and only secondarily a *what-I-can-do* with it now. What I can do with equipment (e.g. the circumspective presentation of that chair as something on which I can actually sit and rest) is a secondary hermeneutic achievement, which builds on its what-it-is-for: it is the appropriation in the context of my situated activity of possibilities that belong intrinsically to it and are the same for all, that is, have an essentially public or anonymous character (Malpas, 2008, p. 85). The consequence is that I am not the ultimate meaning-giving source of the in-order-to. I have just appropriated a standardized way of expliciting equipment – i.e. seeing it *as* this or that – that is used by many. Equipment is for anybody and not for me in particular.

The situation is opposite with affordances[6], which constitutively refer to a *particular* agent that is capable of taking advantage of the affording structure. In particular, something will afford some action

"*the anyone*"– as the true "subject" of everyday concern or, to put it more exactly, as "the 'who' of everyday Dasein" (BT, §25, p. 150 [115]): the one who the Dasein is when dealing with its day-to-day environment. Without going into details, Heidegger claims that the Dasein, "as it is proximally and for the most part – in its average everydayness" (BT, §5, pp.37-38 [16]), is not "really" him/herself –"is *not* the 'I myself'" (BT, §25, p. 150 [115])– but an anonymous or impersonal subject who –this is one of its chief characteristics– "concerns itself as such with averageness" (BT, §27, p. 164 [126]). This tendency to be and behave like the others determines how the Dasein spontaneously interprets the intraworldly beings it deals with and limits the possibilities that it projects to a set of (so to say) socially authorized roles, attitudes and behaviors. "The 'they' itself articulates the referential context of significance, […] within the limits which have been established with the 'they's' averageness" (BT, §27, p. 167 [129]) and determines, to that extent, the meaning (i.e. functional references) with which entities (viz. equipment) are encountered. "The 'they', which is nothing definite, and which all are, though not as the sum, prescribes the kind of Being of everydayness. […] Publicness [*die Offentlichkeit*] proximally controls every way in which the world and Dasein get interpreted" (BT, §27, pp. 164-165 [126]).

[6] This characterization of affordances would probably not be accepted unanimously by researchers within the Ecological Psychology community. It mostly corresponds to the position expressed by Gibson himself in his most important works (Gibson, 1977, 1986) and to the accounts that have been developed by Gibsonians such as Turvey, Shaw, Reed, Mace, Warren, Whang, Stoffregen, and Michaels (Turvey & Shaw, 1979; Turvey, Shaw, Reed, & Mace, 1981; Warren & Whang, 1987; Turvey, 1992; Stoffregen, 2003; Michaels, 2003). In particular, some attempts have been made to take into account the social and normative character of the affordances we human beings tend to perceive in our everyday world (Costall, 1995; Chemero, 2009; Rietveld & Kiverstein, 2014). The line I draw in my argument between equipment and affordances applies foremost to so-called "transcultural" views of affordances (what the environment affords is independent of the social practices and cultural conventions). And it could be discussed whether my account and arguments also apply to "sociocultural" views of affordances (what the environment affords depends on the social practices and cultural conventions). See Heras-Escribano & Pinedo-García (2018) for discussing the pros and cons of these two competing approaches.

to some agent only with respect to the so-called "effectivities" of that agent: its skills and body properties, its biomechanical structure, its dimensions and weight, or the kind of material it is made of (Gibson, 1977, p. 67; Gibson, 1986, p. 157; Turvey & Shaw, 1979; Turvey, 1992). This reference is embedded in the very functioning of the informational process underlying affordance perception: in order to extract the informational invariants specifying a given affordance (i.e. specifying that the afforded behaviour can be realized with the affording structure, is supported *qua* possibility by that structure), the extraction process must be calibrated on the effectivities of the agent to whom the object might afford the behaviour (see e.g. Warren, 1984; Mark, 1987; Warren & Whang, 1987), which is generally *me*, but can also be *someone else*, for instance when I see that someone is too far from an object in order to grasp it (Gibson, 1986, p. 128; Valenti & Gold, 1991; Rochat, 1995; Stoffregen et al., 1999). What the structure affords is something that an identified someone can do, not something *one generally does* with that sort of thing.

This difference between equipment and affordance has an important consequence, for it means that the ability to see what a given structure affords is not sufficient (and maybe not even *necessary*) to present it as equipment. Imagine someone living in a community that does not use chairs. Putatively, if seeing a chair, she will be able to detect its affordance of sittability (Lanamäki et al., 2015). The chair can be used to sit and rest just as the floor, a rock or a tree trunk. Yet, this condition is not enough for the chair to access the ontological status of equipment-for-sitting, i.e. chair in the normal sense. To be a chair, the sitting and resting opportunities that it offers must be referred to a set of anonymous users that are used to take chairs that way: they must gain the status of assigned functions (Dreyfus, 1991, p. 64). This does not mean that human beings do not detect affordances when dealing with their environment. For sure, like many animals, we are able to extract informational invariants specifying if this or that action can be realized with this or that structure, is *feasible* given our position, our skills and body characteristics. But this is a different operation from relating to beings as equipment for this or that. In the latter case, the social dimension of Dasein's perceptual relation to its world is constitutively implied. Not in the former case. I will come back to this issue in section VI.

It shall be noted that this "socionormative" account of equipment and the sharp distinction it seems to imply between *what equipment is for* and *what I can do with it* is not without difficulties when considering other aspects of Heidegger's phenomenology of everyday coping. Especially, besides stressing the normative character of the functional references that are constitutive of equipment, Heidegger, as is well known, insists on the primacy of concrete activity and manipulation for the apprehension of these references and for discovering equipment with its genuine being, its readiness-to-hand (*Zuhandenheit*). It is when using it to hammer things – when it is actually put to use – that the hammer is encountered with its genuine character as equipment, shows itself authentically as the being that it is (BT, §15, p. 98 [69]; on this issue, see Dreyfus, 1991, pp. 184-185 and p. 200). Equipment, more generally, always makes sense when actually appropriated for this or that particular use (nailing this board), in a particular

context of activity, to reach some particular situated goals (fixing the shelf to the wall, doing some home repair). Equipment, on the one hand, is thus endowed with a sense that does not depend on the particular use that one can make of it in one's particular situated activity: the functional references that are constitutive of equipment are defined at a sociocultural level, they depend on socially standardized uses and social practices, which are not constrained by the particular (and maybe deviant) use that *I* can make of it. But, on the other hand, equipment is never apprehended in a detached or theoretical attitude: equipment is put to use and it is only through use – that is, when using it as a means to reach some particular goal – that we are acquainted with its in-order-to referential structure. How to reconcile these two apparently contradictory statements?

The best answer, I think, is that the way we make use of equipment – *how* we use it and *for (doing) what* – is never arbitrarily guided by practical efficiency (in which case any object, provided it possesses suitable properties, could be used to reach any goal), but is always *constrained normatively* by the functions equipment is used to serve, how one *normally* makes use of it, and when (in what circumstances). When Heidegger says that when hammering with the hammer, "our concern subordinates itself to the 'in-order-to' which is constitutive for the equipment we are employing at the time" and "appropriate[s] this equipment in a way which could not possibly be more suitable" (BT, §15, p. 98 [69]), what he means is not only an ability to use that sort of tool so as to reach one's practical situated goals (nailing the shingles so as to waterproof the roof), but also an ability *to comply with standardized uses*, socially approved ways of doing things, that have been appropriated though enculturation. Hammers are for hammering things, which means that *they must be used that way* in order to access their very meaning of hammers[7]. If I use a hammer to heat my home, I do not use it *as a hammer* but *as firewood*. Certainly, atypical or deviant uses are always possible. But a deviant use still understands itself as deviant with respect to a normal or canonical use. I can use a knife as

[7] When Heidegger claims that it is when using equipment that we discover it in its very character of equipment (BT, §15, p. 98 [69]), two claims must consequently be distinguished: (a) To deal with equipment in agreement with its very being of *Zuhanden*, one must *use it* and not *stare at it*; it is when using it for hammering something that we "uncover the specific 'manipulability' [*Handlichkeit*] of the hammer." (b) To deal with equipment in agreement with its equipment identity, one must use it for what it is used normally and not use it in a deviant way. In that respect, using a hammer, even circumspectively (that is, without just staring at it), as a door-wedge, a book-end or a paperweight, does not respect its being-in-itself-a-hammer, even though it does respect its being of *Zuhanden*. In order to use it as the equipment it is – a hammer –, our "dealings with equipment" must "subordinate themselves to the manifold assignments of the 'in-order-to'" (BT, §15, p. 98 [69]). This is another essential aspect of Heidegger's account: items of equipment do not have volatile identities, *what they are* does not depend on the particular – and maybe be non-optimal or deviant – ways we use them, our particular needs, knowledge and mood. This hammer was already a hammer before I came to use it. It is a hammer even if I am not familiar with the sort of equipment hammers are. And it remains a hammer even if I do not use it as a hammer.

a screwdriver. But the fact that I know that this is a knife that I am using demonstrates that I understand the way I make use of it by reference to the normal canonical use, the use in virtue of which knifes get their equipmental identify (are knifes, not screwdrivers)[8].

A second important argument in favor of this socionormative account is that the way we use equipment is sensitive to contextual parameters that have to do with what is appropriate or inappropriate from a sociocultural point of view. In *Being and Time*, Heidegger makes use of the concept of circumspection (*Umsicht*) to refer to Dasein's ability to cope skillfully with equipment, "deal with them by using them and manipulating them" (BT, §15, p. 98 [69]). Thanks to this kind of 'sight', "from which [our manipulation] acquires its specific Thingly [*Dinghaftigkeit*] character" (BT, §15, p. 98 [69]), we are able to adapt and react directly and fluently to the requirement and opportunities of the situation (HCT, §29.b, p. 274 [378-379]). We immediately know (or see) *what can and must be done*, *how* and *with what*, in order to achieve a given practical purpose. But, Heidegger insists, circumspection is not only an ability *to do* – some manipulatory skill –, but is altogether a discriminative ability to *know when* to exercise that skill, and is, as such, *sensitive to sociocultural norms* (on this issue, see especially Christensen, 2017, pp. 175-176). It not only implies the ability to see if, say, physical conditions of realization of the skills are met (if it *can* be done), but also if performing this behaviour is appropriate from a socionormative perspective (if it *may* be done). And the same is true when considering the way we make use of equipment when using it – e.g., how you hold your fork, sit on your chair, smoke your cigarette –, which is always subtended and constrained by social conventions, and depend on the location and context of activity we are implied in.

III. Affordances are perceived in isolation. The discovering of equipment is holistic

A second important difference between equipment and affordance has to do with the holistic nature of equipment. Contrary to "objects" or "mere things" (cartesian or husserlian *res materialis*), the equipment one deals with in everyday coping is never apprehended in isolation, but "always belongs [to] an equipmental whole (*Zeugganzheit*), in which it can be this equipment that it is" (BT §15, p.97 [68]). Any item of equipment is what it is only as a node in a huge system of references (*Bewandtnisganzheit*), where it is connected to other equipment that point as a whole towards a set of normalized practices and contexts of use. Any item of equipment refers to other equipment, e.g. the pen refers to ink, paper, table, furniture, etc., with which it forms a coherent system referring to shared social practices (writing). This means, as Heidegger repeatedly explains, that Dasein cannot present a being as equipment –take it as something *for* this or that– in isolation (BPP, §.15, p.164;

[8] See also Malpas (2008, pp.85-86) on this issue.

BT, §15, p.97 [68-69])[9]. The circumspective presentation of equipment always takes place within an equipmental whole one is familiar with, and which is already disclosed as an available totality before we encounter any *particular* being. This "specific functionality whole is *pre*-understood" before any individual piece of equipment we come to meet (BPP, §.15, p.164; BT, §15, pp.97-97 [68-69])[10].

The consequence is that a condition for discovering beings as equipment is to be already familiar (*Vertrauten*), accustomed or acquainted with the system of functional references (*Bewandtnisganzheit*) and the equipmental totality (*Zeugganzheit*) inside of which each item of equipment takes place and has its very meaning[11]. This is the only way for a particular intraworldly being to present itself as being *for* something, get an in-order-to. Though Heidegger does not say it explicitly and is not interested, in general, in developmental or genetic issues, we can follow Dreyfus' claim that this sort of familiarity results basically from *enculturation mechanisms*, which include transfers of habits and knowledge that are both implicit and explicit (explaining to children what this or that item is for is a common thing)[12].

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[9] As Mulhall (2001) explains, "the idea of a single piece of equipment makes no sense: nothing could function as a tool in the absence of what Heidegger calls an 'equipmental totality' – a pen exists as a pen only in relation to ink, paper, writing-desks, and so on. […] its being ready-to-hand is constituted by the multiplicity of reference- or assignment-relations which define its place within a totality of equipment and the practices of its employment. Properly grasped, therefore, an isolated tool points beyond itself, to a world of work and the world in which that work takes place" (Mulhall, 2001, pp. 226-227) As Guignon (1983, pp. 99-100) puts is, "For Heidegger, the *essence* of any entity – its being what it is – is nothing other than its *actual place within a total context* – its 'that it is.' " "it is the *totality* of the equipmental context as an interconnected field – a totality understood in advance – that is articulated into an as-structure in interpretation." (Guignon, 1983, pp. 95-96)

[10] "It is precisely out of this totality that, for example, the individual piece of furniture in a room appears. […] I primarily see a referential totality as closed, from which the individual piece of furniture and what is in the room stand out." (HCT, §23.a, p. 187) "What we encounter as closest to us […] is the room […] as equipment for residing. Out of this the 'arrangement' emerges, and it is in this that any 'individual' item of equipment shows itself. Before it does so, a totality of equipment has already been discovered." (BT, §15, p. 98 [68-69])

[11] Heidegger uses several expressions for this non-thematic acquaintance that precedes and conditions one's circumspective encountering with equipment, including "familiarity with significance" (BT, §18, 120 [87]), "having previously discovered the world", "Being-already-alongside-the-world" (*schon-bei-der-Welt-sein*) (BT, §13, 88 [61]) or "being-already-in-the-world" (*schon-in-der-Welt-sein*) (BT, §41, 236 [192]).

[12] Dreyfus (1991), p. 17. Defending a view close to Dreyfus, Vasterling (2014) gives the following illuminating example of how infants get progressively acquainted with the referential system that enables pre-reflective direct understanding. "Cognition in infants consists mostly in pre-reflective familiarizing with action and interpretation possibilities. For example, a baby sitting in my lap may play around with the spoon I have used to feed it some yoghurt. This playing around with the spoon familiarizes the baby with this particular action possibility in its world which, by itself, does not yet constitute understanding. It has become understanding when the baby, a couple of months later, takes the spoon herself,

Heidegger's view, in that respect, is reminiscent of semantic holism, as it is defended by authors such as Davidson or Wittgenstein (Wheeler, 2017). An important difference, though, is that Heidegger's holism is non-propositional: the network from which any item of equipment gets its meaning is not a network of propositions (or beliefs or any other propositional attitude), but a network of beings and functional references related to contexts of practices (see Dreyfus, 1991, p. 22).

Now, this very idea is obviously absent from the concept of affordance and the ecological theory of perception. Take the graspability of an object, such as a pen: there is nothing, in Gibson's account, that indicates that this affordance should be integrated, in order to be perceived, to an encompassing system of affordances referring to each other and against the background of which every particular affordance, when perceived, would stand out. Graspability can in principle be perceived *in isolation*, and outside the meaningful context of normalized practices or uses. The only prerequisite to affordance perception is the information processing ability to extract informational invariants specifying the affordance. We might want to argue that there are sometimes conditional relations between affordances and that some affordances have a so-called nested character (Gaver, 1991, p. 82). But this is different from the kind of holistic structure equipmental totalities consist of and the kind of referential relations articulating equipment, that have to do primarily with normalized practice –how one makes use of that sort of things–, not with physical possibilities. I will return to this point immediately.

IV. Affordances are real possibilities. Equipment refer to existential possibilities

Another critical issue that separates Heidegger and Gibson is their respective understanding of *what is possible* for a given agent, which has to do with the question of the modal status of the possibilities that we access through ordinary perception.

Equipment and affordances are both constituted by a reference to some possibilities that they support. Seeing what some item of equipment is for and detecting affordances both amount to anticipating *possibilities*. Both amount to some sort of foreseeing. Heidegger says that Dasein's understanding (*Verstehen*) has a projective character and he speaks of being-ahead-of-oneself (*sich-vorweg-sein*) (BT, §31). Gibson and ecological psychologists claim, in a seemingly similar way, that perception has a prospective or anticipative character (Turvey, 1992; Gibson E.J. & Pick, 2000, p. 164 sqq.; Stoffregen, 2003). "To perceive an affordance is to perceive a possibility, something that *could be*, rather than something that currently *is*." (Stoffregen, 2003, p. 118) Affordances concern "what might happen in the future" (Stoffregen, 2003, p. 124).

and starts eating with it. In tandem with the development of her motor skills, the baby has appropriated the action possibility of grabbing the spoon and eating with it. From that point onwards, the appropriation enables direct understanding or direct perceptibility of the spoon as spoon."

Yet, while Heidegger defends what could be termed an existential approach to possibility, Gibson promotes a realistic account of what is possible and what is not. For Heidegger, if you haven't been raised in a culture where some artifact is used for this or that purpose, this artifact simply *does not offer* the possibility of doing that thing, even if absolutely speaking (i.e. in merely "physical" terms) it does (Dreyfus, 1991, p. 189). On the contrary, for Gibson, affordances exist from the moment their physical basis exists, and independently of whether the agent is able or used to detect them (Gibson 1982, p. 410; 1986, pp. 138-139; Turvey, 1992). An object affords a behaviour provided it possesses physical and functional properties that are appropriate –considering the body structure and skills of the agent– for the enactment of this behaviour (Gibson, 1986, p. 127).

The difference, ultimately, comes down to the methodological perspective that each adopts. Heidegger defines what is possible for the agent on the basis of a phenomenological analysis, that is, from the point of view of what *appears possible* to the agent, while Gibson studies possibilities from a naturalistic point of view. There is no sense from the perspective of Heidegger's existential analytic to say that a piece of equipment makes it possible to do this or that if the Dasein is not already familiar with this functional reference, i.e. does not "know" (has the background knowledge) that this equipment can be used to do that, or if the related action makes no sense in the current context of activity. The same is true if considering what is authorized or prohibited from a socionormative point of view: what Dasein *can* do is always narrowed by what it *may* do, i.e. *is allowed* to do (BT, §41, p. 239 [195-196]; Dreyfus, 1991, p. 189 sqq)[13].

The fact that equipment, contrary to affordances, refers to socially standardized possibilities, namely *what one generally does* with that sort of things –the range of functions the object has been culturally assigned to –, also implies a different modal status. The in-order-to (*um… zu*) of equipment refers to a kind of possibility that is much more virtual compared to affordances. We can make mistakes when detecting affordances, that is, the structure may in fact not support the action that was anticipated. But perceiving an affordance always means perceiving that some action can actually be realized. On the contrary, perceiving equipment (i.e. taking it circumspectively as equipment for this or that) means perceiving something that is for some use *in general*. As a result, it may happen that I *cannot* use some item of equipment and yet present it circumspectively as equipment for this particular use. That I cannot use this chair to sit and rest for this or that reason (I am paralyzed, this is someone else's place, the chair does not have the right dimensions) does not deprive it of its in-order-to and involvement in the web of functional references I am familiar with. Whether *I* can or cannot use equipment is of no concern for its presentation as equipment-for-this-or-that: the in-order-to references in virtue

[13] "This interpretation has already restricted the possible options of choice to what lies within the range of the familiar, the attainable, the respectable – that which is fitting and proper. This levelling off of Dasein's possibilities […] results in a dimming down of the possible as such." (BT, §41, p.239 [195-196])

of which intraworldly beings make sense entail no direct commitment with respect to my current field of behavioural possibilities.

More radically, the way Heidegger analyses the functional references that are constitutive of equipment allows a gap between, on the one hand, what we can do in terms of know-how –the skills that we have acquired trough experience–, and, on the other, our familiarity with equipment and contexts of use. *Theoretically*, we do not have to know-how to use an item of equipment in order to be able to present circumspectively this item as equipment for that use. Think of car driving. I can be familiar (acculturated) with the world of car driving and have a standard understanding of the equipmental wholes and system of references cars belong to, and yet not have my driver's license, i.e. be incapable of driving a car (Dreyfus, 1991, p. 64).

V. Who one is (or strives to be) is ultimately why equipment makes sense. The affordances we detect have nothing to do with one's self

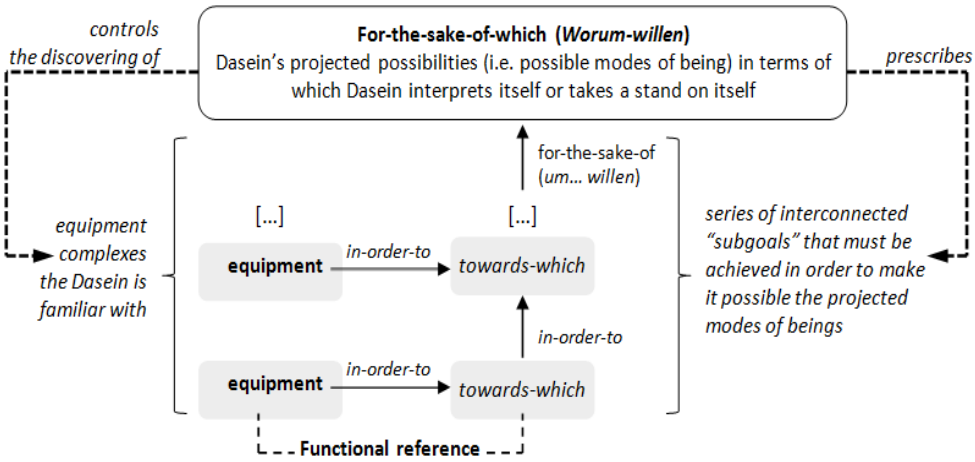
Last but not least, the circumspective presentation of equipment is inseparable, in Heidegger's account, from the process through which the agent coping with its environment *interprets its own being*. If we develop the functional relations by which intraworldly beings make sense in ordinary dealings (the chains of in-order-to), we ultimately arrive to a term with which there is no further in-order-to reference, and that has to do with Dasein's modes of being, values and concerns, which are, so to say, self-referred: they are not *for* something else, they are their own end (BT, §18, pp.116-117 [84]). Dasein – as the being which, in its very Being, has a problematic relationship towards that Being[14] – is the ultimate reference in virtue of which intraworldly beings make sense. And this is because Dasein has an implicit (undeveloped, says Heidegger) understanding of the modes of being that are ultimately at stake with equipment, the modes of being equipment is ultimately dedicated to support or sustain or possibilize –such as "being at home" or "having shelter" for a house, viz. "equipment for residing" (BT, §15, p.98 [68])–, that it can make sense of the beings it is confronted with in day-to-day concern[15]. The discovering of equipment is always subordinated to possibilities of oneself that one projects, possibilities that one cares about and through which one understands who one is. Heidegger uses the terms "for-the-sake-of" (*um... willen*) and the "for-the-sake-of-which" (das *worum-willen*) for this ultimate reference of the equipmental system to Dasein's possibilities (BT, §18, pp.116-117 [84])[16].

[14] "Dasein is an entity which does not just occur among other entities. Rather it is ontically distinguished by the fact that, in its very Being, that Being is an *issue* for it. But in that case, this is a constitutive state of Dasein's Being, and this implies that Dasein, in its Being, has a relationship towards that Being-a relationship which itself is one of Being." (BT, §4, p. 32 [12])

[15] See especially Guignon (1983), pp.96-99.

[16] Heidegger uses the term "significance" (*Bedeutsamkeit*) (BT, §18, p. 120 [87]) to refer to the integrated system formed by these two kinds of referential structures: the in-order-to (*um… zu*) a towards-which (*Wozu*), on the one hand, and the for-the-sake-of (*um… willen*) some Dasein possibilities, on the other. Significance is what

Another way to understand the articulation between the hermeneutic process through which Dasein interprets its own being and the discovering of equipment is to consider that our activities and the – short or longer-term – goals that we pursue set a *relevance frame* for the equipment we deal with (Guignon, 1983). Basically, any item of equipment is articulated through a complex set of functional references and can be put into perspective according to one or another depending on the situation. The totality of functional references each Dasein is familiar with (through always to a different extent) constitutes a huge repertoire of available ways to make sense of equipment, a set of standardized and ready-made meaning-giving relations that can be used to connect equipment to situations and activities and to connect several items of equipment together (articulate them as a coherent functional system)[17]. What decides of the functional references that come to be selected or highlighted in a particular situation is their relevancy for the task one is currently undertaking: *what* one does. But Heidegger's point is that *the reasons why* one does what one does always have to do with some possibilities of ourselves that we project and that we care about. That is, *why* one does what one does refers ultimately to some projected possibilities of our being that both motivate and justify teleologically these activities. As a result, the possibilities that we project –the modes of being to which we implicitly assign ourselves to understand who we are– operate in a kind of top-down manner in the referencing process



constitutes the phenomenological structure of the world in Heidegger's idiosyncratic use of the term, what makes it a world in the sense of *that in which* Dasein exists (BT, §69.c, p. 415 [364]) "These relationships are bound up with one another as a primordial totality […] we call 'significance'. This is what makes up the structure of the world – the structure of that wherein Dasein as such already is." (BT, §18, p. 120 [87])

[17] "The totality of involvements is revealed as the categorical whole of a *possible* interconnection of the ready-to-hand." (BT, §31, p. 184 [144])

governing the presentation of beings. The for-the-sake-of-which (*das Worum-willen*) ascribe concerns (or reasons why) to Dasein's everyday coping (BT, §24 [111]). These concerns specify to-be-achieved subgoals, which in turn specify the functional references through which beings come to be encountered. As Guignon explains, our self-understanding "lays […] out conditions of relevance for the equipment we encounter": it "determines how entities will punctuate the environment" and "whether things will stand out as significant or recede into insignificance." (Guignon, 1983, p. 97)

This referencing process is not unidirectional, though, for the possibilities that we project (the modes of being having a self-interpretating function, i.e. telling us who we are) are themselves specified in a "bottom-up" manner by the system of functional references the world consists of and our tendency to be and behave as others do (social normativity). When taking a stand on oneself (i.e. projecting one's own being on a possibility), we "make our choice" among a limited field of possibilities that is specified in advance by the world we live in: the world provides a sort of costume gallery that altogether opens and limits the field of possibilities of self-interpretations, i.e. ways of being-open-to (interpreting) oneself[18]. We reuse –so to say– the common stock of social *personae* (standardized ways of behaving and self-understandings) with which we are acculturated. As a result, the possibilities to which equipment ultimately refers are not our own private possibilities: they belong to everyone. Roofs are made to protect people *in general*, and it is because I am "one of them" (BT, §27, p. 164 [126]) that roofs are also to protect my own Dasein[19]. In addition, the possibilities that we project are always conditioned *qua* possible modes of being by the availability of specific systems of equipment and norms (BT, §41, p. 238 [194]; 69.c, p. 416 [364]). I could not be a locksmith –play this role and self-interpret in that way– in a world where doors, locks, keys, private property would not exist. As Dreyfus explains: "Dasein needs 'for-the-sake-of-whichs' and the whole involvement structure in order to take a stand on itself, i.e., in order to be itself." (Dreyfus, 1991, pp. 95-96)

The result is that, ultimately, no equipment can be perceived apart from the process through which Dasein takes a stand on itself. It is always *to be a particular someone* that Dasein selects some subset of functional references within which the equipment around makes sense. Everything that makes sense draws its meaning from a –most of the time implicit– reference to some possibility of oneself that one has projected, possibilities that one cares about, that is, through which one implicitly understands –and relates to– one's own being.

[18] In *Being and Time*, it is difficult to see exactly how these anonymous and collective possibilities that the world makes available and my own projected possibilities (the possibilities for the sake of which I am) articulate. But Heidegger seems to hold basically that we simply appropriate or reuse them when projecting one's own self.

[19] That is why Heidegger says that the possibilities of our being that we ordinarily project are not *really* our own (BT, §27, p.165 [128]).

Once again, such claim is obviously absent from Gibson's account. Like most theories of perception, the ecological approach tends to insulate perception from cognitive processes related to what psychologists usually call self-knowledge (Neisser, 1988) and to limit it to some epistemic function. Whatever the explanatory load Gibson puts on activity and modes of life, perception remains taken as a process of extracting information about the world (even if it is a world related-to and significant-for the agent, an *Umwelt* in Jakob Von Uexküll's paradigmatic sense), that is, a process of acquisition of knowledge. In the same way, the process through which long-term goals and, to put it roughly, our self-concept (the for-the-sake-of-which) prescribe or control the selection of subgoals, and subsets of equipment relevant for their achievement, has no real counterpart in Gibson's account. This prescription process can be related, in the Gibsonian framework, to the general issue of what parameters control the detection of affordances. This issue is generally addressed in Psychology under the label of selective attention, action planning and executive control. As far as I know, it has been little studied by Gibson and his followers (Noble, 1981; Heft, 1989)[20]. And ultimately, the only thing Gibson has to say about that matter is that *needs* ultimately control the detection of affordances[21]. Obviously, Gibson's perspective on this issue remains largely "biological".

VI. And yet… How dealing with equipment and perceiving affordances articulate

The previous analysis shows that Heidegger's concept of equipment and Gibson's concept of affordance – despite some surface resemblance – shall not be confused, but refer to different ontological kinds and proceed *qua* descriptive concepts from different methodological perspectives: equipment is a *phenomenological category*: it refers to something that (in a way or another) appears to the agent, while affordance is a *real category*: it denotes a physical property and the "direct" process which is taken to be responsible for affordance perception is informational in nature. Equipment and affordances constitutively refer to something that can be done, but the nature of the possibilities that are implied in each case is totally different. Affordances are related to an identified agent (which is generally me) and their detection has an egocentered character. Equipment, by contrast, is *for anybody*, and its *for-which* has the character of a *normalized* use. What forks are for is basically what they are for *for anybody*. And when I come to perceive (present circumspectively) or use that something *as a fork*, I just perceive it and make use of it as anybody does. As a result, I am never the only and exclusive point of reference of the for-doing-what that is attached to the equipment that I use, which tacitly refers to an ideal community of users to which I myself belong. Making this distinction is important

[20] See however the recent and promising account of Dings (2018) about what parameters determine whether a particular affordance solicits to act or not. Dings defends, based on the work of authors like Slors & Jongepier (2014), that self-narrativity or self-theory (which story we tell ourselves about our life, who we are, what we do and why, etc.) is an essential parameter in this process.

[21] "Needs control the perception of affordances (selective attention) and also initiate acts." (Gibson, 1975, p. 411)

for it leads to claim, against a widely accepted view in embodied approaches, that the possibilities we foresee when coping with our environment do not identify with *what I can do*, the actions that my body structure and abilities offer to realize. What the equipment complexes we are familiar with offer to do, they offer to anyone. These possibilities have – as Merleau-Ponty (1962, p. 82) could say – an anonymous character and are not tailored to my own body structure and abilities.

Correspondingly, the perceptual and cognitive processes – and learning abilities – that are required for the presentation of equipment and those implied in affordance detection are different and probably operate in a functionally separated way. The ability to anticipate what equipment is *for*, though it amounts in a sense to anticipating what can be done with it (action possibilities), cannot be equated to – nor even presupposes – the detection of what the object affords in a Gibsonian sense. The presentation process through which intraworldly beings come to be taken – or *discovered* in Heidegger's terms – as equipment for this or that[22], builds on a familiarity (*Vertrautheit*) with the equipment complexes (*Zeugganzheit*) and network of functions (*Bewandtnisganzheit*) – and associated practices – they are culturally dedicated to. This includes background knowledge about the functions that the equipment serves (what it is used for) in habitual (i.e. non-deviant) contexts of use[23]. There is nothing to suggest that the presentation of equipment shall be subordinated to the detection of the affordances that this equipment makes available. Conversely, it is not sufficient –and perhaps not even necessary– to be capable of detecting the affordances that something offers for this something to count as a piece of equipment. Take the book on the shelter. The presentation of this something as *a book* presupposes a familiarity with the equipmental totality to which books belong, what they are used for, how one makes use of them (by reading them), what other things one uses when one reads books, what sort of persons reads them and when, what they are made of (paper, ink), where one can find them (libraries, etc.), etc. In order to see and treat practically this object *as a book*, one must, in short, be acculturated with human beings' reading practices and the "world of reading". Anticipating if this book *can actually be read*, that is, presents physical attributes enabling the actual realization of the reading behaviour (the af-

[22] What Heidegger calls the prepredicative expliciting (*Auslegung*) (BT, §32).

[23] Though Heidegger does not seem to mention it, obviously this background knowledge is also about *what can typically occur* with this or that item of equipment: pens can be out of ink, they can leak, one can be throw them away and sometimes reload them, the ink can have different colors, etc. Minsky's frames, despite their limitations (Dreyfus, 1991), offer a good formalization of this kind of background knowledge, things one typically knows about objects. But of course, and Dreyfus is undoubtedly right on this, frames shall not be reified and "propositionalized", understood in terms of propositional and symbolic knowledge. My background knowledge that pens are for writing can certainly express in propositional forms, e.g. if I explain to a kid what one does with that kind of objects. But there is no reason to assume that it is intrinsically propositional.

fordance of "readability"), is not a requirement to take it as a book, and refers to a totally different cognitive process.

Now, this does not imply that the detection of affordances is not required in some way or another by the *actual coping* with equipment, nor that the presentation of equipment has *nothing to do* with the detection of affordances[24]. In order to understand this point, we must distinguish between, on the one hand, the process on the basis of which equipment comes to be *identified*, or *discovered* in Heidegger's terms, i.e. taken *as* equipment for this or that (its apprehension under an as-structure that makes it the equipment that it is); and, on the other hand, the process through which we actually *coordinate* with equipment, that is (basically), make use of it (manipulate it, put it to use) so as to achieve this or that situated goal. These two aspects of one's ability to deal with equipment are not clearly distinguished in Heidegger's analysis, where they correspond to two facets of circumspection (*Umsicht*, meaning literally both *looking (or seeing) around* and *looking for*), which is altogether a practical know-how – the ability to cope skillfully with the equipment, "deal with them by using them and manipulating them" (BT, §15, p. 98 [69]) – and a presentative ability: the ability to "see" immediately – in the heat of the moment, so to say – what equipment is for and what must be done with what in order to achieve one's practical purposes. Speaking, as Heidegger does, of one and the same faculty for apparently so different abilities could certainly be criticized. Heidegger's decision is probably guided by a principle of phenomenological simplicity: from a first person's point of view, these various skills are just different aspects of one's ability to deal with equipment: we are familiar with what things are for and we immediately see what must be done and do it without having to think. But it does not mean of course that these skills shall not be distinguished conceptually for the sake of phenomenological clarity.

(1) You do not have to perceive that this fork is graspable or affords pricking food in order to present that thing right there as a fork – equipment-for-pricking-food –, or, more radically, take for granted the presence and availability (readiness-to-hand) of forks in the kitchen or restaurant you just entered[25]. However, when it comes

[24] How the circumspective presentation of equipment and the detection of affordances must be articulated is a complex issue that would require an in-depth analysis and the development of a whole coherent theoretical framework. I will only propose here some quick thoughts as a conclusion.

[25] We might want to argue that one must be able to detect these affordances (i.e. possess the perceptual or information-processing ability) in order to be capable of using forks, *and consequently* – assuming that the possession of that sort of skill is a necessary condition to understand equipment – in order to present those beings with this identity, i.e. as equipment-for-pricking-food. But this claim overlooks the fact that there is obviously a lot of equipment we are acquainted with that we are *not able* to use, e.g. helicopters or abacuses or saxophones (see Dreyfus, 1991, p.64). We also might be tempted to claim that in situations where one must guess what an unfamiliar (e.g. vintage) tool is used for, we usually proceed based on its visible affordances (inferring tools' functions from their apparent structure). But this objection is not acceptable, for this situation has to do with the process of becoming acculturated with equipment, and this must be distinguished

to actual use and manipulation, things are different. In order to use a fork (and use it *as* a fork), you must be able to grasp it and manipulate it efficiently so as to prick food in your plate and bring it to your mouth (e.g. control its trajectory and the force that you put in your arm). And the exercise of that sort of skills requires detecting affordances such as the graspability of the fork (that is, affordances related to the actions that must be performed to actually make use of that sort of equipment) or the affordances that the fork, once grasped, makes available, e.g. the prick-ability of the food (affordances that the equipment, when actually in hand, potentiates). In a same manner, I could not open the door by turning the doorknob (BPP, §.15, p. 163) if I were incapable of perceiving that I can grasp the doorknob and turn it that way, or that turning the doorknob is what makes it possible to open the door (nested affordances). We must be able to see – based on the extraction of the appropriate optical invariants – if those actions are actually feasible in the current situation, given parameters such as our relative position, orientation and posture. And if they are not, we must be able to anticipate how the situation must be changed to make them feasible. That is, the *actual coping* with equipment requires the exercising of some know-how, which implies the ability to detect affordances.

(2) Conversely, we can presume that the detection of affordances is someway *framed* by the presentation of equipment. Each time one makes use of equipment (or, more broadly, equipmental totality, say, a kitchen, an office or a supermarket), one's background knowledge about what the item is for (its *towards-which*) operates as a basic frame that altogether orients and constrains the affordances that we come to detect. When I am about to use a fork, I immediately focus on the affordances that are related to its status of equipment-for-sticking-food: be it the actions that must be performed to actually make use of it, for instance its reachability and graspability, or the actions that the fork, once grasped, makes available, such as the stick-ability of the food in my plate. That sort of knowledge is embedded in one's circumspective ability to deal with forks.

This last point is of central importance for current research on affordance perception. A pressing challenge for ecological Psychology is to identify the parameters that control the detection of affordances, considering that only a few affordances –amongst all the affordances that are currently available– come to be detected at each instant by the agent. Why these and not others? Most research on this topic focuses on action planning, executive functions, and parameters controlling selective attention, such as needs, short-terms objectives ("desired states") and moods. But this sort of account can only deal with the top of the iceberg, for parameters such as needs depend themselves on some background knowledge about what is possible and what is not, both from a merely physical and sociocultural point of view. As Heidegger explains, Dasein "has already restricted the possible options of choice to

from the process of presenting circumspectively equipment, a process which cannot take place if such background knowledge is not *already* in place.

what lies within the range of the familiar, the attainable, the respectable – that which is fitting and proper." (BT, §41, p. 239 [195-196]) This is a key element to understand the specificity of our perceptual relation to the environment as human beings. The affordances we are attuned to when going around our business in our day-to-day environment, are always already filtered by our familiarity with significance (*Bedeutsamkeit*), that is to say, with the system of meaningful references that is constitutive of the social world we inhabit[26].

As a final remark, it is worth noting that the distinction I have made above between, on the one hand, the process supporting the circumspective presentation of equipment and, on the other hand, the process of actual coordination with equipment, parallels the distinction that is usually made in Cognitive Psychology with respect to our knowledge of tools, between: (*a*) conceptual knowledge about the tool's normal function (knowledge that the tool is used for this or that), a kind of *knowing-that* which implies semantic memory, and (*b*) the ability to actually make use of the tool, grasp it and use it appropriately, a kind of *knowing-how* or procedural knowledge that relies on the possession of suitable motor programs (see e.g. Johnson-Frey, 2004). This distinction has especially been supported by the kind of behavioural dissociation that we can observe in different forms of apraxia following brain lesions[27]. This parallel shall however be taken with caution for at least two reasons. First, several approaches in Psychology, especially enactive approaches, have argued against a too clear-cut distinction between semantic or conceptual knowledge and sensorimotor skills. Especially, some observations suggest that the semantic ability to understand the tool's function could rely on the covert activation of motor programs associated with its use, i.e. on the implicit simulation of the instrumental behaviour.

[26] I have claimed in Declerck (2020) that it is a basic feature that distinguishes the sort of possibilities we as human beings selectively perceive when dealing with our environment and the possibilities that animals perceive, typically in animal tool-use sequences.

[27] Patients suffering from so-called "ideational" or "conceptual" apraxia (De Renzi & Lucchelli, 1988) can still perform the skillful actions associated with the actual use of the tool (or pantomime this use), which demonstrates that their tool-use skills are intact (the motor programs are still available and accessible). But they seem incapable of using the tool in the right context to do the right thing, thus demonstrating "errors of content" (e.g. misusing a toothbrush for a fork). That is, they seem to have lost their knowledge of *when* (in what functional context, for doing what) it is appropriated to actually make use of the tools and available skills (semantic knowledge about the functions that are associated with tools) (Ochipa et al., 1992). Besides this, these patients are still capable of identifying and naming the tool, which separates this condition from mere agnosia (Ochipa et al., 1989). Patients suffering from 'ideomotor' apraxia demonstrate the reverse impairment: their knowledge of the tool's function and context of use is intact, but they seem to have lost the motor skills necessary to actually make use of it. They typically show difficulties when asked to pantomime how a familiar tool is used or demonstrate this use with the tool actually in hand (De Renzi et al., 1982; Sirigu et al., 1995). This is not due, however, to a mere sensorimotor control deficit, for these patients are still capable of accurately grasping and manipulating the tool (Buxbaum et al., 2003; Johnson-Frey, 2003a,b; Johnson-Frey & Grafton, 2003).

Second, Heidegger's claim that concerned coping (*besorgenden Umgang)* is the primary mode of engagement with the world aims precisely to overcome the traditional opposition between mere doing and mere thinking. And he makes it clear that the kind of knowledge the concepts of familiarity and circumspective presentation refer to cannot be equated to some conceptual knowing-that. Especially, the linguistic expression of the functional references articulating equipment already presupposes that it has been prepredicatively interpreted (*ausgelegt*) as equipment-for-this or that (BT, §32, p. 189 [149])[28]. Telling what things are –what Vasterling (2014) calls "narrative understanding"– presupposes a being-already-open-to the world as a network of interrelated meanings (Heidegger, 1976, §12.a, p. 121 [144])[29].

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[28] "In dealing with what is environmentally ready-to-hand by interpreting it circumspectively, we 'see' it *as* a table, a door, a carriage, or a bridge; but what we have thus interpreted [Ausgelegte] need not necessarily be also taken apart [auseinander zu legen] by making an assertion which definitely characterizes it. Any mere pre-predicative seeing of the ready-to-hand is, in itself, something which already understands and interprets." (BT, §32, p.189 [149])

[29] "Every form of speaking about things is, as an ontological comportment of existence, already grounded in existence as world-open. That is, all speech speaks about something that is somehow already disclosed. […] Speaking indicatively about something —'this table here,' 'that window over there,' 'the chalk,' 'the door'— already entails [their prior] disclosure. What does this disclosure consist in? Answer: the thing we encounter is uncovered in terms of the end-for-which of its serviceability. It is already posited in meaning —it already makes sense [*be-deutet*]. Do not understand this to mean that we were first given a something that is free of meaning, and then a meaning gets attached to it. Rather, what is first of all 'given' —and we still have to determine what that word means— is the 'for-writing,' the 'for-entering-and-exiting,' the 'for-illuminating,' the 'for-sitting.' That is, writing, entering- exiting, sitting, and the like are what we are *a priori* involved with. What we know and learn when we 'know our way around' are these uses-for-which we understand it." (Heidegger, 1976, §12.a, 121 [144])

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THE WORLD-RELATEDNESS OF AFFECTIVITY: HEIDEGGER AND RICHIR

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ABSTRACT. My investigation reveals that Heidegger's account of affectivity – though his programmatical determination included an ontical dimension or otherwise lived, personal experiences – is overshadowed by a dense ontology that cannot enable real phenomenal experience. This is why he could not account for other affective states such as emotions, feelings and the role of the body in affectivity. Besides, in that account we are lost when we seek to answer the question of whether moods are "one" or "many". My aim is to point out how these deficiencies in Heidegger's account of mood could be overcome in Richir's account of affectivity, where indeterminate background feelings (affections) could give rise to a determinate and occurent emotion (affects). The advantage of this move is a rich ontic account of affectivity where not only the body but also sense/meaning of affective episodes play a robust role in an encounter of world events. If Richir reproached Heidegger for existential solipsism, one could now reproach the former for existentiell/phenomenal solipsism. In the end I suggest that these two core but opposite aspects of affectivity (the ontological and the ontic) belong to the same reality: Dasein is not just in the world (ontology), but also the world is in Dasein (ontic/phenomenological).

Keywords: mood, affection, affect, Heidegger's ontology, Richir's *Leib* and *sense*.

Introduction

A first methodological remark is the question of why Richir's first phenomenological analysis of affectivity took Heidegger's *Sein und Zeit* as starting point, even though it was Husserl who in the phenomenological tradition had made the first detailed analysis of the affective life. Husserl's extensive analyses of affectivity in the *Logical Investigations*[1] have shown that intentionality is intrinsic to affective experiences. Such mediation makes it clear that the affective act is not just (like Descartes) a movement of the soul[2] in itself; neither is it (like Michel Henri) a feeling in the sense of *sentiment* that reduces the affective experience to the auto-apperception of the self and not to something else. Thus pain is, so to speak, a self-experience and nothing of

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1 Edmund Husserl, *Logische Untersuchungen. Erster Band: Prolegomena zur reinen Logik*, Holenstein Elmar (ed.), Den Haag: Nijhoff 1975 (HUA XVIII).

2 René Descartes, *Les passion de l'âme*, Introduction and remarks by Pascale D'Arcy, Paris: Flammarion 1996, p. 117.

the things in the world.[3] Rather, for Husserl, the affective act goes beyond the interior dimension of subjectivity since it touches upon the objects of the world. This world-referentiality of affectivity owes its articulation therefore to Husserl's analysis. The affective act is something that goes beyond itself to represent an object in the world. So in mourning the object of mourning is represented that reaches into the world. In this way, affectivity can be distinguished from such non-intentional acts as sensations or feelings (sentiment) or the movement of the soul that may not be about anything specific or determinate. So we see that Husserl had already articulated affectivity in terms of interiority and exteriority on which Richir will later fall back to formulate his analysis of the immanence and transcendence[4] of affectivity. Another work on affectivity can be found in Husserliana *XX111*. In the latter case, Richir was able to make a profound discovery in phenomenology. Of great importance was the discovery of *phantasia*,[5] through which he opened up his own original path to the question of affective world-disclosure. Primarily – we have already mentioned this – his first access to affectivity, as Carlson[6] explained, took place through Heidegger's *Sein und Zeit*. As we shall see, Heidegger's masterpiece is about a special approach to the world, beyond all *subjectivity* in the face of an *objective world* (intentionality). This is because for him, *Dasein* does not have to go into interiority first in order to be able to get into the world afterwards. It is unthinkable without the constitution of *being-in-the-world.*

Heidegger's doctrine on affectivity – denoting, as Elpidorou indicates, "an ontological structure", which is "a way, the human way, of existing in the world and through which all aspects of human existence … must necessarily be understood"[7] – aims at developing world-referentiality that is rooted in the ontological difference. But one sees therein that precedence is given to ontology, though the ontic aspect was also thematised. This ontological precedence becomes apparent not only in the case of the conceptual labelling which takes place with findingness[8] (*Befindlichkeit*) and mood (*Stimmung*) but also in the difficulty to confer a rich ontic dimension to mood. One sees there as well the mightiness of *being*, in other words of ontology which Heidegger could not escape, as the present analysis will endeavour to outline. This implies *inter alia* the difficulty

[3] Michel Henri, „*Phénoménologie et psychanalyse*", in P. Fédida und J. Schotte (editors), in *Psychiatrie et Existence, Décade de Cerisy*, Grenoble: Éditions Jérôme Millon 1991 [1989].

[4] We shall not touch upon these aspects in the present paper.

[5] We shall see that Richir's positive contribution to the affective life builds on and is directly related to the *phantasia.* We shall have time to say more on this.

[6] Sacha Carlson, « *Le langage, l'affectivité et le hors langage (Richir, Heidegger)* » in *Divination : Studia culturologica* series, vol. 41., 2015.

[7] Andreas Elpidorou, "On Affect: Function and Phenomenology" in *HUMANA.MENTE: Journal of Philosophical Studies,* 11(34) 2018, 155-184, p. 162.

[8] In line with Haugeland, we shall translate *Befindlichkeit* as findingness. John Haugeland, Dasein Disclosed: John Haugeland's Heidegger, Rouse Joseph (ed.) Havard University Press: Cambridge, Massachusetts and London, England, 2003.

of ontologically and ontically delineating the singularity and plurality of mood. How are the phenomenal, the feeling aspects of affectivity, which often – on Richir's account – are not expressible with language, to be differentiated from those aspects that not only describe a certain way of being in relation to the world but also require language for their articulation? How can for instance the transformation of a *deep, diffuse affective state* into a *concrete and specific emotion* be accounted for without lumping all these different aspects in one pot as mood?

Richir's development of affectivity highlights, precisely in this context, two connected but delimited parts: "Affection" and "Affects". With this unparalleled development Richir could not only illuminate the correlation between plurality and singularity of affectivity – which also involve the *phenomenological* and the *symbolic* in order to remain faithful to Heidegger (we could also speak of the ontic and the ontological) – but also respond to the difficulty how Heidegger's doctrine on affectivity could have differentiated mood from the concrete emotion. This is the positive or constructive aspect. Moreover from Richir's confrontation with Heidegger emerges a negative or destructive side, in which the latter was heavily criticized. In the context of this critic, corporeality (*Leiblichkeit*) was not only thematised as necessary for the receptivity of affectivity but also as *sense*/*meaning*[9]*-conferring* instance of each affective experience. If for Heidegger, affectivity relates how *Dasein* has always *been in the world,* for Richir this world that is opened is nothing other than *sense* (capturing the indeterminate aspects of affection) or *meaning*[10] (capturing the determinate aspect of affects).

To achieve what has been described above, the paper is divided into three parts. The first is concerned with the schema of *Dasein's* existential analytic, where the basic constitution of *being-in-the-world* and its consequences for the existential understanding of *Dasein* come to light. At the same time "findingness and the ontological *a priori* of world-relatedness" as well as the "difference between findingness and mood" will be thematised. In the second part we turn comprehensively to the investigation into whether mood is a singularity or a plurality, a problem that arises from a closer study of Heidegger. We conclude that Heidegger could not systematically discriminate those phenomenal moments in which affectivity could be understood as plural and singular respectively. This was the reason not only of his failing to account for feelings and emotions, but also for the ontological condensation of his

[9] *Sense* at this stage could be understood as that which every phenomena bears and wants to express; sense is a more primitive, and more basic aspect of meaning since it cannot yet be expressed with words, in a given language, given its indetermination. To do this we would require reflection. Meaning refers to those phenomena that words of languages could express. Thus on Richir's account, all affective acts are all about the world and the world is nothing other than a plurality (*sense*) or a singularity (*meaning*).

[10] This thesis has been defended in a recent dissertation. *Cf.* Dominic Ekweariri, *Leib und Leiblichkeit bei Marc Richir,* Inaugural-Dissertation zur Erlangung des Doktorgrades der Philosophie im Fachbereich A Geistes und Kulturwissenschaften der Bergischen Universität Wuppertal 2021.

doctrine of affectivity which made him to lump every dimension of affectivity under the concepts of mood/findingness. The third part addresses the negative and the constructive sides of Richir's examination of affectivity.

Critical of Richir's critic of Heidegger as guilty of existential solipsism, we, in the concluding section, ask if Richir himself could not be guilty of phenomenal solipsism – a question which paves the way for us to give an example of how contraries, in this case Heideggers' condenced immobile ontology and Richir's spontaneous and dynamic phenomenology, could be reconciled with each other.

1
The schema of existential analytics of *Dasein*

Heidegger's mood/findingness (affectivity) finds its initial context in the existential analytic of *Dasein*. Therein the basic ontological constitution of this "who"[11] ascribed entity (*Seiende*) – it is all about *Dasein's* ontological constitution and not those of present-at-hand (*vorhanden*) and ready-to-hand (*zuhanden*) entities – was thematised and turned out to be *being in the world.*[12]

Furthermore the ontological mode of *Being-in* implies to begin with neither a consciousness nor an affiliated concept of *Leiblichkeit* (corporeality). This would make the body to have a primacy over the world, which according to Heidegger would be a kind of naivity: to think that mankind was "first and foremost a mental thing which is then subsequently displaced into space."[13] Neither consciousness nor *corporeality* can ontically replace or exhaust this *a priori* of *Being-in*. World-relatedness is accordingly possible since "*Dasein*" "is" "as a *Being-in-the-world*". This is a declaration of ontological primacy. *In order words cognition of things or emoting must not presuppose an outside and inside since Dasein already cognizes ever since it is in the world. The question remains unanswered as to how extent cognition or affectivity* could be thematised in a dense ontology *without interiority.*[14]

[11] This characteristic of Dasein differentiates itself from all others whose essence result from *being what* or *essentia*. Instead, the ontological nature of Dasein's Being is portrayed as an Existence. This explains why it cannot be understood as "properties present-at-hand of some entity which 'look' so and so and is itself present-at-hand" but in its Being. Martin Heidegger, Being and Time, Translated by Macquarrie, John & Robinson, Ed-ward, Blackwell, 1962, p. 67/42; Martin Heidegger, *Sein und Zeit*, Tübingen:Max Niemeyer Verlag 2006, pp. 53. Henceforth when I cite the german version, I adapt the translations as mine.

[12] *Ibid.,* pp. 53, 130.

[13] *Ibid.,* p. 56.

[14] This supposition receives an unequivocal confirmation from Heidegger who insists on the primacy of the ontological constitution: "When Dasein directs itself towards something and grasps it, it does not somehow first get out of an inner sphere in which it has been proximally encapsulated, but its primary kind of Being is such that it is always 'outside' alongside entities which it encounters and which belong to a world already discovered". Heidegger continues: "Nor is any inner sphere abandoned when Dasein dwells alongside the entity to be known, and determines its character; but even in this 'Being-outside' alongside the object, Dasein is still 'inside', if we understand this in the correct

The next move for Heidegger is the question: How can a phenomenological version of the original unified structure of *Dasein* (*Grundverfassung von Dasein*) be explained? Such a phenomenological layer should explain how *Dasein's* "mode of *being" there* (*da*) in the world is opened up – a gap which is filled by the investigation of "findingness" (*Befindlichkeit*), "understanding" (*Verstehen*) and "discourse" (*Rede*) and sometimes "falling" (*Verfallen*). So the question arises whether the affective life would not be pre-theoretically corrupt since *Dasein* is *always already* its *there*, familiar with its *there*, *from day to day*.

Findingness and the ontological *a priori* of world-relatedness

It has to be explicitly emphasised that "findingness" occupied a very important place in Heidegger's account of affectivity. Heidegger regrets that the programatic function which findingness played in the history of affectivity has been forgotten since after Aristotle's *Rhetoric*. Scheler[15] was an exception in this direction. This forgetfulness has some consequences for philosophy: on the one hand, affects and feelings missed their "goal" and turned out to be "psychological" and "accompanying phenomenon"[16]; on the other hand, the "underlying ontological interpretation of the affective" lost the exigency for which it has been known since Aristotle's Rhetoric[17]. This Aristotelian approach (Rhetorik. 11. 1.8-11) captured the social-worldly, existential dimension of affectivity which is the basis of Heidegger's ontological investigation. Findingness therefore seeks to liberate *affectivity* from psychological characteristics, and instead emphasizes *its* world-relatedness through which *Dasein*[18] unveils itself. That is why every understanding or each translation of *Befindlichkeit* (findingness) in the sense of disposition[19] is to be rejected. Heidegger coins a vocabulary "to disclose" to express this world-relatedness of *Dasein* via findingness. Disclosure (*Erschlossenheit*) neither refers to the perception of an object via intentionality. Rather the disclosing of findingness is "already" (*je schon*) accomplished. This

sense; that is to say, it is itself 'inside' as a Being-in-the-world which knows". Heidegger, *op.cit.,* 1962, p. 89/ 62. Cognition replaces for us Macquarrie and Robinson' "knowing". It is clear that Heidegger resists the distinction between inner and outside body. But the question remains, if such a move could do justice to the indeterminacy and determinacy of affectivity.

15 Consider for instance Scheler's works: The *Nature of Sympathy*, Brunswick N.J*, 2009* [1913] or Formalism in Ethics and Non-Formal Ethics of Values: A New Attempt toward the Foundation of an Ethical Personalism, Evanston, 1973 [1912-1916].

16 *Ibid.*, p. 139.

17 Aristotle, *The Art of Rhetoric*, translated by Freese, John Henry. London: Heinemann, 1926, p. 179.

18 Heidegger, *op.cit.,* 2006, p. 136.

19 See Macquarrie and Robinson's translation of *Being and Time* (1962) and Mayr's translation of the *Zollikon Seminar*. Martin Heidegger, Zollikon Seminar, translated by Franz Mayr, Illinois: Northwestern Univ. Press, 2000. However Haugeland distances himself from such an attribution of mental states and disposition and instead sustains the ontological density of *Befindlichkeit* (*findingness*). Heidegger himself warns that "Befindlichkeit is very far from something like the finding of a mental state." Heidegger, *op.cit.,* 2006, p. 136.

"already" is far from revealing what *findingness* discloses but brings one back to *beeness* (ontology). The problem with such a move for Richir is that affectivity is so much saturated with ontology – which is always already disclosed: therein lies the grain of passivity which forms part of Richir's critic – that one wonders if room could be made for its phenomenological character; part of this concern is also the question whether the complexity of the affective life could be successfully captured without thematising the role of corporeality, especially if the body is understood as *Leib.*[20]

However we do not know yet how findingness and mood[21] are connected. Though they are closely related, they express nevertheless varying subtleties.

Difference between *Findingness* and *Mood*

To differentiate between findingness and mood is first of all to make the distinction between "ontological" and "ontic" as

[20] To better understand the meaning of *Leib*, it is essential to distinguish it from another corelate term *Körper* as Husserl and Helmuth Plessner did. Helmuth Plessner wrote: "A person is always at the same time *Leib* (head, torso, extremities with everything that is in them) [...] and has this *Leib* as this *Körper*." Helmuth Plessner, „*Ausdruck und menschliche Natur*", in *Gesammelte Schriften*, 10Bde., Bd. VII, Frankfurt 1982, p. 238. The difference between the two concepts cannot be captured in english language without descriptions since the two concepts are translated as body. The body as *Körper* stands for an inanimate organism, a kind of exteriority that is conveyed to me through perception. It is, so to speak, that which is already tangible and touchable in the symbolic institution (i.e. culture). The body as *Körper*, for example, describes an object that can be reified, which one can own and manipulate. The term body as *Leib* is roughly understood to mean a *corps vivant* (Merleau-Ponty). In contrast to the body *Körper*, the body as *Leib* concerns the human being as an experiencing, living subject. It stands for the living - namely for living processes that cannot be posssessed, but can only be experienced. To localize the body in the dimension of *being* (*Sein*), as Plessner did, makes it a place of events, encounters, of living, where one can feel everything that can be experienced such as laughing, crying, joy, envy, pain, etc. This dimension of *Leib*, refer "at the same time" to "experiences in which nature announces itself in us - 'nature' insofar as the impulses of hunger, thirst, love, desire, etc." Thomas Fuchs, „Zwischen Leib und Körper", in M. Hähnel *et al* (editors), in *Leib und Leben: Perspektiven für eine neue Kultur der Körperlichkeit*, 2013, p. 84.

[21] This substantive, in German (*Stimmung*) is derived from the verb „to tune"(*Stimmen*), refers to the bringing in tune with each single notes of a musical instrument where a musician for instance tunes the strings of his guitar so that they could fit in relation to one another and produce the perfect tonality. For Heidegger even *not being tuned* (*Ungestimmtheit*) belongs to essential character of mood. So, the fact that Dasein's mood changes suddenly or that Dasein appears as untuned is even the justification for Dasein's mood, its tunedness in a way: "apparently *never there* and *yet there* is exactly that Un-tunedness in which we are *neither badly nor goodly tuned*. But in this ‚neither nor'we are never *not tuned*. " Martin Heidegger, *Die Grundbegriffe der Metaphysik*, Frankfurt am Main: Vittorio Klostermann 1983, p. 102, *My translation*. This *backside* of mood fits to the general project of *Being and Time* where Heidegger complains of the forgetfulness of *Being*. Although it *is there*, yet we have *forgotten the question of Being* or extremely thingified it.

these unequivocally point to the ontological difference. According to Heidegger: "What we ontologically show with the title *findingness* is ontically the most known and *the most ordinary* (*Alltäglichste*): mood, tunedness (*Gestimmtsein*)."[22] How is this to be understood? The dialogue between Heidegger and Peter Meier-Classen can be of help to us here: "Ontological means ‚interpreting the doctrine of Being', ontic means ‚concerning Being' ". Since Heidegger introduces this to mark the difference between the not objective entital Being and the entities appearing to it as so and so, one can relate the ontological to Being itself and the ontic to entities themselves. Only in this context is the sentence cited from the dialogue with Peter Meier-Classen meaningful: "Although *Dasein* is *ontically the nearest to us*, certainly we are even this *Dasein*, inspite of that or exactly because of that it is *ontologically the farthest* to us."[23] Whereas findingness (which is far from us) is tied to the ontological, mood (which is near to us) depicts the ontical and concerns the everydayness of *Dasein.*[24] Since "Being […] comes prior to entity"[25], *the ontological is from the outset a priori*. However findingness is ontically[26] expressed in mood.

Mood happens neither outside of *Dasein* nor in a part of its private inner subjectivity. Contrariwise, *Dasein* finds itself in mood, a mode of 'this or that way': "moods are the how, according to which one is 'this or that way' "[27]. 'This or that way' means for example, that a sad person sees the world in a way. The world appears to him in a particular (singular) light that is not possible in the case of a happy person, for whom the world also appears in a singular, or from a particular, light.

2.
Is mood (Affectivity) a singularity/ determination or a plurality/ an indetermination?

If above Heidegger is concerned with a specific light in which the world appears to *Dasein* in mood, does he not then give the impression that mood would be available to one in a singular ("this" or "that") way? How are diffuse and indeterminate affective situations (plurality) to be accounted for? Are these not also moods? Are moods then determined or indeterminate, singular or plural? There is no clear answer to this in Heidegger since in Heidegger moods seem to be both. We also know that there is an indecisive aspect of affectivity in Heidegger which is not immediately explicit; let us first illustrate this indecisiveness as it is given in facticity before we go to answer the question whether affectivity are singular or plural.

[22] Heidegger, 2006, *op.cit.,* 2006, p. 134.

[23] Peter Meier-Classen im Gespräch mit Martin Heidegger, http://www.meier-classen.ch/interviews/heidegger.htm. Internet access on the 5.5.2020.

[24] Andreas Elpidorou, Moods and Appraisals: How the Phenomenology and Science of Emotions Can Come Together, in *Human Studies*, 36 (4), 2013, 565-591.

[25] Heidegger, *op.cit.,* 2006*,* p. 134.

[26] The different and familiar affective ways become evident in everyday life. Through these affective ways Dasein relates with the world. The „affective ways"are depicted as mood.

[27] Heidegger, *op.cit.,* 1983, p. 101.

So the indecisiveness (whether moods are singular or plural) becomes evident in case of *Dasein's* facticity or thrownness which for Heidegger captures both the aspect of *Being* and its evasion (*non-Being*), disclosure and concealment[28]. Though *thrown* means that *Dasein* finds itself there[29] where it is, and has no choice, Heidegger refuses to reduce what "is "evident" in findingnness, by measuring it against the apodictic certainty of a theoretical cognition of something which is purely present-at-hand."[30] We have seen that Heidegger denies cognition access to the facticity of *Dasein*. In other words, though the facticity of the affective position of *Dasein* stares us in the face, this does not mean that *Dasein* has access to this affectively charged situation in which it is thrown. He illustrates this movement with the concept of „turning away" (*Abkehr*).[31] The concept depicts that that which mood has disclosed as facticity goes beyond what is recognizable and accessible to *Dasein*. There is always a "*more*" (Phenomenally what mood discloses is not to be "compared with what Dasein is acquainted with, knows, and believes 'at the same time' when it has such as mood"[32]), a "*surplus*" to mood's disclosure, although this *more* or *surplus* also escapes us.

In this way the backside (tunedness versus untunedness, thrownness and turning away) which we have already mentioned resurfaces again. What does this backside tell us? That affectivity also corresponds to a plurality, a *more*? That to every return (*Hinkehr*) corresponds also a turning away (*Abkehr*)? At this stage, Heidegger's account leaves us indecisive. We do not know precisely, if for Heidegger affectivity could be spoken of in the singular or in the plural. There are indications for both. However, Heidegger has no systematic way of accounting for these indeterminate and determinate aspects of the affective life. Later we shall turn to the whole strcture of Richir's phenomenology to give reasons for these inadequacies.

The time has come for us to respond to the question of the singularity or plurality of affectivity. We approach the subject using two important moods as examples, which are given an important place in Heidegger: these are fear and anxiety. In order to respond to the questions that are important to us we shall treat their *disclosing contents* or *methods of disclosure.*

At first glance, mood appears in Heidegger as one that is "already there"[33] and something "that has the character of 'there'"[34]. The character of "there" refers to

[28] Heidegger, *op.cit.,* 2006, pp. 134, 135.

[29] Slaby called facticity "the unshakable condition of sheer 'being there' " and refuses understanding of it as "ways of finding oneself in the world" [Mathew James Ratcliffe, "Why Mood Matters", in Mark A. Wrathall (editor), *The Cambridge Companion to Heidegger's Being and Time*, Cambridge: Cambridge University Press, 2013, pp 157-76] since such fails "to capture the full drama of factual situatedness, its 'hardness' " Jan Slaby, "More than a Feeling: Affect as Radical Situatedness", in *Midwest Studies in Philosophy*, XLI, 2017, 7-26, here p. 12, 13.

[30] Heidegger, *op.cit.,* 2006, 175/136, my translation.

[31] Heidegger, *op.cit.,* 1962, p. 174.

[32] *Ibid.,* 1962, p. 175.

[33] Heidegger, *op.cit.,* 1983, p. 91.

[34] *Ibid.,* p. 95.

a *definitive* affective state that bears a *particular situational* name. He, however, shows that a *certain known situation* can also trigger off a certain behaviour. Fear, sadness, joy, hope, despair, weariness etc. are some examples that may correspond to a familiar event or a certain temporal context.[35]

Heidegger analysed fear in terms of: "that in the face of which we fear", "fearing" and "that about which we fear". In the first subtitle, the "fearful" turned out to be the "that in the face of which we fear"; it has the character of "threat" and it can, in turn, be fearful in diverse ways (as *present-at-hand*, as *ready-to-hand*, or as co-*Dasein*). Rather than expressing plurality the diversity expresses a specificity, a given determination that we derive from its properties: "1. What we encounter has detrimentality as its kind of involvement. It shows itself within a context of involvements. 2. The target of this detrimentality is a *definite* range of what can be affected by it; thus the detrimentality is itself made *definite,* and come from *a definite region.* 3. The region itself is *well known* as such, and so is that which is coming from it; but that which is coming from it has something 'queer' about it."[36] With all of this, however, we see that in fear, the world appears in a *specific, definite*, affectively coloured view that enables a *certain* field of action. This is exactly what is meant in the second subtitle of *Fearing as such:* "Fearing as a slumbering possibility of finding oneself being-in-the-world" for it gives a *specific* access to the world. This fear is not a case of a shadowness but, as Jan Slaby expresses, "consists in a *specific affective awareness* of something as threatening"[37]. More so, in the third, "that about which we fear", the disclosure has the purpose of "uncovering *Dasein* predominantly in a private way"[38]. Besides this disclosure of fear goes hand in hand with a closure. That means that *Dasein* does not have access to moods such as grief or joy whenever it fears. In the case of a person who is sad, the same can be observed: "He closes himself off, he becomes inaccessible." His inaccessibility is explicit since "*the way we* can be with him and he with us is *different*. It is this sadness that determines this 'how' we are together."[39] In other words, sadness as a mood is the specific way of opening the world to us. That is why it is part of the sadness of this sad person to be with us in his mood in a peculiar way that is not a usual way to be with. *This again shows that in Heidegger mood corresponds to a singularity, i.e. a determined*[40] *mode of "this or that way", of relationship to the world.*

This interpretation becomes complicated, however, as soon as we continue our reading of Heidegger's *Grundbegriffe der Metaphysik*: „At the same time it expresses that it is, in a way, not there. Strange, mood

[35] Heidegger, *op.cit.,* 2006, p. 345.

[36] Heidegger, *op.cit.,* 1962, p. 179.

[37] Jan Slaby, *Gefühle und Weltbezug*, Paderborn: Mentis, 2008, p. 132.

[38] Heidegger, *op.cit.,* 2006, p. 141.

[39] Heidegger, *op.cit.,* 1983, p. 99.

[40] Heidegger distinguishes three types of boredom. The first is explicitly understood *with a determinate content*. With this first type ("getting bored of…"), there is a "certain boring" that implies for instance *this* or *that*, i.e. *this writing style*, *that way of reading this book* Heidegger, *op.cit.,* 1983, p. 172. However, this first type must be distinguished from the second, as we will shortly do.

is something that *is there* and at the same time *not there*."[41] This reminds us again of the pairs of terms with which mood was already associated: tunedness and untunedness, returning and turning away, disclosure and closure. Each opposite pair forms Heidegger's understanding of mood and is reflected in the essence of *Dasein*: "If mood is something that has the character of *being there* and *not-being there*, then it has to do *with* the innermost essence of human existence, *with* its *Dasein*."[42]

This intertwining in mood itself approximates what appears in Robert Musil's description of mental life, the nature of which is descriptively difficult because it is interwoven.[43] Mental and affective lives can hide within it unorganized and unspecific states: "The peculiar way in which feeling is both *present* and *not-present* can be expressed through a comparison that one has to imagine its growing and becoming based on the image of a forest, and not based on the image of a tree"[44]. The attribution of "present" and "not present" correspond to Heidegger's terms: "being there (*Da-sein*) and "not being there" (*nicht Dasein*). Musil goes on to discriminate between feelings and moods. Whereas feeling goes hand in hand with "something specific*"* (this understanding differs in a robust manner from Richirs depiction of affections*)*, "that arises from a situation in life, has a goal and is expressed in a more or less unambiguous behaviour", mood is the opposite: "it is *comprehensive, aimless, spread out, inactive*, contains in all clarity something *indeterminate* and is ready to pour itself onto any object." For Musil, feeling is a determinate way of relating-to-something; it draws us into action. But mood "only lets us participate behind *a coloured window.*"[45] On this ground, we can hypothetise Heidegger's presence and non-presence above as refering to the indeterminacy of mood.

But can this claim be justified in Heidegger's thoughts? Heidegger wrote that "that in the face of which one is anxious" is incapable of having an involvement; its threatening does not have "the character of *a definite* detrimentality…which reaches it with definite regard to a special factical potentiality-for-Being. *That in the face of which one is anxious is completely indefinite*."[46] In other words, there is not concrete directedness to an object, to a specific event in anxiety. Anxiety therefore sees "not a specific 'here' and 'there' from which the threatening approaches."[47] The threatening is "nowhere" and brings with it a sense of "uncanniness" and "not being home". Hence we speak of the indeterminacy of anxiety. Same is true of the second and the third form of boredom.[48] *Based on this example, one can say that mood also contains a plurality*. *We mean in that sense diverse affective contents*

[41] Heidegger, *op.cit.,* 1983, p. 91.

[42] Heidegger, *op.cit.,* 2006, p. 95-96.

[43] Robert Musil, *Der Mann ohne Eigenschaften*, Novel/vol. 11, Reinbeck am Hamburg: Rowohlt Verlag, 1978, p. 1169.

[44] *Ibid.,* p.1171.

[45] *Ibid.,* p. 1197.

[46] Heidegger, *op.cit.,* 1962, p. 231.

[47] Heidegger, *op.cit.,* 2006, p. 186.

[48] The second type of boredom happens, even when nothing boring is available (you cannot even name for example "this or that book" as actually boring); it has the „character of *I do not know what* [….] so if we say: in the second case, there is nothing boring, then that means now: There is no *assignable* entity or rather no *determinate* connection between such thing which bores us directly." Heidegger, *op.cit.,*

– interwoven in each other – that do not yet have a specific name. Is anxiety then really understood that way, as purely indeterminate? There are clues in Heidegger that anxiety is both like a determinate "emotion" (in the sense of our normal way of saying that "this or that person is anxious about an information") as well as an indeterminate feeling[49] in the senses analysed in Heidegger above. Thus we see also that mood, despite its determinate understanding, *could also be indeterminate and plural in Heidegger.*

In so doing affectivity is rendered ambiguous in Heidegger's account. The ambiguity resides precisely in the fact that mood appeared to *possess on the one hand a specific[50]concrete content (e.g. fear, love, jealousy, joy etc.) and that it refers on the other hand to diffuse, nebulous affective situations.* Heidegger seemed to have emotions in his mind while articulating some of the moods. He lumped both in one pot, though the connection between mood and emotions were never worked-out[51]. So for the "fact that fear is directed at a specific worldly entity can be taken as evidence in support of the claim that fear, even in Heidegger's understanding, is an emotion and not a mood."[52] Even when Heidegger speaks of alteration or *the awakeneing* of affective episodes from neutral, not yet accessible, but shadow-like background findingness that seem just inaccessible to us, it is still obvious that he wants to account for how moods (e.g. the basic mood of anxiety) could serve as the basis out of which other moods (e.g. fear) could emerge. Thus fear "is grounded rather in anxiety, which in turn is what first makes fear possi-ble."[53] Anxiety, depicted as "not-at-home" is for Heidegger the "more primordial phenomenon" than fear.[54] But fear itself can in turn be altered into other moods: it can become "alarm", "dread" and "terror,"[55] in the same way like

1983, p. 172-173, my translation. The third type, "the profound boredom", also has a deeper original vagueness, which is evident in the expression: "it is boring" (or read as: "*one* is bored of *it*"), whereby the "it" (*es*) and that "one" (*man*) show an anonymous indefiniteness. *Ibid.* p. 204.

[49] Heidegger did not account for feeling; he rather lumped all forms of affectivity together in the catch-word "mood".

[50] This recalls the "appraisal theories" in the philosophy of emotion, where for instance Lazarus in his "molecular appraisals" speaks of the "core relational theme" which expresses how an emotion articulates a certain kind of well-being. Anger und Anxiety for example express: "a demeaning offense against me" and my "facing uncertain, existential threat "respectively, whereas love and jealousy express "desiring or participating in affection, usually but not necessarily reciprocated" and "wanting what someone else has" respectively. Jesse Prinz, Gut Reactions: A Perceptual Theory of Emotion, Oxford: Oxford University Press 2004, p. 14. Each emotion has its specific object or it concrete content to which it is intentionally related. We fear the threatening in the world which springs from a *specific direction*.

[51] Andreas Elpidorou & Lauren Freeman, "Affectivity in Heidegger I Moods and Emotions in Being and Time," in *Philosophy Compass* 10/10 2015, pp. 661-671, here p. 668. DOI: 10.1111/phc3.12236

[52] *Ibid., p.* 668.

[53] Heidegger, *op.cit.,* 1962, p.230.

[54] *Ibid.,* p. 234.

[55] Heidegger, *op.cit.,* 2006, p. 142.

boredom.[56] In all these instances, Heidegger is only concerned of the transformation of mood into other moods. For Elpidorou and Freeman, the different variations in the case of fear, "further supports" the "pronouncement": fear, even in Hiedegger's account "is an emotion, and not a mood."[57] Thus we can see that Heidegger's account of affectivity is problematic in several ways.

Difficulties with Heidegger's account of affectivity and its ontological condensation

Despite Heidegger's enormous contribution to the affective life, one can safely conclude that the articulation of affectivity still remains *problematic* in his account**.** First, as we have seen, he could not systematically discriminate those phenomenal moments in which affectivity could be understood as plural and singular respectively. He was at the verge of understanding how a determinate affective episode (eg. emotions) could emerge from indeterminate affective episodes (e.g. feelings). To that extent he remained like the biblical Moses, who saw the Promised Land but could not step into it. Secondly, though the analysis of findingness/mood revealed that phenomenon was not completely forgotten by Heidegger, yet this analysis of mood was merged into the Being of entities in conforming to the general plan of *Being and Time*. If "phenomena" was "understood" in the light of Being, then that which mood (affectivity) should articulate phenomenologically was buried in the ontological constitution of Being[58], as if it were *implicit* like Kant's formal intuitions of time and space, and could only have to be made phenomenologically *explicit.*[59] In a word ontology prevails in Heidegger's account of affectivity such that no room is accorded the *phenomenal.*

Richir's critical reading of Heidegger gives us at least four clues to this claim of ontological density in Heidegger's articulation of affectivity. First, according to Richir, the subject of affectivity, *Dasein*, is not a phenomenological but an ontological category, full of existence and empty of interiority and experience. Thus mood cannot justifiably open the world of *Dasein* if it blanks out or closes ontic experiential (or otherweise phenomenal) aspects and the affective interior life (designated by Augustine as *motus animae* and *passio animae*[60]). Consider also Maine de Biran's concern with the intimate mode of our sensual Being,

[56] In many instances, Heidegger points to the transformation of boredom into other forms (Heidegger, *op.cit.,* 1983, p. 206) or to the transformation of the first and second forms of boredom into the third form (*Ibid*, p. 208). The case of the transformation of profound boredom into despair also finds a place here (*Ibid*, p. 211)

[57] Elpidorou & Freeman, *op.cit.,* 2015, p. 668.

[58] Heidegger, *op.cit.,* 1983, pp. 90, 91.

[59] John Haugeland, Dasein Disclosed: John Haugeland's Heidegger, Rouse Joseph (ed.) Cambridge, Massachusetts and London, England 2013, p. 70.

[60] Aurelius Augustus. 2017. The Trinity, edited by John R Rotelle, New York: New City Press; Augustine Aurelius. 1998. The City of God, edited and translated by R. W. Dyson, Cambridge: Cambridge University Press; Johannes Brachtendorf. 1997. Cicero and Augustine on the Passions, in *Revue des Études Augustiniennes*, 43 (1997), 289-308.

its familiarity, its capacity to colour things or images, its evocation of affective shadows in us etc. which for Richir is very essential for affectivity[61]. Since for Richir interiority is crucial for an account of mood – for him only this interiority makes the phenomenological encounter of the world possible[62] – and since it is lacking in Heidegger's *Dasein*, Richir attributes an existential solipsism[63] to the performance of Heidegger's moods. Secondly, this existential solipsism is also expressed in the temporal restriction of affectivity in *beenness* (*Gewesensheit*). According to Richir, findingness (*Befindlichkeit*), as "based primarily on the past" (*Gewesenheit, Vergangenheit*[64]) captures the completed finality of affectivity: that it is locked up in the past. Besides the temporality of *findingness* (*Befindlichkeit*) modifies the temporality of *mood* (*Stimmung*) which belongs to the future and the present[65] and thereby making mood (the phenomenological) to be based/dependent on findingness (the ontological). Because of the ontological density/primacy of affectivity[66] in the past, Richir accused Heidegger's affectivity of "fundamental passivity"[67] which is illustrated in profound boredom or in the eternal repeatability of anxiety since the present and future are already exhausted in beenness[68] and in the fact that this repeatability causes a paralysis of *sense* which lies beyond the present. From this we could go to a third clue: If the ontological has the upper hand in affectivity and if affectivity portrays *Dasein* as lying in the past/beenness, it also means that the subject is lacking in the capacity to receive (transpassibility, if we fall back to Henri Maldiney[69]) in the face of an event. Because each event (such as an encounter of the other as person) brings with it something unpredictable, unexpected and surprising that only transpassibility can make subjectively liveable, Heidegger's account of affectivity, residing in the lethargy of an ontological condensation and in beenness, is lacking not only in the capacity of receiving events[70], but also in the articulation of an encounter of the other. With this we come to a fourth clue, namely that, for Richir, the term „Being with" (*Mitsein*) was more of a verbal solution, an abstract existential rather than one that articulates a concrete experience[71].

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61 Pierre Maine de Biran, *Mémoire sur la decomposition de la pensée, Œuvres completes* (volumes 111), Paris : Vrin 1988, p.92.

62 Marc Richir, « *Stimmung, Verstimmung et Leiblichkeit dans la Schizophrenie* », in Manuel R.D. (editor), *Conferencias de Filosofia 11*, Campo das Letras, 2000, 61.

63 See this citation: „Anxiety individualizes Dasein and thus discloses it as '*solus ipse*' "(Heidegger, *op.cit.,* 1962, pp 188-189; Marc Richir, *Méditations Phénoménologiques*, Grenoble : Jerôme Million, 1992, p. 41).

64 Heidegger, *op.cit.,* 2006, p. 340.

65 Heidegger, *op.cit.,* 1962, p. 390.

66 *That "mood is always already there",* as Heidegger always says, *is a clue to this dense ontology in Heidegger's investigation of affectivity.*

67 Richir, *op.cit.,* 1992, p. 43.

68 *Ibid.*

69 Henri Maldiney, *Penser l'homme et la folie,* Grenoble: Éditions Jérôme Million Maldiney, 1991, p. 17.

70 Richir, *op.cit.,* 1992, pp. 48-49.

71 *Ibid.,* p. 41.

3.
Recuperating the phenomenality of affectivity through corporeality

The above problematics give rise to the question how one could then recuperate the phenomenon from a condensed metaphysics/ontology of affectivity? This question has been posed and responded to elsewhere, in relation to the perception of artworks[72]. In line with our concerns in this paper, we only emphasize that it is only the phenomenological, which is required, according to Richir, for the *aporias* of the metaphysical/ontological, and which understands itself as the *reverse side* (*l'envers*) of the metaphysical/ontological – in contrast to Heidegger's understanding of it as "the science of the Being of entities"[73]– that can accord us access to the phenomenon that is buried in ontology and thereby recuperating the *phenomenality* of affectivity. In so doing, Richir does not place a ban on the ontological, but recognises the mutual tension between the two worlds (the phenomenological and the ontological), while at the same time highlighting that they were different registers and ought to be kept apart. With this, he is able to account for – this is the first problematic above – what seems lacking in Heidegger, i.e. showing how affective states could be both indeterminate (plural) and determinate (singular). The indetermination of affectivity (e.g. feelings, affections) is grounded on what he calls the basis of phenomenology: corporeality (the platonian *chora*, i.e. *Leiblichkeit*) and the *phantasia-affection*[74]; the determinate affectivity (e.g. the emotion of love, jealousy etc.) is articulated by what he calls the symbolic institution[75]. He understands the movement from one register (the indeterminate) to the other (the determinate) as an *architectonic transposition* which further could be explained in terms of a movement from pre-reflectivity of affective states to their reflective cognition (in emotional episodes).

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[72] Dominic Ekweariri, "Appreciation of Art as a Perception sui generis: Introducing Richir's Concept of the "Perceptive" Phantasia", in *Front. Psychol.,* 12:576608, 2021, doi: 10.3389/fpsyg.2021.576608.

[73] Heidegger, *op.cit.,* 1962, p. 61.

[74] Dominic, Ekweariri, « *La Χώρα (Leiblichkeit) comme la base de la phénoménologie* », in Alexander Schnell (editor), *Annale de Phénoménologie*, Association Internationale de Phénoménologie, 2020, pp. 326-356.

[75] For Richir the symbolic institution refers to the "totality of symbolic systems" - such as language, rites, action, practice, emotions, representations, representations such as in art or in the media, etc. – which code "being, actions, belief and thought " of people without the latter having intentionally or consciously selected or decided to do so. They are always there since our *being in the world.* Marc Richir, *L'expérience du penser : Phénoménologie, philosophie, mythologie.* Grenoble : Éditions Jérôme Million 1996, p. 14. For an elaborate and extensive reading see also Flock, Philip Bastian, *Das Phänomenologische und das Symbolische: Marc Richirs Phänomenologie der Sinnbildung in Auseinandersetzung mit dem symbolischen Denken*, Inaugural-Dissertation zur Erlangung des Doktorgrades der Philosophie im Fachbereich A Geistes und Kulturwissenschaften der Bergischen Universität Wuppertal 2017.

To overcome the ontological condensations above, Richir, while following Sartre's criticism of Heidegger[76] for failing to give a detailed account of corporeality (*Leiblichkeit*), hinted that not only that *corporeality* could accord interiority – Husserl's *Innenleiblichkeit* – to the subject of affectivity; but also it renders *the phenomenological encounter of the world/and events affectively possible* and thereby overcoming what Heidegger's treatment of *Mitsein* (intersubjectivity) has failed to articulate: concrete experience and the robustness of emotional face to face encounters[77]. I have argued elsewhere against Richir that it is untenable to totally deny Heidegger's ontological condensation (of being-in-the-world) of all levels of embodiment for some obvious reasons: Heidegger wanted to avoid a *Cartesian dualism* between inside and outside which would for instance see in *blushing* (*Erötten*) caused by an embarrassing condition a psychic and a somatic phenomenon, and there psychologising and technologysing/objectifying[78] *Dasein*. He wanted to show how the body is immersed/embedded in the world with a sense of *immediacy*.[79] Reading, writing for instance, are forms of the body's *being in the world*. Blushing might mirror how *Dasein* stands in relationship to his co-*Dasein* (in *Mitsein*) in the world.

Nevertheless, such an account will not mirror how the subject of blushing got affectively "infected"/ "contaminated" or how subjects come to share their joys together via emotional contagion or even how I come to understand the emotion of the other via empathy. This is the subtle point that Richir wants to explain when he speaks of *affective communicative contagion* by which bodily subjects experience a *circulation of affectivity*[80] running unbrokenly from one inner-body to its outside-body and then to the other's inner-body and her outside body via feeling (*ressentir*). I experience joy which I bodily communicate to the person

[76] Martin Heidegger, Zollikoner Seminare. Medard Boss (editor), Frankfurt am Main: Vittorio Klostermann 1987.

[77] In line with Richir's criticisms of the *Mitsein*, we add those of Galagher and Jacobson. They criticized Heidegger's intersubjectivity for not thematizing the face to face encounter. Schau Gallagher & Rebecca Seté Jacobson, Heidegger and social cognition, in J. Kiverstein & M. Wheeler (Eds.), Heidegger and cognitive science, New York: Palgrave Macmillan 2012, pp. 213–245. The importance of the face to face encounter has been affirmed in recent studies of collective intentionality and shared emotions. See Schaun Gallagher, The practice of mind: Theory, simulation or primary interaction?, in Journal of Consciousness Studies, 8(5–7) 2001, 83–108; Schaun Gallagher, How the body shapes the mind. Oxford: Clarendon Press 2005; Colwyn Trevarthen, Communication and Cooperation in Early Infancy: A Description of Primary Intersubjectivity, in M. Bullowa (Ed.), Before Speech: The Beginning of Interpersonal Communication. Cambridge: UP 1979.

[78] Kevin Aho, "Acceleration and Time Pathologies", in Time and Society, 16(1) 2007, pp. 25-42. https://doi.org/10.1177/0961463X07074100 acccessed on: 8. 3. 2021; See also Kevin Aho, Heidegger's Neglect of the Body Albany, NY: Sunny Press 2009.

[79] Peters Meindert, "Heidegger's embodied others: on critique of the body and 'intersubjectivity,' in Being and Time", in Phenom Cogni Sci, 18 2019, Springers Phenom, pp. 441-459; https://doi.org/10.1007/s11097-018-9580-0 accessed on: 27.02.2021.

[80] Marc Richir, « *Des phénomènes du langage* », in Maria José Cantista (Editor), in *Perspectivas o sujeto et racionalidade,* Porto: Campo de Lettras 2005°, pp. 95-107, p. 96.

around me. S/he immediately experiences this same joy and I immediately embody his/her joy as I experience that s/he experienced a great joy. While running through and permeating the embodied subjects the prevailing emotion is experienced in a way that directly short-circuits[81] "language" (*langue*[82]), though mobilizing the "language phenomenon" *(langage*[83]).

According to the last statement above, if corporeality makes a phenomenological encounter of the world affectively possible, then a corporeal affectivity has to articulate the dimension of sense[84] *in the making* (*sens se faisant*). The world that is affectively opened to me, is a world that confers *sense* (or an inchoate meaning), even in the encounter of the other. In *Meditations Phénoménologiques* Richir writes that that which is experienced, such as the joy between two humans, is nothing other than the sense itself, "as incarnated in corporeality".[85] Since the sense depicts for Richir that which is affectively lived in the body, and since this affective sense does not articulate what belongs to the order of being, but that which exceeds our capacity to be,[86] we can say it is that which, given its enigmatic character, relativizes the ontological order of pure determination. The order of being is exceeded for instance in the fact that when you communicate yourself affectively to me in the context of an intersubjective encounter, you do not yourself master all your joy or your sadness: in other words, the indeterminate sense of your affective state partly escapes you; on the other hand, in any way I might react to your affective communication, I would not have mastered my reactions; your affective state "wins me despite me, and invades me to rejoice or to despair."[87] This means also that the sense which the affective communication is all about escapes or overwhelms me. This *sense in the making*, in its indeterminacy, is to affections, what meaning in its determinacy, is to affects.

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81 Richir, *op.cit.,* 2000, p.63.

82 This refers to the traditional representations or signs that every language carries. Thus the signs of the language "designate objects intuitioned in perception or imagination"; "they are, as Husserl says, purely symbolic" (Richir, *op.cit.,* 2000, p. 96). The words "rot", "rouge", "red" in both german, french and english respectively are signs for the a specific colour that represents blood in the world. The signs therefore require a symbolically institutionalized language in order to "express" the objects/or categories of *being* which they designate in the world.

83 Richir understands language phenomenon as *plural phenomena*. It refers to those phenomena which can only be understood in relation to *sense in the making.* They have already opened themselves to the subject and are also trying to establish themselves.

84 *Sense in the making* is what every language phenomenon (*langage*) carries, while seeking to express itself. It is thus conveyed by the language phenomenon without which it cannot be. It is that which emerges each time I have an idea or a feeling and I want to communicate. Richir describes sense in the making as an enigma because on the one hand I embody it and on the other hand it escapes me. (Richir, *op.cit.,* 2006a, p. 96-97). To escape me implies simply that I cannot employ language to captures it since there is an aspect of it that is evasive. The most primitive aspect of meaning is evasive and non-positional; it appears to us as *sense.*

85 Richir, *op.cit.,* 1992, p. 36.

86 *Ibid.,*p. 49.

87 Richir, *op.cit.,* 2000, p. 62.

Affectivity as Affection and Affects

If we now turn to the completely positive development of affectivity in Richir, we are dealing with two concepts. The first is that of "affection" (*l'affection* or what Richir calls elsewhere "mood" or "primitive mood"[88]). So that we would be well positioned to understand the place of *affection* in Richir's phenomenology, let us note that Richir accords corporeality – which he had understood as the platonian *chora* – a dualistic character: corporeality is *schematic* and *proto-ontological*; or it is the "milieu" of *phantasia* and *affections.* We shall not be able to give a detailed account of these concepts here.

By proto-ontological he means that most primitive form of corporeality that escapes postionality in a historical time. Rather than capturing something that could be located in the historical past or future, Richir says that in the proto-ontological, the *transcendental past* (*the* immemorial) and the *transcendental* future (*the* immature) intersect in a distance (*en écart*). Inspired by Levinas's *immemorial* which proposed a form of temporal phenomenon beyond[89] the limitations of Heidegger's *being* and positional finitude of time, Richir depicts the proto-ontological as the archaic ground of affectivity in its most obscurely objectless and fleeting movement, where all forms of *fixed temporality* (e.g. historical past/beennes) and *being* is relativized.[90] So the proto-ontological characterizes the register of corporeal affective events, which is more original than Heidegger's affectivity (mood / findingness). For Richir this proto-ontological is the very lively indeterminate basis/background of *being-in-the-world.* It is never in *act* but implies *a potency to be* and goes beyond all possibilities that would be *thetically* accessible to the subject in the *present*. The name for the phenomenon at play at this level of operation is *affection.*

Phenomenological schematism which, in accord with Richir's interpretation of Plato's *Timeus,* results from the shaking of the *chora* (*corporeality*) by the elements, leaves the traces of the *phantasmata* (In *Timeus*,[91] this refers to the state of dream, with one leg in the world of being and the other in the world of non-being; though it seems to depict an *image* about something, it is nevertheless not in any part of the world), i.e. the *phantasia*[92] in it. The *phantasia has* nothing of its own, not even that of which it is supposed to be image. The

[88] Richir *op.cit.,* 2006a, p. 96.

[89] Emmanuel Levinas, *Autrement qu'être ou au-delà de l'essence*, Paris : Kluver Academic 1978, p. 141. See also Paulette Kayser, Emmanuel Levinas : *La trace du féminine*, Paris : Presse universitaire 2000.

[90] Marc Richir, *Fragments phénoménologique sur le temps et l'espace*, Grenoble : Éditions Jérôme Million 2006.

[91] Platon, "Timaios", Otto Apelt (editor), in Platon Sämtliche Dialoge, volume VI. Hamburg: Felix Meiner Verlag 1993, p. 52/152.

[92] The *phantasie* is distinguished by Husserl from imagination. While the *phantasie* is involved in the representation of an interior object the imaginations functions in the presentation of an external object (*Bildsujet*) via a copy (*Bildobjekt*). Later, Husserl vaccilated, undecided, between conferring the *phantasie* an internal object (*Bildobjekt*) or not, while ending up for the former. Richir's radicalisation of phenomenology is in part due to his refusal of any *Bildobjekts* and intentionality for the *phantasia*. The result is that henceforth

phenomenological schematismus therefore indicates that only movements of instability and always fleeting, changing *appearances*[93] are captured in the archaic non-thetic body (*Leib*). Thus the body in its most archaic form is schematic and ontologic or simply put: *phantasia-affection,* because the apperception of *phantasia* implicates the apperception of *affection*. When I listen to music for instance, it is a corporeal activity in which the embodied music wants to communicate/speak something to me. What it wants to speak is objectless (pre-reflexiv) as fleeting appearances (*phantasia* which is the basis of what we have described above as *sense and language phenomenon*) I cannot thetically position as this or that (*language*) in the moment of just enjoying the music. However, I just enjoy the music. But this fleeting appearance of a certain objectless world (*phantasia*) goes hand in hand with a corresponding fleeting affection of the mind (*affection*) which I cannot describe as this or that emotion. It is simply a sort of *primitive feeling*[94] – distinguishable from collective feelings[95] – stirred up in the body by the music I have incarnated. Perhaps one could say, as Sartre did of emotional consciousness, "that this feeling is "at first non-reflective, and upon that plane it cannot be consciousness of itself"[96] or, as Hans Bernhard Schmid writes, "the feeling is not a localized experience, it is a feeling which one feels, to use Descartes' expression, "as if they were in the soul." "[97]

If Richir later claimed that affection *does not coincide with itself*, but remains in contact with itself, albeit "*through a distance* that opens up in it,"[98] it is because he wants to describe a primitive aspect of affectivity

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the *phantasia* forms the archaic base of phenomenology from which the intentionality of objects could be generated through an architectonic transposition. This happens through the movement of the imagination. See Edmund Husserl, *Phantasie, Bildbewusstsein, Erinnerung: Zur Phänomenologie der anschaulichen Vergegenwärtigungen*, Eduard Marbach (editor), Den Haag: Martinus Nijhoff; Alexander Schnell, *Le sens se faisant: Marc Richir et la refondation de la phénoménologie transcendantale*, Bruxelles : Édition Ousia 2011, pp. 65-66. See also Dominic Ekweariri, *Leiblichkeit comme ouverture au monde chez Marc Richir,* in Studia Phenomenologica 2021, in the press.

93 Marc, Richir, *Phénoménologie en Esquisses : Nouvelles Fondations*, Grenoble : Éditions Jérôme Million 2000.

94 Richir, *op.cit.* 2006, p. 277: "second affect appearing exogenous "as distinct from "second concrete but primitive… endogenous affect." This citation shows that affection is not yet concrete and cannot explain any category of *being* at this stage. It depicts the interior immediacy of a pre-reflexive affective movement of the soul as evident feeling.

95 At this stage we are articulating not a collective's feelings, as defended by Hans Bernhard Schmid following Max Scheler, in which feelings as body-related are "shared among the members in the way of the member's plural pre-reflecitive self-awarenenss of their emotional concerns as theirs." Hans Bernhard Schmid, "Collective Emotions, Phenomenology, Ontology, and Ideology: What should we learn from Max Scheler's War Propaganda", in Thaumàzein, 3 2015, pp. 103-119, here p. 108; doi: /10.13136/thau.v3i0.44; See also Scheler, *op.cit.,* 2009 [1913];

96 Jean-Paul Sartre, *Esquisse d'une théorie des émotions*. Paris : Hermann ; Sketch for a Theory of the Emotions, trnas, P. Mairet, London: Routledge Classics, 1938/2004, p. 34.

97 Schmid, *op.cit.,* 2015, p. 108.

98 Richir, *op.cit.,* 2000, p. 312.

that subverts the metaphysical/ontological, through its indeterminacy,[99] an indetermination which roots it profoundly in the primordial layer of *phantasia.* The distance (*écart*) mentioned above, has been recently understood in Richirian phenomenology as the hermeneutical key[100] to interprete the *excess of phenomenon*, i.e. the indetermination of lived experience as it occurs in affectivity, sense/meaning, perception etc. In the context of Richir's criticisms of Heidegger, this distance is precisely the distance that was lacking in Heidegger's analysis – with the consequence that affectivity is grounded in the past, finalised time frame as a whole, as with *profound boredom*. The indetermination of affection characterizes the plurality of affective phenomenon because it expresses the plurality of *indeterminate but determinable* worlds[101] opened to the feeling subject. If according to Richir, the indetermination of affectivity is rooted in *phantasiai-affections*, which as we have seen, is purely corporeal, then it means that this account should serve as a positive corrective to the inadequacies of the Heideggerian account we have highlighted. In doing so, the *phenomenal* would have been recuperated.

However, the fact that "affection" portrays the dimension of *indeterminate* background feelings (Richir uses "*é–motion*" to emphasize its eternal mobility) does not mean that "affection" cannot be *determined*. Through a transposition it becomes[102] affects, just as the "second affect second appearing exogenous"[103] functions as a "kickstart" (*Anstoß*) that gives rise to external sensation. This transposition can take place through an imagination or via a reflective activity. Only then can affection recognise itself and could be articulated by *language.* We cite Richir in details to this regard:

> If one wonders about the phenomenology of affection, it happens that the latter seems *originally innocent or naive,* that it cannot be recovered…, if not later, or too late, in affect, therefore that it surprises, or "betrays" some unexpected movement of the "soul", and that, however, as soon as it recovers itself, it "knows" itself, knows that it is it which has been transposed into the corresponding affect, which is present.[104]

In the above passage, Richir describes affection as an originally naïve, evasive phenomenon that is only recovered through some conscious acts of the mind. In that moment affects betrays the innocence and the evasiveness of affections, which occurs in a temporalization "absent"/without present (*sans présent*), by making them objects of cognition, changing their temporality from being "absent" to being present. The

[99] *Ibid.,* p. 311.

[100] Dominic Ekweariri, *op.cit., Leib und Leiblichkeit bei Marc Richir, 2021*.

[101] Sacha Carlson, « Le langage, l'affectivité et le hors langage (Richir, Heidegger) », in Divination : Studia culturologica series, vol. 41, 2015, p. 63.

[102] Slaby has defended the thesis that moods (and background feelings) are less specific, but through a gradual dynamical transformation they could turn to be more specific emotions. (Slaby, *op.cit.,* 2008, pp. 166-167) But one of the huge differences with Richir is that Slaby defended the idea that background feelings are intentional.

[103] Marc Richir, *Fragments Phénoménologique sur le Temps et l'Espace,* Grenoble: Éditions Jérome Million 2006, p.277.

[104] *Ibid.,* p.311. My translation.

consequence is that, in that sense, I could describe what my feelings of hearing music are like when I use a particular, *determinate* concept to describe what I feel about the music. For example I could say it is a sorrowful song in which sorrow describes a determinate ocurent emotion (*i.e.*the "second concrete but primitive endogenous affect") that could be attributed to my stand in relation with the world. In affects, no longer do I describe what I feel with *sense* or *language phenomenon*. Rather affects are captured by the description of language or words, reflectively – and the corresponding language used conferes *meaning or value* to the affective episode and this meaning/value thereby describes how I stand in relation to the world. Sorrow, joy, love, jealousy, contempt are emotions which describe the world in *a determinate sense*. All this takes place in *becoming conscious* – this is richirian version of the Heideggerian *awakening of mood* mentioned in an earlier section – of feelings that are formed in affection which now bear an identity. So this second dimension marks the *singularity of the world of affectivity* as it articulates the dimension of the symbolic institution. With this, we have responded to the question posed above, how singularity and plurality correspond together in affectivity in which Heidegger lumped mood and emotions together in one pot.

In the guise of a Conclusion

In summary, based on these *two worlds* (the plural/indeterminate/phenomenal and the singular/determinate/ontological) open to us, we could say that Richir represents the first while Heidegger represents the second. If Richir is attributed the *ontic phenomenological dimension* and Heidegger the *ontological dimension*, one can ask whether Richir himself does not fall into another type of ditch: *phenomenal solipsism* because of his emphasis on the ontic/phenomenological aspect of affectivity. We do not have sufficient space to go into this question. Suffice it to say that not only is *Dasein in the world* (ontology), but also the world is in *Dasein* (ontic). The World is in *Dasein*, when he, for instance, participates in an aesthetic experience: "He ceases to be his ordinary self, and the picture or building, stature, landscape, or aesthetic actuality is no longer outside of him."[105] "No longer outside of him" indicates that the world is in *Dasein* and to that extent too, *Dasein* is transformed; he is stirred. In such moments, "the power of Being grasps and holds our attention, releases us to the thing in such a way that we become one with the thing. Then *we think from* rather than at the thing"[106]. "Thinking from" also indicates the appropriation of that world which is now in us.

[105] Berenson Bernard, Aesthetic and History, New York: Pantheon, 1948, p. 93.

[106] David Martin, The Humanities through the arts. NY: Mc Graw Hill, 1974, p. 98.

Contrariwise, *Dasein* is in the world through his bodily, affective coloration of it. This is why we evoke emotions corresponding to specific social institutions: the comedian's work, even if s/he herself/himself were sad,[107] is to colour the ambience of the audience with a mixture of fun, laughter, joy, exhilaration etc. In the context of a funeral ceremony, attendees are to bring grief, sadness and mourning. Stewards, sales personals, receptionists etc. colour their work space with cheerfulness, courtesy and friendliness to make their customers feel at home. This is the functional aspect of emotion that Sartre hinted in his *Sketch for a Theory of the Emotions* when he wrote that emotion "is a transformation of the world."[108] Let us note that it is all about our transformation of the world, our coloration of it through the emotions. The emotions arise often when everything in the world appear so exacting, when we are faced with difficulties, though we must have to act. He continues: "So then we try to change the world… to live it as though the relations between things and their potentialities were not governed by deterministic processes but by magic."[109] The keynote here is magical and emotion portrays the world in terms of magic. The world we encountered before we coloured it with a given emotion is different from the one we now see from a certain point of view. Elpidorou comments on this citation showing that emotional consciousness does not bring a material transformation of the world since the world continues to be the world. From that material perspective the world remained unchanged. Nevertheless, it is our emotional consciousness of disgust, for instance, which "changes innocuous objects into repulsive ones," whereas our emotional consciousness of "anxiety renders familiar situations overwhelming,"[110] the same way our emotional consciousness of joy evoked by the comedian, sees everything optimistically. This is a way *Dasein* can be in his world, he transforms the world with emotional consciousness. All these show, as Richir wrote, that affectivity is susceptible to being symbolically instituted in every society.[111]

If *Dasein* is in the world (ontology) and the world is in *Dasein* (ontic/phenomenality), then all accounts of affectivity should not be one-sided but endeavour to include both sides. This is what Richir, following the phenomenological tradition since Husserl, has done to complement the densely rich ontological account of Heidegger.

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EXPÉRIMENTER LA PENSÉE EN SCHÉMAS-IMAGES. DES ADOLESCENTS S'INTERROGENT « D'OÙ VIENNENT LES PENSÉES ? »

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ABSTRACT. Experimenting Thinking in Image Schemas. Teenagers are Wondering "Where Do Thoughts Come From?". An intellectual view of philosophy as an activity focusing on understanding abstract concepts and their relationships deprives philosophical exercise of the participation of the body and senses. If we reject the mind-body dualism, as Dewey, Johnson, etc. did, then we are constantly engaged in interactions with the world and others, and can thus consider the act of thinking from our own experiences. Inspired by an experimentalist conception of school and life, as well as the method of inquiry developed by Dewey, the Philosophy for Children program provides an inquiry process that invites participants to conceptualize and reason philosophically in a collaborative manner. Do these practices implement an embodied cognition? To find out, we selected a discussion as a case study and analyzed it based on the observation that the issue to be discussed by the participants - "where do thoughts come from?" contains two *image schemas*: *path* (come from) and *source* (where). We have noted a variety and a significant number of expressions ("they come from within", "they come from what happens outside", etc.) whose analysis enhances a better understanding of how an experience of understanding the origins of our thoughts fits into the discourse and contributes to a collective conceptualization of "thinking".

Keywords: image schemas, perceptual experience, conceptualisation, community of philosophical inquiry, experimentalism

Introduction

L'exercice philosophique par excellence consiste à (se) poser des questions pour tenter de comprendre, réfléchir sur ses propres expériences et saisir la signification des événements du monde (Lakoff & Johnson, 1999). Cette définition contraste avec une vision intellectualiste de la philosophie comme activité centrée sur la compréhension de concepts abstraits et de leur relations, excluant toute participation de la part du sensible et du corps à la recherche de sens.

Le philosophe pragmatiste J. Dewey (1925/2012) a dénoncé ouvertement le dualisme corps-esprit. Comprendre, selon lui, à l'école et dans la vie en général, est pour l'individu une affaire d'expérienciation, celui-ci mettant en jeu ses expériences spécifiques et son engagement dans les interactions avec le monde et avec autrui. On reconnaît à Dewey le mérite d'avoir mis les

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bases d'une conception incarnée de la cognition et de la compréhension humaine (Johnson, 2015), tout comme d'avoir souligné l'importance des interactions. Sa façon d'envisager l'expérience en lien avec la démocratie et l'éducation ont fortement inspiré le programme éducatif *Philosophy for children* – dorénavant P4C – initié par M. Lipman et ses collaborateurs (Lipman, Sharp, Oscanyan, 1980 ; Lipman, 1988 ; Lipman, 2003), comme le souligne la littérature (Daniel, 1997 ; Cam, 2008 ; Kennedy, 2012, etc.). A partir des années 1970 se développent, partout dans le monde, des pratiques de dialogue philosophique appelées, dans la tradition pragmatiste de C. S. Peirce et J. Dewey, des « communautés de recherche philosophique » (Lipman, 2003). Elles mettent en œuvre la conception deweyenne d'une pensée réfléchie (Dewey, 1910/1997) et la démarche d'enquête (Dewey, 1938/ 1993) conduisant l'individu à faire l'expérience du doute et de la pensée, le processus de recherche itératif étant soumis, comme chez Peirce (CP 5, 1931-1935) à la validation du collectif. En P4C, l'expérimentation de la pensée et du questionnement philosophique se fait avec les pairs et en présence d'un facilitateur (animateur), la communauté étant formée par l'ensemble des participants.

Etant donné ces éléments d'influence, on pourrait s'attendre à distinguer dans les pratiques de la P4C une démarche incarnée de la réflexion philosophique montrant à l'œuvre une raison « façonnée par le corps », à l'image d'une "philosophy in the flesh" décrite par Lakoff & Johnson (1999 :7) : "In asking philosophical questions, we use a reason shaped by the body, a cognitive unconscious to which we have no direct access, and metaphorical thought of which we are largely unaware".

Qu'en est-il au vrai ? Les enfants et les adolescents s'exerçant au questionnement philosophique en communauté de recherche mettent-ils réellement en acte une pensée « façonnée par le corps » ? Il s'agit d'un objectif de recherche plus large autour duquel nous souhaitons amorcer, avec cet article, une première réflexion. Nous souhaitons analyser la manière dont les participants, dans le cadre d'un traitement collectif d'une question philosophique comme on le fait en P4C, schématisent le réel dans et par l'interaction. Étant donnée la thématique évoquée dans le questionnement que nous avons choisi d'analyser comme une étude de cas – « D'où viennent les pensées ? » – nous pouvons présager que l'activité de réflexion conduira les protagonistes vers une mise au jour de leurs conceptions de la pensée. En cela, la discussion présente un double intérêt : celle de fournir un cas d'expérienciation de la pensée et d'expliciter le processus de penser.

« D'où viennent les pensées ? »

Est le sujet d'une discussion philosophique mettant en dialogue des jeunes de 12-14 ans accompagnés d'un animateur expérimenté, dans une école de secondaire en France, en 2015 (corpus de thèse, Fournel, 2018). Les élèves sont volontaires et la discussion se déroule en dehors du temps scolaire sous la forme d'une séance de démonstration, devant un public. La principale question traitée par les participants lors de cette séance (formulée par les participants

eux-mêmes[1]) est un thème de réflexion qui va occuper les esprits des participants durant environ une heure. L'objectif de la séance est de penser ensemble autour des origines de la pensée – une question largement étudiée en neurosciences, philosophie, linguistique, anthropologie, histoire, etc.

Le choix de placer au centre de nos analyses cette séance n'est pas anodin. On aurait pu s'intéresser d'emblée à des discussions portant sur « Qu'est-ce que le destin ? », « Pourquoi on se pose des questions ? », « Pourquoi pensons-nous à la mort plutôt que de profiter de la vie ? », etc.[2] pour observer et analyser la manière dont les jeunes conceptualisent leur expérience du monde, structurent le réel, révèlent leur compréhension de la vie, de la mort, du destin, etc., pensent par eux-mêmes. D'une part, « D'où viennent les pensées ? » s'annonce ouvertement comme un travail de métacognition, d'explicitation du processus de pensée auxquels les participants concourent le temps du dialogue. Ce questionnement philosophique permettra de mettre au jour leur conception de la pensée. D'autre part, la question propose tout aussi ouvertement de travailler avec le présupposé que les pensées viennent de quelque part et que nous serions en mesure d'en identifier la(les) source(s), en tracer le(s) chemin(s). En formulant cette question, les participants semblent avoir mobilisé leur propre expérience perceptive. Ce présupposé – les pensées viennent de quelque part – évoque une relation spatiale du sujet pensant à l'objet de sa pensée, au moins sous deux aspects : l'existence d'un point de départ, d'une source, d'une origine (« d'où ? ») et celle d'un chemin que les pensées parcourraient à partir de cette source jusqu'à nous (« viennent »). Il s'agit d'une schématisation des expériences subjectives des relations spatiales, qui ont été définies sous le concept de « schème-image » (Langacker, 2003; Talmy, 1983 ; Barbané, 2013), repris par Johnson (2013 : 29) en termes de structures gestaltiques, schèmes pré-conceptuels qui sont construits et abstraits à partir de l'expérience du corps, facilitant au sujet l'appréhension du monde :

> A schema is a recurrent pattern, shape, and regularity in, or of, these ongoing ordering activities. These patterns emerge as meaningful structures for us chiefly at the level of: our bodily movements through space, our manipulation of objects, our perceptual interactions.

D'après le même auteur (Johnson, 2021 : 15), ces schémas-images (*image schema),* dorénavant *SI*[3]*,* jouent un rôle essentiel dans le travail d'abstraction et de conceptualisation, des opérations au cœur de la pensée philosophique. Elles ont donc une signification et une pertinence philosophique :

> From a philosophical perspective image schemas are important primarily because they help to explain how our intrinsically

[1] La question a été élaborée par les élèves lors d'une séance antérieure. Dans le protocole proposé par M. Lipman (2003), les élèves formulent leurs propres questions à partir d'un support déclencheur qui leur est proposé. Il s'agit, dans le cas étudié, du chapitre 3 du roman philosophique « La découverte de Harry Stottlemeier » (Lipman, 1978).

[2] Discussions faisant partie du corpus Fournel (2018).

[3] Nous utiliserons à certains moments l'abréviation *SI* pour « schéma-image » afin d'éviter des redondances dans le discours.

> embodied mind can at the same time be capable of abstract thought. As patterns of sensory-motor experience, image schemas play a crucial role in the emergence of meaning and in our ability to engage in abstract conceptualization and reasoning that is grounded in our bodily engagement with our environment.

De facto, elles devraient jouer le même rôle dans le contexte des pratiques de dialogue philosophique, consistant à élaborer des constructions mentales reliés à des dimensions de l'expérience des participants. Étant donné le contexte de dialogue et de partage des significations qui caractérisent les CRP, on pourrait qualifier le processus collectif de la pensée d'« expérientialisme », dans le sens d'une construction d'une « intersubjectivité entre individus incarnés et situés socialement et culturellement, partageant une expérience commune » (Fastrez, 2014 :40).

C'est la notion d'enquête menée collectivement qui nous semble également importante dans ce contexte, car elle englobe la démarche de conceptualisation et d'abstraction dont parle Johnson (2021) en tant qu'activité fondée sur une structuration langagière, pré-conceptuelle du réel (les schémas-images), mais également une démarche de justification, d'argumentation, d'interprétation, etc. caractérisant le processus de compréhension et traitement d'un problème philosophique. Si l'on suit J. Dewey (1938/1993), l'homme est capable de simuler la réaction du milieu et faire des hypothèses, puis de les tester. Simuler, dans le contexte d'une enquête, c'est à la fois expérimenter sans risque et schématiser le réel rendant ainsi possible la réflexivité. Nous tenons ici un autre mode de schématisation du réel, celui-ci étant spécifique d'une enquête (qu'elle soit du sens commun, scientifique ou philosophique), et qui serait utile d'observer dans le dialogue : à savoir la présence des hypothèses formulées, examinées et soumises à la validation. Dans la discussion « D'où viennent les pensées ? », les protagonistes sont d'emblée incités à formuler des hypothèses sur l'origine, la source ou la provenance de la pensée, et de les tester.

Problématique et questions de recherche

Comme formulé plus haut, nous nous attendions à ce que dans la discussion « *D'où viennent les pensées ?* » les participants (l'animateur et les jeunes) mobilisent des schémas-images au moins dans un registre évoquant des expériences perceptives liées au mouvement du corps dans l'espace (se déplacer, avoir un point de départ). Les deux types de schémas-images présents déjà dans la question sont celui de l'origine/la source de nos idées (« d'où ») et celui de la trajectoire/du chemin (« viennent »). Nous identifions ici un des *SI* les plus fondamentaux pour la conceptualisation humaine (Johnson, 2015, Turner, 1996), sous la forme *source-path-goal* (v. figure 1), proposé et discuté par Johnson (2013 : 126), repris et travaillé par de nombreux auteurs, sous cette forme ou celle du *path*, notamment dans le champ de la linguistique cognitive (Langacker, 2000 ; Lakoff, 1987 ; Matsumoto, 1996 ; Lakoff & Johnson, 1999 ; Slobin, 2004 ; Barnabé, 2013, etc.).

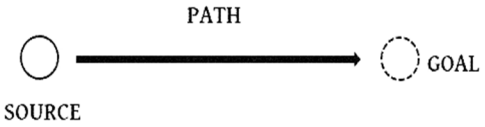

Figure 1 : *Source-Path-Goal*

Dans la discussion « D'où viennent les pensées ? », le schéma-image identifié prend la forme *path-source* (Figure 2), les origines ou sources de la pensée pouvant être proposées comme des hypothèses à explorer.

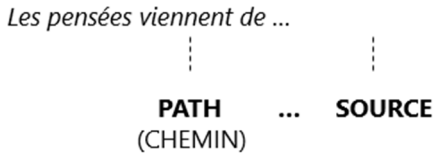

Figure 2 : *Path-Source* comme schéma pour les hypothèses sur l'origine de la pensée.

Barnabé (2013 : 5) explique que les *SI* peuvent s'analyser à deux niveaux et que « les travaux [de Lakoff] sur le schème du chemin font état de sa division en sous-schèmes (...) de la source (*source*), du chemin (*path*) et le sous-schème du but (*goal*) qui forment le *source-path-goal* schéma. » Nous prendrons en compte ce double niveau de structuration dans l'analyse de notre discussion.

Ainsi, nous souhaitons observer la présence de ces schémas-images sur la durée de la discussion, vue comme un déploiement du raisonnement et des opérations afférentes (justifier, conceptualiser, etc.), et comme un processus d'enquête impliquant la formulation et l'examen d'hypothèses. Nous nous demandons par ailleurs si d'autres *SI* sont mobilisés dans le dialogue, et quelles formes connues[4] prennent-ils ? Enfin, nous aimerions comprendre en quoi la mobilisation des *SI* participe du raisonnement abstrait et plus spécifiquement d'une conceptualisation philosophique, cette question nécessitant cependant de procéder à l'analyse d'autres discussions.

Hypothèses de travail

Trois hypothèses sous-tendent nos analyses, elles concernent d'une part la présence des schémas-images dans la discussion (H1 et H2), d'autre part leur mobilisation et le rôle qu'ils pourraient avoir dans le processus collectif de raisonnement et d'enquête (H3) :

H1 : Les participants (animateur et jeunes) mobilisent les *SI* du chemin (*path*) et de la source (*source*) dans le dialogue ;

H2 : Les participants mobilisent d'autres *SI* que ceux présents (*path-source*) dans la question qui est discutée, « D'où viennent les pensées ? » ;

H3 : Les participants mobilisent des *SI* pour conceptualiser, formuler/proposer des hypothèses à la question traitée, et pour les tester.

Le traitement de H1 & H2 se fera selon un traitement quantitatif à visée essentiellement descriptive qui conduira à : identifier les *SI* dans la discussion ; déterminer la nature de celles-ci ; identifier qui mobilise les *SI* et dans quelles proportions (animateur, jeune). Nous envisageons la prise en compte d'autres variables, comme les moments de la séance où les *SI* sont mobilisés. En effet la séance étant organisée en trois temps : introduction (prise de contact, lecture des

[4] Nous nous basons principalement sur la liste de *SI* proposés et discutés (ou non) par Johnson (2013 : 126) avec des éléments supplémentaires apportés par Lakoff (1987). D'autres listes ou « typologies » ont été proposées, mais à notre connaissance il n'existe pas un inventaire exhaustif et arrêté.

question, identification de la question à traiter) – durant les 34 premiers tours de parole ; délibération (réflexion collective autour de la question choisie) – de 35 à 443, et conclusion (synthèse de la discussion à travers un exercice invitant les jeunes à proposer une comparaison, une analogie) – de 443 à 487[5], nous nous demandons s'il y a des différences entre les productions réalisées lors des différents moments de la séance. Enfin, H3 sera traitée de manière qualitative et interprétative.

Méthodologie d'identification des schémas-images

L'analyse de la discussion a consisté à repérer et étiqueter les schémas-images mobilisés par l'animateur et les participants. L'acquisition des *SI* se déroule à un niveau pré-langagier à travers les expériences vécues du sujet, ce qu'il ressent physiquement par l'ensemble de ses sens, on ne peut donc postuler qu'ils sont mobilisés qu'à partir du moment où le sujet les représente d'une manière ou d'une autre par un procédé sémiotique : une langue naturelle, un dessin explicatif, un geste, etc. Pour cette contribution nous nous sommes intéressés essentiellement aux dires. Il nous a donc fallu identifier les passages dans et par lesquels les *SI* étaient mobilisés.

Nous avons eu à faire face à plusieurs difficultés. Tout d'abord déterminer la liste des schémas-images possibles. Certains auteurs comme Barnabé (2013 : 3) soulignent que la liste de *SI* que propose Johnson (2013) n'est pas complète, les travaux successifs de Johnson lui-même montrent que d'un article à l'autre la liste initiale s'enrichit de nouveau *SI*. Ainsi, le travail d'identification a procédé par itérations successives et codage en double aveugle. Nous n'avons certainement pas totalement épuisé les passages où des *SI* étaient mobilisés, mais à ce stade nous estimons être arrivés à un point où la plus grande partie des *SI* a été identifiée.

La métaphore est un processus central dans la vie et l'évolution d'une langue. Nombre de mots portent en eux une qualité de ce qu'ils représentent ainsi le mot « fleuve » désigne une réalité d'eau « fluide » (*quod fluit*) et le « navire » est un objet qui nage (*natat*) (Darmesteter, 1886 : 40-41). Il nous a donc fallu distinguer les métaphores qui étaient passées dans le langage courant pour ne retenir que les métaphores vives (Ricoeur, 1975). Ainsi, quand la jeune Zaïda (318[6]) dit : « des fois moi aussi ça m'arrive vu que euh (en)fin moi *chuis toujours tête en l'air // e::t des fois je pense à rien du tout et jjj (en)fin je:: », nous ne considérons pas qu'il s'agit d'un *SI* (« tête en l'air »), car cette expression fait partie de la phraséologie commune. *Idem* pour des expressions comme « poser des questions » chez Iacob (119) « non *chuis pas trop d'accord parce que // (il) y a / (il) y a des trucs où tu réfléchis et peux poser des questions et (il) y a d'autres trucs où tu réfléchis mais tu te poses moins d(e) questions », Arthur (367) « vous voyez c(e) que j(e) veux dire », *etc.* En outre, nous n'avons pas comptabilisé les formes verbales qui renvoient à un *SI* quand elles sont uniquement référentielles comme :

[5] Dans la phase de clôture, l'animateur demande aux participants de produire une analogie : « si on terminait avec une image // qu'on essaie de former une image de ce que c'est que penser // on disant penser c'est COMME {pause} // puis là je vous laisse le soin de compléter » (Animateur, 444).

[6] Le nombre entre parenthèse correspond au numéro du tour de parole.

« merci d'être venus // mercredi c'est congé ou quoi↑ » (Animateur, 3).

Pour nos décomptes nous avons choisi de compter qu'une fois la présence d'un même *SI* dans un tour de parole et de considérer également que l'on peut y trouver plusieurs *SI* différents dans une même intervention :

> bah // moi pour faire un résumé en fait // et rajouter un peu // pour moi **ça vient** [7] des fois bah c'est **des envies** // des fois c'est un élément **extérieur** qui nous fait penser à un des souvenirs que l'on avait // par exemple on a lu un article sur euh les pierres à Paris {Animateur : ouais} // heum on marche dedans/ on marche **dessus** une // on fait ah tient je me souviens d'où // ça **vient** au moins ça **vient de souvenirs** // euh:: des fois ça **vient** aussi **des envies** // et ça **viendrait** quelques fois **du hasard** et de **c(e) qui se passe dehors** (Jean-Luc, 98)

Ainsi, nous avons identifié les *SI* suivants : **chemin**, exprimé par « ça vient » / « ça viendrait » et les sous-schèmes de la **source** : « envies », « souvenirs », « hasard », « ce qui se passe dehors ». Ceux du **contenant** : « extérieur » / « dehors » et de la **verticalité** : « on marche dessus une ... » sont également mobilisés. Nous n'avons décompté qu'une occurrence de *SI* CHEMIN et de *SI* CONTENANT.

Analyses et premiers résultats

Afin de rendre compte de la mobilisation par les participants des schémas-images, dans le contexte du dialogue, nous procédons dans un premier temps à un traitement quantitatif de nos données (nous permettant de vérifier nos hypothèses de travail H1 & H2). Ce travail d'analyse à visée descriptive nous conduira à identifier des séquences dialogiques qui seront analysées de manière qualitative en lien avec le travail de raisonnement (autour de notre hypothèse H3).

Mobilisation des SI tout au long de la séance

Nous l'avons souligné plus haut, la séance se compose de trois phases : une première concerne le lancement de la discussion, vient ensuite la discussion ou la délibération, et enfin la phase finale de conclusion. Nous distinguons dans un premier temps la production de *SI* dans chacune de ces étapes, sans chercher à les spécifier pour le moment. Dans les figures ci-dessous, chaque « pointe » correspond à la présence d'un *SI* dans une verbalisation et sont représentés en bleu quand il s'agit d'un élève et en orange pour l'animateur. Un premier regard sur l'ensemble de la séance montre que les *SI* sont mobilisés dans les trois phases :

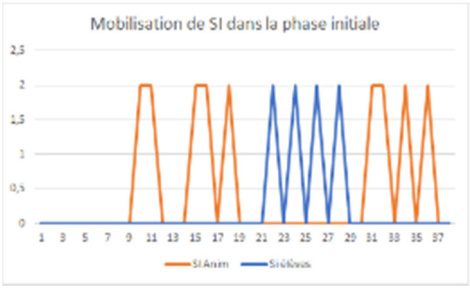

Figure 3 : Mobilisation de *SI* dans la phase initiale

[7] Nous avons mis en gras les *SI*.

Figure 4 : mobilisation de *SI* pendant la délibération

Figure 5 : Mobilisation des *SI* dans la phase de conclusion

Si on prend en compte le nombre de *SI*, on constate qu'ils sont mobilisés majoritairement dans la phase de délibération (107 *SI* sur un total de 142 *SI*). On observe que dans la phase initiale et finale les *SI* produits par l'animateur « encadrent » ceux qui sont produits par les enfants, alors que pendant la délibération les productions sont davantage mélangées. Enfin, les données nous montrent que les 142 *SI* sont répartis à égalité entre l'animateur et les jeunes.

Mobilisation du SI CHEMIN (path-source-goal)

Revenons maintenant à notre première hypothèse selon laquelle nous posons que les participants (animateur et jeunes) mobilisent les *SI* du CHEMIN (*path*) et de la SOURCE (*source*), dans le dialogue, que ce soit en termes de *SI* ou de sous-schème. Rappelons que cette hypothèse a été inspirée par la question à traiter (« d'où viennent les pensées ? ») qui invitait les participants à réfléchir aux origines ou sources possibles de la pensée (« les pensées viennent de … »). Le tableau 1 rend compte du nombre de fois où CHEMIN apparaît en tant que *SI* ou sous-schème d'un autre *SI*.

Ce type de *SI* représente 42% de l'ensemble des *SI* mobilisés dans la discussion (59 sur 142 *SI*). L'hypothèse 1 est donc validée. Voici quelques exemples d'actualisation de ce *SI* :

- En 358, Zaïda mobilise le *SI* CHEMIN exprimé par le verbe « aller » et le sous-schème BUT : « (...) en fait je voulais juste dire des fois on essaie de ne pas penser mais on:: / **on va / on va / on va** / en fait on / **on va *dans la pensée*** ».
- En 369, Jean-Luc explique ce qu'est pour lui penser : « (...) c'est quelque chose qui **va nous arriver** parfois automatiquement et qui va nous avertir de par exemple là aïe je me suis fait mal parce que // là c'est quelque [chose] qui va **nous arriver** la plupart du temps automatiquement et qui va être une sorte de message heum qu'on **va s'envoyer** à ***soi-même*** ». Pour cela il mobilise le *SI* CHEMIN à plusieurs reprises - « arriver », appliqué à la pensée en général, puis il l'explicite à travers une analogie : pensée = message, avec le sous-schème du BUT « soi-même ».

Tableau 1 : Décompte du nombre des *SI* CHEMIN *(source-path-goal*)

Schème \ Sous-schème	Animateur	Jeune	Total
ATTRACTION\CHEMIN	1		1
BLOCAGE\CHEMIN		1	1
CHEMIN\	3	6	9
CHEMIN\CENTRE-PERIPHERIE		1	1
CHEMIN\CYCLE	2	1	3
CHEMIN\ BUT*(GOAL)*	11	8	19
CHEMIN\SOURCE	12	6	18
CHEMIN\VERTICALITE	2		2
CONTENANT\CHEMIN	1	1	2
CONTENANT\SOURCE	1		1
SOURCE\	1		1
SOURCE\CHEMIN	1		1
Total général	**35**	**24**	**59**

Comme on peut l'observer dans le Tableau 1, il y a un relatif équilibre entre la production des élèves (les *SI* CHEMIN, présents dans leurs verbalisations, représentent 40% du nombre total des *SI* CHEMIN produits) et celle de l'animateur (60%) ce qui nous permet de parler d'une co-construction de la pensée à l'œuvre.

Mobilisation d'autres SI

Nous avons pu identifier une vingtaine de schémas-images différents (cf. tableau 2 sur la page suivante, p. 88) qui montre une diversité de structures pré-conceptuelles mobilisées par les locuteurs, inspirées de leur expérience perceptive et corporelle. A l'évidence, le schéma du CONTENANT *(CONTAINER)* est le plus fréquent, après celui du CHEMIN, et ses occurrences représentent 25% du nombre total de *SI*. Avec le *SI* CHEMIN, il rend compte de plus des 2/3 (67%) des *SI* mobilisés.

Le *SI* CONTENANT apparaît seul mais aussi associé à d'autres schéma-images (v. tableau 3 ci-après, p. 89), comme on peut le constater dans les exemples suivants. Très tôt dans la discussion des *SI* sont mobilisés. Ainsi, Jean-Luc (44) explique que les pensées viennent « <euh> // je dirais du hasard et de c(e) qu'on voit:: // bah:: à l'**extérieur** ». Il oppose ainsi un monde des pensées qui se situe à l'intérieur mais qui est suscité, mis en mouvement par l'extérieur mobilisant ainsi le *SI* CONTENANT avec les sous-schèmes DEHORS-DEDANS, figure de pensée qui est d'ailleurs la plus fréquente (cf. tableau 3), ce dont témoigne également l'exemple mentionné plus haut quand Zaïda dit qu'« **on va *dans la pensée »*** (358), ce que Ulrick reprend en 409 quand il dit : « (...) j'ai réfléchi et j'ai vu **dans mes pensées** ». Nous avons ici le *SI* CONTENANT associé à l'expression d'un percept « j'ai vu ».

Tableau 2 : L'ensemble de *SI* \ sous-schèmes identifiés dans la production des participants

SI* \ *sous-schème	**Animateur**	**Jeunes**	**Total**
ATTRACTION\CHEMIN	1		1
BLOCAGE\	1	4	5
BLOCAGE\CHEMIN		1	1
BLOCAGE\CONTENANT	1		1
CENTRE-PERIPHERIE\	3	1	4
CHEMIN\	3	6	9
CHEMIN\CENTRE-PERIPHERIE		1	1
CHEMIN\CYCLE	2	1	3
CHEMIN\ *GOAL*	11	8	19
CHEMIN\SOURCE	12	6	18
CHEMIN\VERTICALITE	2		2
COLLECTION\	1		1
CONTENANT\	1	3	4
CONTENANT\CHEMIN	1	1	2
CONTENANT\DEHORS-DEDANS	9	13	22
CONTENANT\OUVRIR-FERMER	1	4	5
CONTENANT\SOURCE	1		1
CYCLE\	1	2	3
DEVANT-DERRIERE\		1	1
EMPILEMENT\		2	2
EMPILEMENT\VERTICALITE		2	2
EQUILIBRE-DESEQUILIBRE\		1	1
FORCE\		1	1
GOAL\	1		1
MANIPULATION OBJET\	9	3	12
MANIPULATION OBJET\VERTICALITE	1	1	2
NEAR-FAR\		1	1
PARTIE-TOUT\	2		2
PROCESSUS\		1	1
RESTRAINT-REMOVAL\	1	4	5
SCALARITY\INTENSITE	1		1
SOURCE\	1		1
SOURCE\CHEMIN	1		1
VERTICALITE\	3	2	5
VERTICALITE\HAUT-BAS		1	1
Total général	**71**	**71**	**142**

Tableau 3 : Décompte du nombre des *SI* CONTENANT

Schème \ Sous-schème	Animateur	Jeunes	Total
BLOCKAGE\CONTENANT	1		1
CONTENANT\	1	3	4
CONTENANT\CHEMIN	1	1	2
CONTENANT\DEHORS-DEDANS	9	13	22
CONTENANT\OUVRIR-FERMER	1	4	5
CONTENANT\SOURCE	1		1
Total général	**14**	**21**	**35**

Il est intéressant de constater que nous avons la répartition inverse de celle que nous avons observée pour le *SI* CHEMIN : la mobilisation par les élèves représente 60% des occurrences, celle par l'animateur 40%.

A ces deux premiers schémas-images il convient d'ajouter un troisième : MANIPULATION D'OBJET mobilisé 14 fois (soit 10% du total). La pensée se développe donc à travers trois *SI* principaux : CHEMIN, CONTENANT et MANIPULATION. Le schéma ci-dessous représente comment ils « tissent » la pensée, les « pointes » grises représentent la mobilisation d'un *SI* MANIPULATION OBJET, les oranges le CHEMIN et les bleues le CONTENANT :

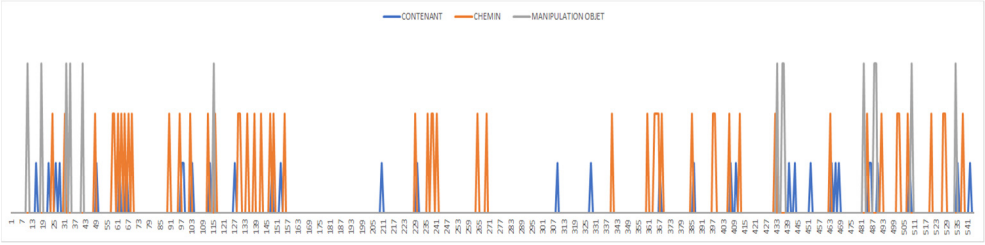

Figure 6 : répartition des 3 principaux *SI* dans le fil du dialogue.

Notre hypothèse 2 est donc vérifiée puisque, en plus du *SI* induit par la question initiale, les jeunes mobilisent d'autres *SI* pour traiter la question. Celui du contenant est également très présent, et on constate que la pensée est incarnée et s'appuie sur l'expérience de manipulation d'objet.

Mobilisation des SI dans le raisonnement

Dans une discussion de type CRP, comme celle que nous analysons, les participants réalisent différents types d'activités, avec l'aide de l'animateur dont le principal

rôle est de faciliter l'avancement de la réflexion et de mettre les participants au défi de penser. En voici quelques activités mises en œuvre durant la séance pour traiter la question « D'où viennent les pensées ? », que nous caractériserons et illustrerons avec des extraits. Nous soulignerons à chaque fois la présence également des schémas-images mobilisés par les participants, lors des opérations cognitives décrites.

a. Formulation de réponses à la question traitée, sous la forme d'hypothèses (par exemple, les pensées peuvent venir du « hasard et de ce qu'on voit à l'extérieur », la proposition étant avancée par le jeune, dans l'extrait ci-dessous, avec le conditionnel - « je dirais ») :

(43) Animateur : d'où **viennent**[8] les pensées Jean-Luc

(44) Jean-Luc : <euh> // **je dirais du hasard et de c(e) qu'on voit::** // bah:: **à l'extérieur**

CHEMIN\SOURCE ; CONTENANT

b. Un travail d'explicitation d'une hypothèse proposée (dans l'extrait ci-dessous, l'animateur, invite les jeunes à préciser ce qu'ils entendent par « hasard » proposé comme origine pour les pensées) :

(99) Animateur : mais mais quand vous dites hasard c'/ c'/ j'ai un peu (de) difficulté à saisir là // qu'est-ce que ça veut dire ça // quand ça **vient du hasard**↑

CHEMIN\SOURCE

…

(130) Jean-Luc : … *chuis d'accord que // euh::m // justement des fois on complète un peu plus et **pour moi ce que j'appelle le hasard** c'est // ah // c'est la partie par exemple euh on va se mettre à penser quelque chose // puis // (il) y a quelque chose d'autre qui nous **vient à l'esprit //**qu'a pas forcément de:: de cause ou alors on (ne) se rend pas compte // et du coup on va approfondir ce sujet **dans not(re) tête**

CHEMIN\BUT ; CONTENANT (DEHORS-DEDANS)[9]

(131) Animateur : ça voudrait dire qu'il pourrait y avoir des pensées qui **viennent d'autres pensées** \

CHEMIN\SOURCE

c. Exploration des hypothèses proposées, activité relevant du processus de raisonnement élaboré dans le dialogue : donner des raisons, contester (comme dans l'extrait ci-dessous), envisager des conséquences, etc.

(211) Ulrick : parce que:: // pour moi on peut ne pas penser mai:::s **on a un peu une coquille vide** et et des fois (il) y a des actions par exemple les réflexes // on pense pas **on les maîtrise pas** // mais:: ça s(e) fait tout seul

CONTENANT ; BLOCAGE

…

(216) Ulrick : par exemple (il) y a un ballon qui **vient vers moi** je veux **l'attraper** pourtant // je m(e) suis pas dit le ballon // il::::

CHEMIN\BUT ; BLOCAGE

[8] Nous avons souligné en gras dans les extraits les schémas-images et présenté le type de *SI* mobilisés dans chaque intervention.

[9] Entre parenthèses (DEHORS-DEDANS) est indiquée la spécification du *SI* CONTENANT.

(217) Animateur : il vient vers moi euh

(218) Ulrick il **vient vers moi** faudrait plutôt que je me **baisse**:: ou:: ou que:: ou que je me **décale** euh:: ou plutôt mettre ma mains **devant**

CHEMIN\BUT ; VERTICALITE (HAUT-BAS) ; CHEMIN (CENTRE-PERIPHERIE) ; DEVANT-DERRIERE

…

(222) Arthur : euh:: pas d'accord

(223) Animateur : t'es pas d'accord // peux-tu // pas / dis-lui alors

(224) Arthur : <euh:: > //pa(r)ce que en fait euh:: quand:: / quand on s(e) prend un ballon // euh: en fait quand tu réfléchis // t'es obligé de réfléchir pa(r)ce qu'en fait comme /en fait euh quand:: // là je suis en train de réfléchir et **je bouge mes mains //** tu vois // c'est comme ça que je réfléchis // tu vois

Exemple au niveau perceptuel, permettant de construire une nouvelle hypothèse : pour réfléchir il faut bouger les mains

d. Un travail de conceptualisation (impliquant de faire des distinctions, définir de critères, etc.), par exemple, dans les extraits ci-dessous, lorsqu'est interrogée la différence entre « penser » et « réfléchir », ou quand sont proposés, dans la discussion, des critères pour conceptualiser ce qu'est « réfléchir » (se poser des questions, pensée maîtrisée, …).

(178) Animateur : vois-tu une différence toi entre penser et réfléchir ou si c'est pareil pour toi

(179) Leila : c'est à peu près la même chose

(180) Animateur : à peu près la même chose

(181) Leila : sauf que je pense réfléchir **on se pose plus de questions**

(182) Animateur : ah // alors que penser pas nécessairement

(183) Leila : non

Critère pour conceptualiser

…

(245) Nourra : euh:: j'aimerais **revenir sur** les points de:: réfléchir et de penser la différence

CHEMIN\BUT

(246) Animateur : je t'en prie

(247) Nourra : euh:: penser c'est un sujet ou::: // heum // comme un souvenir on se rappelle de ce moment // e::t réfléchir c'est plutôt ouais // se poser des questions // euh::: comment aurais-je dû réagir à cette question à cette phrase euh

(248) Animateur : okay

(249) Nourra : donc euh c'est vraiment **approfondir** le sujet

VERTICALITE

(237) Ulrick : moi *chuis: pas d'accord par(r)ce que des fois on fait:: des mouvements avec ses mains // et on::: on les // on (ne) les maîtrise pas //on:: peut les faire euh // parce que on // ça peut êt(r)e des tics par exemple qu'on / **qu'on maîtrise pas** et pour le coup on pense pas à les faire on (ne) réfléchit (ne) pas (à) les faire parce que si non on n'aurait jamais eu euh on n'aurait jamais eu de tics

BLOCAGE

(238) Animateur : c'est c'est vraiment vraiment vraiment vraiment intéressant c(e) qui est en jeu en ce moment // parce que tu dis que nécessairement // il faut comme **maîtriser un peu quand on pense**

BLOCAGE

Tableau 4 : Liste des hypothèses proposées *Les pensées viennent de…*

Hyp	**Les pensées viennent de …** (origine ou cause)	**Type de *SI* mobilisé** CHEMIN +	**Conception de la pensée qui s'y trouve impliquée**
H1	Perceptions de ce qui nous est extérieur *trébucher sur des racines* (Jean-Luc, 46)	CONTENANT (DEHORS)	Explicitation d'une conception expérientialiste de la pensée à partir d'une expérience physique partagée (sur laquelle se fonde notre concept d'arbre)
H2	L'inverse / l'opposé des choses qu'on ne devrait pas penser pendant qu'on est en train de faire quelque chose *on est en cours et subitement on se met à penser à des jeux vidéo (*Ulrick, 52)		La source des pensées n'est pas dans notre vécu ici et maintenant (mais dans un vécu situé dans un espace-temps différent)
H3	Sensation Ex. *quand on a soif on pense au robinet et à l'eau qui coule* (Eugène, 66)		Cause : sensation (expérience physiologique)
H4	Envie *quand on a envie on pense à quelque chose* (Eugène, 68)	CONTENANT (DEDANS)	Cause : envie (expérience psychique)
H5	Souvenirs / bons souvenirs (ex. revenir à ce qu'on a fait de bien, Zaïda, 92)	CYCLE\ SOURCE	Cause : souvenirs (expérience psychique)
H6	Hasard *ce n'est pas conscient qu'on pense à cette chose ; ça peut être tout ou rien ; ce à quoi on ne penserait pas habituellement ; n'importe quoi, qui n'a pas de sens ; quelque chose qui se passe en dehors* (Louis, 98)	CONTENANT (DEHORS)	Les pensées naissent de quelque chose qui échappe au sujet
H7	Hasard *quelque chose qu'on n'a pas vécu* (Eugène, 112)		Pas d'expérienciation
H8	Pas de cause ou cause inconnu - Inconscient *Proposition de l'Animateur validée par Eugène*, 122		On ne connaît pas la cause des pensées : inconnue ou on n'est pas conscient de
H9	Imagination *de plus loin que ce que l'on voit* (Ulrick, 211)	*NEAR-FAR* / CYCLE	La pensée va au-delà de la perception (imagination)
H10	D'autres pensées *quelque chose d'autre nous vient à l'esprit qui n'a pas forcément de cause ou alors on ne se rend pas compte* (Arthur, 224 et suiv.)	SOURCE / *GOAL*	Une pensée renvoie à une autre mais pas de causalité : réseau de pensées

e. L'ouverture, au cours de la discussion, de la question initiale sur d'autres questions qui appelleront à leur tour d'autres hypothèses :

(135) Animateur : et pas uniquement des choses qui sont de l'extérieur ou::: du hasard ou::: // et inversement est-ce qu'il serait possible de ne pas penser // du tout

(136) Iacob : euh::

(137) Animateur : … ou bien on est toujours en train de penser ça c'est inévitable

Mise au jour des conceptions de la pensée

Dans cette dernière partie de notre analyse, nous souhaitons présenter quelques éléments extraits de la discussion permettant de mettre en forme des conceptions de la pensée formulées par les participants. En listant les différentes réponses-hypothèses proposées par les participants pour répondre à la question « d'où viennent les pensées ? », nous avons essayé de distinguer à chaque fois de quelle nature est l'origine évoquée, quel type de *SI* est mobilisé et comment ces conceptions s'approchent ou s'éloignent d'une vision expérientialiste (v. Tableau 4, p. 92). Nous constatons que les schémas-images sont bien présents dans les hypothèses formulées et participent au travail de réflexion philosophique sur ce qu'est la pensée, comme l'avait envisagé Johnson (2021). Nos observations montrent que dans les réponses formulées par les participants, il s'agit d'une part d'identifier une **source** (« l'inverse des choses » – H2, d'autres pensées – H10), ou plutôt une **cause** à nos pensées (sensations, envies, souvenirs – H3, H4, H5, ou cause inconnu ou inconsciente – H8). D'autre part, les participants envisagent une **origine abstraite,** le hasard (H7) – qui a fait d'ailleurs l'objet d'un travail d'explicitation, envisagé clairement comme quelque chose qui n'a pas été vécu ; ou bien ils explicitent une **conception expérientialiste** de la pensée (H1), à partir d'une expérience physique commune (celle de « trébucher sur une racine », sur laquelle se fonde notre concept d'arbre).

Discussion

Nous avons avancé, en début de notre étude, comme argument pour le choix de la séance analysée son double intérêt du point de vue d'une approche expérientielle ou incarnée de la pensée. Le premier était de révéler la présence de schèmes pré-conceptuels construits à partir de l'expérience perceptive des locuteurs et donc de mettre au jour l'expérienciation de la pensée par ceux-ci le temps de la discussion. Le second se situe davantage au niveau métacognitif et rend compte d'une activité à visée philosophique qui consiste, dans la démarche de la CRP, à explorer/enquêter sur le processus même de pensée.

A travers nos hypothèses de travail nous nous demandions quels schémas-images sont mobilisés dans le dialogue et quel(s) rôle(s) jouent-ils dans le processus de raisonnement et d'enquête à l'œuvre dans les communautés de recherche philosophique. Cette étude a permis de montrer le rôle incontournable de l'expérience du sujet lors d'activités cognitivo-langagières collectives telles que les pratiques philosophiques. Cette étude liminaire nous a permis de définir un cadre d'analyse que nous allons maintenant pouvoir appliquer à d'autres discussions de notre corpus. Cela nous permettra de mieux comprendre en

quoi la mobilisation des *SI* participe du raisonnement collectif abstrait et plus spécifiquement d'une conceptualisation philosophique. Il nous faudra aussi voir s'ils jouent un rôle dans la dynamique interactionnelle, s'ils sont repris par plusieurs participants.

La question des métaphores est restée sous-jacente à nos analyses. Elles sont largement présentes dans les verbalisations des locuteurs de la discussion analysée. Leur importance dans l'élaboration d'une pensée abstraite a été déjà démontrée (Lakoff & Johnson, 1980), nous avons pu la voir à l'œuvre dans la production des participants et dans le dialogue, comme par exemple lorsque Ulrick évoque la coquille vide : « quand on (ne) se parle pas c'est un peu comme si on est une coquille vide » (381) ; ou encore lorsque Nourra conceptualise l'acte d'oublier : « l'oubli c'est un peu comme un dossier qu'o:::n ferme mais qu'on jette pas en fait on garde » (411). Si nous ne les avons pas analysées c'est qu'il existe des études en cours (Lagrange-Lanaspre & Colleta, 2020 ; Polo & Lagrange-Lanaspre, 2019) qui le montrent très bien. Trop élargir le cadre de cette étude ne nous aurait pas permis de traiter de manière satisfaisante l'analyse d'une CRP mobilisant le concept de schéma-image.

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INTEGRATING ENACTIVE AND INTERCORPOREAL APPROACHES TO INTERACTION AND INTERACTION ANALYSIS: d/DEAF PERSONS AND ANIMALS. IN SEARCH OF THE 'IN-BETWEEN' AND ADEQUATE METHODOLOGIES

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ABSTRACT. How does understanding occur in encounters of living beings? What is experienced by the interaction partners and what happens in the 'In-Between'? And how can this be captured? In this paper an enactive approach to interaction is proposed with the focus on reciprocal intercorporeal attunement and co-creation of meaning in a specific environment. As alternative framework this approach is applied to the interaction of d/Deaf persons[1] and animals. In the interaction with an animal, verbal communication – which is challenging for d/Deaf persons – is of secondary importance, so this frame is well suited to focus on intercorporeal attunement. In the interaction discourse regarding d/Deaf persons as well as Human-Animal-Interaction the assessment of the interaction process as such and embodied research methodologies are scarcely to be found. With the enactive approach new perspectives on the mechanisms of interaction and the influencing conditions can be opened as well as new approaches to respective research options.

Keywords: d/Deaf, Human-Animal-Interaction, Intercorporeality, Embodied Cognition, Embodied methodologies, Enactive approach, resonance

1. Interaction through the lens of intercorporeality

The body and its role in interaction is highlighted in some approaches in interaction research, in contrast to conventional models which conceptualize interaction as sending and receiving of mental states and ideas merely by the minds of interaction partners.

The underlying theoretical framework is the philosophy of Embodied Cognition, a part within the philosophy of mind which roots in phenomenology and challenges the dualistic construct of separated mind and body. From the perspective of Embodied

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[1] In this differentiation 'deaf' (lowercase) refers to the audiological condition of hearing loss and addresses hard of hearing and late-deafened persons communicating by oral and writing means. In contrast the uppercase 'Deaf' refers to congenital or early deafened individuals who identify themselves as part of a community sharing a language, i.e. Sign Language, and a culture (according to Padden, C. & Humphries, T., Deaf in America: Voices from a Culture, Harvard Univ. Press, 1988).

Cognition cognitive processes are fundamentally dependent on the body and its physical abilities as well as embedded in the environment. Due to the concept of enaction[2] an organism actively creates his world in mutual and dynamic interactions with the environment. Environment refers to the actual physical surroundings as well as the historical, cultural and social background. In this phenomenological and enactive paradigm of intersubjectivity meaning is co-constructed in face-to-face encounters as 'participatory sense-making' through "mutual incorporation, i.e. a process in which the lived bodies of both participants extend and form a common intercorporality"[3].

According to the phenomenological distinction between the *lived/ animated body* (*Leib)* and the *physical body* (*Körper)* mutual attunement occurs in the 'In-Between':

> The *lived body's impression* in the one person (A) becomes a *living body's visible expression* for the other person (B), and vice versa: the impression produced in B's lived body becomes a living body's expression for A. Thus, it is the peculiar 'chiasmatic' structure of the body as the turning point of interior and exterior, as both *Leib* and *Körper*, which enables the interlacement of self and other in the process of mutual affection and perception. This analysis may be regarded as an articulation of Merleau-Ponty's concept of 'intercorporeality' (*intercorporéité,* Merleau-Ponty 1960)[4].

Especially because of these pre-reflective and pre-conceptual aspects of engagement - in contrast to more conscious and cognitive approaches - Meyer et al.[5] propose intercorporeality as a meaningful model for the research on interaction from an embodied point of view.

Alongside the actual encounter there are also diachronic dimensions: Early experiences in interaction with others are sedimented in the corporeal and intercorporeal memory as patterns and are re-enacted in relationships as implicit relational knowledge.[6] So "every past experience of being-in-relation and being-in-resonance shapes and forms the present and future individual potential to resonate"[7].

Interbodily resonance as reciprocal attunement of bodily and facial expressions, postures and movements[8] as well as synchronization are of high importance for interaction processes. Synchronization for example is considered a significant relationship component and an indicator of a sense of belonging and feeling understood in mother-child

[2] Varela, F. J., Thompson, E., & Rosch, E., The Embodied Mind: Cognitive Science and Human Experience, MIT Press, 1991.

[3] Fuchs, T., & De Jaegher, H., "Enactive intersubjectivity: Participatory sense-making and mutual incorporation", in Phenomenology and the Cognitive Sciences, 8(4)/ 2009, 465-486, 465.

[4] Fuchs, T., "Intercorporeality and Interaffectivity", in Phenomenology and Mind, 11/ 2016, 194-209, 200.

[5] Meyer, C., Streeck, J., & Jordan, J. S., Intercorporeality: Emerging socialities in interaction, Oxford University Press, 2017.

[6] Fuchs, T., "Intercorporeality and Interaffectivity", in Phenomenology and Mind, 11/ 2016, 194-209.

[7] Mühlhoff, R., "Affective resonance and social interaction", in Phenomenology and the Cognitive Sciences, 14(4)/2014, 1001-1019, 1013.

[8] Fuchs, T., & Koch, S. C., "Embodied affectivity: on moving and being moved" in Frontiers in Psychology, 5/ 2014, 508.

relationships as well as in therapy contexts.[9] Thereby resonance can be understood as an umbrella term that includes different phenomena of mutual reference. While synchronization is related to the timing, resonance includes phenomena beyond close temporal coordination or phenomena that are not related to personal relationships such as in nature[10].

2. Interaction of d/Deaf persons

The dominant view regarding hearing loss and deafness depicts challenges in verbal interaction, access to language, psychosocial effects and challenges in everyday life. However, the embodiment perspective offers a different view to this discourse. How can interaction of d/Deaf persons be seen through the lens of intercorporeality?

First of all, regarding the physical prerequisites the experiences of d/Deaf persons are fundamentally different from those of hearing people because of different sensory-motor perceptual conditions. As auditory perception becomes less important, visual perception gains significance. For Deaf persons by using sign language "the embodied self is obvious and central throughout their whole lives because it is through the body that language is formed and identity is performed (the signing person, not the person who uses sign language)"[11].

Furthermore, from an intercorporeal point of view the question of when a hearing loss is experienced is crucial, may it be from birth as with congenitally d/Deaf or acquired in early childhood or later in life. Congenital d/Deafness e.g. is not "experienced as the missing of some positive sense, being deaf or deafblind doesn't mean to have an incomplete form of experience but a different form of experience"[12]. An acquired hearing loss occurring later in life, e.g. deafness or even progressive hearing loss in adulthood, means a massive experience of loss of previous communication possibilities and thus of social functioning. With the discrepancy between the habitual body[13] and the actual body with the current abilities in a concrete situation, the difference to one's own former normality can be well described. A musician who became deaf can no longer react in the same way to the request or affordance of his instrument to be played.

Of high relevance are limitations in verbal interaction as they often cannot 'flow' in a relaxed and natural way and often are experienced as 'strained' by both parties. Considering interaction as co-construction of meaning by corporeally mediated

[9] Ramseyer, F., & Tschacher, W., "Nonverbal synchrony in psychotherapy: coordinated body movement reflects relationship quality and outcome", in Journal of Consulting and Clinical Psychology, 79(3)/ 2011, 284-295.

[10] Pfänder, S., Herlinghaus, H. & Scheidt, C.E., „Synchronisation in Interaktion: Eine interdisziplinäre Annäherung an multimodale Resonanz", in: Breyer, T., Buchholz, M., Hamburger, A., Pfänder, S. & Schumann, E., Resonanz–Rhythmus–Synchronisierung. Interaktion in Alltag, Therapie und Kunst, transcript Verlag, 2017, 65-84.

[11] Young, A., Ferguson-Coleman, E., & Keady, J., "Understanding the personhood of Deaf people with dementia: Methodological issues" in Journal of Aging Studies, 31/ 2014, 62-69, 68.

[12] Gallagher, S., "Embodied Intersubjective Understanding and Communication in Congenital Deafblindness", in Journal of Deafblind Studies on Communication, 3/ 2017, 46-58, 55.

[13] 'corps habituel' according to Merleau-Ponty.

attunement processes, the focus here is not on the individual and his or her supposed inability or limited ability to receive and decode verbally sent messages but on two agents interacting in a specific environment.

For the understanding of interaction processes, the embodied perspective offers an approach that points out different influencing factors regarding each of the interaction partners, the 'In-Between' and the environment. For the interaction of d/Deaf persons the following aspects could have influence:

Regarding the interaction partners and their self-resonance, the different sensorial perception leads to different embodied experiences and different channels of communication. Interaction experiences in verbal communication might be exhausting and frustrating on the part of the d/Deaf person, for Deaf signers additionally unsatisfactory because the environment often cannot sign. These experiences might be sedimented in the body. Expectations on verbal exchange might be strained, the (self-)confidence in successful communication rather low. For deaf persons the experience of higher stress levels and physical tension in communication situations is documented[14].

The hearing interaction partner's mental or stress state is influential as well. There might be uncertainties about how to deal with the unfamiliar and stressful situation, growing tension could be found on this side, too. Respective past experiences with d/Deaf-hearing communication might be sedimented in the body of the hearing partner as well and so might influence the mutual attunement and resonance. As the interaction always is embedded in a specific setting and social environment it must be stated that the physical surroundings are mainly tailored to auditory perception and often do not fulfill the requirements of d/Deaf persons, e.g. regarding light, sound conditions and alert systems. The impact of the social context on the interaction and attunement processes becomes visible with the societal understanding of d/Deaf persons as 'disabled' persons which may lead to being stigmatized and pitied.

3. Human-Animal-Interaction (HAI) through the lens of intercorporeality

Several publications introduce embodied intersubjectivity and reciprocal corporeality in the context of Human-Animal interaction[15]. The enactive approach is even proposed as a unifying theoretical framework explaining potential benefits of human-animal-encounters[16]. Phenomenological aspects

[14] Holman, J. A., Drummond, A., Hughes, S. E., & Naylor, G., "Hearing impairment and daily-life fatigue: a qualitative study", in International Journal of Audiology, 58(7)/ 2019, 408-416, Zaidman-Zait, A. & Dotan, A., "Everyday Stressors in Deaf and Hard of Hearing Adolescents: The Role of Coping and Pragmatics", in The Journal of Deaf Studies and Deaf Education, 3/ 2017, 257-268.

[15] Brandt, K., "A language of their own: An interactionist approach to human-horse communication", in Society & Animals, 12(4)/ 2004, 299-316, Birke, L. & Brandt, K., "Mutual corporeality: Gender and human/ horse relationships", in Women's Studies International Forum, 32(3)/ 2009, Elsevier, 189-197.

[16] Verheggen, T., Enders-Slegers, M.-J., & Eshuis, J., "Enactive Anthrozoology: Toward an integrative theoretical model for understanding

of animal experience[17] are stated as well as suggestions for a phenomenological research approach[18]. Even outside the field of Human-Animal-Studies some interaction researchers attribute intercorporeal attunement to animals as well, instancing the guide-dog for the blind or intercorporeality with horses while riding[19]. Aspects of animal corporeality and reciprocal attunement offer an innovative approach to the study of human-animal relationships and new implications for ethical considerations[20]. In Human-Animal encounters, too, the present mental or stress state and experiences in the past affect the potential of self-resonance and thereby the intercorporeal resonance likewise. Signs of indisposition at the animal part can have effects on a bodily level - even if they are not registered by the human part. Thus, the well-being of the animal is an unconditional prerequisite for positive effects of animals on humans and so the intercorporeal paradigm provides arguments to consider animal welfare beyond ethical claims. In this sense the concept of the interconnectedness of living beings and the environment reflects the One Health/ One Welfare Paradigm which states the mutual dependence of the well-being of humans, animals and environment[21]. The stress-buffering effects of animals are proved by several research activities. As interaction means reciprocal attunement, lower stress levels as well as reduced tension in the human interaction partner may be influential. As the animal doesn't reflect the interaction as such in a human manner, thus irritation or embarrassment on his part can be ruled out. Regarding the diachronic dimension, possibly past negative experiences of interaction with humans may not be transferred as the animal as an interaction partner is completely different from human counterparts.

4. Interaction research

In current interaction research, mainly ethnomethodological conversation analysis, embodiment is considered on different levels. Bodily forms of expression beyond talk, gesture and gaze are analyzed using a multimodal approach[22], even if sensorial aspects

the therapeutic relationships between humans and animals", in Human-Animal Interaction Bulletin, 2/ 2017, 13-35.

17 Lestel, D., Bussoline, J., Chrulew, M., "The Phenomenology of Animal Life", in Environmental Humanities, 5/ 2014, 125-148.

18 Dutton, D., "Being-with-animals: Modes of embodiment in human-animal encounters", in Hockenhull, J. & Birke, L., Crossing Boundaries: Investigating human-animal relationships, Brill, 2012, 91-112.

19 Meyer, C., Streeck, J., & Jordan, J. S., Intercorporeality: Emerging socialities in interaction, Oxford University Press, 2017.

20 Dutton, D., "Being-with-animals: Modes of embodiment in human-animal encounters", in Hockenhull, J. & Birke, L., Crossing Boundaries: Investigating human-animal relationships, Brill, 2012, 91-112.

21 Hediger, K., Meisser, A., & Zinsstag, J., "A One Health Research Framework for Animal-Assisted Interventions", in International Journal of Environmental Research and Public Health, 16(4)/ 2019.

22 Deppermann, A. & Streeck, J., "The body in interaction. Its multiple modalities and temporalities", in Deppermann A. & Streeck, J., Time in Embodied Interaction: Synchronicity and sequentiality of multimodal resources, John Benjamins Publishing Company, 2018, 1-29.

have been somewhat neglected so far[23]. Meyer et al.[24] discuss intercorporeal aspects as foundation for interaction. Methodological implications of the embodiment approach in qualitative research are taken into account, e.g. regarding modes of transcription[25]. To capture the bodily attunement there is a corpus of research on the neurological basis of intersubjectivity. Studies investigated the role of mirror neurons, and Polyvagal Theory of neuroception as well as synchronization of brains interaction[26]. Furthermore, there are approaches to monitor (nonverbal) synchronization in interaction, e.g. motion energy[27]. But: In order to investigate the interactive experience of intercorporeal interaction, methods are necessary that do not only describe observable multimodal bodily aspects in interaction, but also include the researcher' body itself in the investigation. To include the subjective experience of the researchers De Jaegher et al.[28] present a systematic protocol (PRISMA) which involves the experience of different observers. Katila & Raudaskoski[29] offer a micro-analysis which includes the researcher's experience as well: After the multimodal analysis of an interaction sequence the researchers analyze their own video-recorded exchange.

If one directs the view on the **interaction of d/Deaf persons,** in the interaction analysis discourse "practices of hearing ... are often presupposed but not topicalized as such"[30]. For adults with acquired hearing loss "studies concerning interactional aspects of hearing loss based on video-taped authentic encounters are still a desideratum"[31]. The research focus is rather on elevating self-reports of interaction experiences through interviews, surveys and questionnaires than investigating naturally

[23] Mondada, L., "Contemporary issues in conversation analysis: Embodiment and materiality, multimodality and multisensoriality in social interaction", in Journal of Pragmatics, 145/ 2019, 47-62.

[24] Meyer, C., Streeck, J., & Jordan, J. S., Intercorporeality: Emerging socialities in interaction, Oxford University Press, 2017.

[25] Chadwick, R., "Embodied methodologies: challenges, reflections and strategies", in Qualitative Research, 17(1)/ 2017, 54-74.

[26] Dumas, G., Nadel, J., Soussignan, R., Martinerie, J., & Garnero, L., "Inter-Brain Synchronization during Social Interaction", in PLoS One, 5(8)/ 2010, e12166.

[27] Ramseyer, F., & Tschacher, W., "Nonverbal synchrony in psychotherapy: coordinated body movement reflects relationship quality and outcome", in Journal of Consulting and Clinical Psychology, 79(3)/ 2011, 284-295.

[28] De Jaegher, H., Pieper, B., Clénin, D. & Fuchs, T., "Grasping intersubjectivity: an invitation to embody social interaction research", in Phenomenology and the Cognitive Sciences, 16(3)/ (2017), 491-523.

[29] Katila, J., & Raudaskoski, S., "Interaction Analysis as an Embodied and Interactive Process: Multimodal, Co-operative, and Intercorporeal Ways of Seeing Video Data as Complementary Professional Visions", in Human Studies, 43(3)/ 2020, 445-470.

[30] Mondada, L., "Contemporary issues in conversation analysis: Embodiment and materiality, multimodality and multisensoriality in social interaction", in Journal of Pragmatics, 145/ 2019, 47-62, 51.

[31] Egbert, M., & Deppermann, A., "Introduction to conversation analysis with examples from audiology", in Egbert, M. & Deppermann, A., Hearing Aids Communication. Integrating Social Interaction, Audiology and User Centered Design to Improve Communication with Hearing Loss and Hearing Technologies, Verlag für Gesprächsforschung, 2012, 40-47, 9.

occuring interaction[32]. Only few researchers as Kaul[33] analyzed real-life interactions of deaf adults with Conversation Analysis and could show how misunderstandings and difficulties in understanding were countered with deferring expectations and repair strategies. In regard to Deaf students Adami and Swanwick[34] criticize that usually only resources of speech and/or sign language and writing are analyzed with the result of limited understanding of the interacting parties and claim "multimodal frameworks that can account for situated meaning-making beyond 'codified/linguistic' resources"[35]. To sum up research on the processes of the co-creation of meaning occurring in interaction with d/D persons is very limited.

Human-Animal Interaction is a growing interdisciplinary field of research[36], but currently mainly the impact on the human part is assessed. The outcomes of the research are partly inconclusive or inconsistent. As reasons among others the variety of methodologies and the wide range in human and animal participants are cited. As other research limitations weak designs without control conditions and small sample sizes are named.[37] From the intercorporeal perspective could be added that in most cases neither the 'condition' or better the well-being of the animal nor the the 'getting involved with each other' or mutual engagement nor the influences of the setting have been captured. And more often than not the individual conditions, needs and preferences of the human and the animal part were not assessed and considered. Looking for the underlying effect mechanism it is pointed out that Human-Animal Interaction has been treated as a construct with certain effects but without assessing what exactly happens in the process of interaction and which ingredients in which dosage are efficacious for whom[38]. Accordingly, there is a lack of appropriate research tools and methods. Wilson & Netting (2012) provide an overview of available tools for assessing Human-Animal Interaction. None of them captured reciprocal processes in interaction. From an intercorporeal point of view it is highly unsatisfactory to evaluate a two-way Human-Animal Interaction by only

[32] Egbert, M., & Deppermann, A., "Introduction to conversation analysis with examples from audiology", in Egbert, M. & Deppermann, A., Hearing Aids Communication. Integrating Social Interaction, Audiology and User Centered Design to Improve Communication with Hearing Loss and Hearing Technologies, Verlag für Gesprächsforschung, 2012, 40-47.

[33] Kaul, T., Kommunikation schwerhöriger Erwachsener, Kovaléc, 2003.

[34] Adami, E. & Swanwick, R., "Signs of understanding and turns-as-actions: a multimodal analysis of deaf–hearing interaction", in Visual Communication, 2019, Sage, 1-25.

[35] Adami, E. & Swanwick, R., "Signs of understanding and turns-as-actions: a multimodal analysis of deaf–hearing interaction", in Visual Communication, 2019, Sage, 1-25, 21.

[36] Yatcilla, J. K., "A Panorama of Human–Animal Interactions Research: Bibliometric Analysis of HAI Articles 1982–2018", in Anthrozoös, 2020, 1-13.

[37] Rodriguez, K. E., Herzog, H., & Gee, N. R., „Variability in Human-Animal Interaction Research", in Frontiers inVeterinary Science, 7/ 2021, 1-9, Serpell, J., McCune, S., Gee, N., & Griffin, J. A., "Current challenges to research on animal-assisted interventions", in Applied Developmental Science, 21(3)/ 2017, 223-233.

[38] Vitztum, C., "Human-animal interaction: a concept analysis", in International Journal of Nursing Knowledge, 24(1)/ 2012, 30-36.

evaluating one part of the dyad or by only asking human-centric questions.

There are some studies analyzing behavioral synchronization in interaction[39], emotional transfer[40] and synchronization of biological markers as Heart Rate Variability (HRV) among others[41].

For the analysis of the behavior of humans and animals in interaction two instruments were developed and tested. The *OHAIRE Coding Tool: Observation of human-animal interaction for Research*[42] captures emotional display, facial and verbal cues of the human part in the interaction. The state, behavior and expressions of the animal part are not assessed. Another tool is the Human Animal Interaction Scale[43] which describes and quantifies behavioral interactions between humans and animals. Here the animal's behavior is captured but from the perspective and the estimation of the human part. The look at the available instruments reveals a gap: The instruments listed do not fulfill the requirements of embodied interaction research, as there is no instrument that takes the two interaction partners as well as the 'In-Between' into account, let alone the intercorporeal experience.

5. Embodied d/Deaf Human-Animal Interaction research - an approach

Especially to capture the animal's perspective and the 'In-Between', the intercorporeal attunement, a phenomenological research perspective with regard to the first-person experience can provide a suitable

[39] Griffioen, R. E., van der Steen, S., Verheggen, T., Enders-Slegers, M. J., & Cox, R., "Changes in behavioural synchrony during dog-assisted therapy for children with autism spectrum disorder and children with Down syndrome", in Journal of Applied Research in Intellectual Disabilities, 2019, Pirrone, F., Ripamonti, A., Garoni, E. C., Stradiotti, S., & Albertini, M., "Measuring social synchrony and stress in the handler-dog dyad during animal-assisted activities: A pilot study", Journal of Veterinary Behavior, 21/ 2017, 45-52.

[40] Scopa, C., Contalbrigo, L., Greco, A., Lanatà, A., Scilingo, E. P., & Baragli, P., "Emotional Transfer in Human-Horse Interaction: New Perspectives on Equine Assisted Interventions", in Animals, MDPI, 9(12)/ 2019.

[41] Duranton, C., Bedossa, T., & Gaunet, F., "Interspecific behavioural synchronization: dogs exhibit locomotor synchrony with humans", Scientific Reports, 7(1)/ 2017, 12384, Naber, A., Kreuzer, L., Zink, R., Millesi, E., Palme, R., Hediger, K., & Glenk, L. M., "Heart rate, heart rate variability and salivary cortisol as indicators of arousal and synchrony in clients with intellectual disability, horses and therapist during equine-assisted interventions", in Pet Behaviour Science, 7/ 2019, 17-23, Schöberl, I., Wedl, M., Beetz, A., & Kotrschal, K., "Psychobiological Factors Affecting Cortisol Variability in Human-Dog Dyads", PLoS One, 12(2)/ 2017, e0170707.

[42] O'Haire, M.E., McKenzie S.J., Beck A.M. & Slaughter V., "Social Behaviors Increase in Children with Autism in the Presence of Animals Compared to Toys". PLoS ONE 8(2)/ 2013 e57010, Guérin, N. A., Gabriels, R. L., Germone, M. M., Schuck, S. E. B., Traynor, A., Thomas, K. M., McKenzie, S. J., Slaughter, V., & O'Haire, M. E., "Reliability and Validity Assessment of the Observation of Human-Animal Interaction for Research (OHAIRE) Behavior Coding Tool", in Frontiers in Veterinary Science, 5/ 2018, 268.

[43] Fournier, A. K., Berry, T. D., Letson, E., & Chanen, R., "The Human–Animal Interaction Scale: Development and Evaluation", in Anthrozoös, 29(3)/ 2016, 455-467.

framework. Usually, the researcher strives to leave his own subjective experience out of the investigation, to maintain objectivity and neutrality. But from the enactive perspective the researcher is an embodied agent, too, and the double aspect of perception - to perceive oneself and the other at the same time through the lived body - also applies to him.

Whereas the third-person perspective, the 'objective' view, can be investigated by the analysis of observations and the measuring of physiological markers among others, the other's first-person 'subjective' experience is not directly accessible. Humans can be asked regarding their experience during interaction, but the animal's perspective is difficult to capture.

How could an approach to an embodied methodology and research design for the analysis of the interaction of a d/Deaf person with an animal look like? A qualitative combined with a quantitative research approach in a mixed-methods design will best capture the complexity of entanglements. From the perspective of co-production of meaning it is essential to leave the anthropocentric perspective behind and regard the human and the animal interaction partner's perspective alike. Particularly challenging is the capture of the animal's perspective and the 'In-Between`.

The basis could be videotaped free unstructured encounters of dyads of d/Deaf persons and animals. An alternative approach to grasp intercorporeal interaction processes could include the following aspects, based on and adjusting existing approaches:

- the involvement of several observers to include different perspectives
- the observation and coding of bodily behaviour of each - human and animal - part (as gaze, posture, movements among others) and the investigation of whether and how they relate to each other
- the inclusion of aspects of perception of oneself, the other and the 'In-Between' through the observers' bodily sensations as breathing and posture – adjusting ideas of the PRISMA on Human-Animal Interaction[44].

Conclusions

An enactive approach with the emphasis on intercorporeal reciprocal attunement seems to be a highly suitable perspective for the understanding of interaction processes of d/Deaf persons. This perspective directs the view on factors with influence on the interaction regarding each of the interaction partners, the 'In-Between' and the environment, beyond the narrowing to the hearing loss. Regarding Human-Animal Interaction, aspects of animal corporeality and intercorporeality provide new implications for ethical considerations and reflect the One-Health paradigm. Several facets indicate a possible positive impact for d/Deaf persons through the interaction with an animal, these might be transferable to rehabilitation and therapeutic contexts. And finally an embodied methodology points to possibilities of capturing not only the human but also the animal's perspective and maybe even the 'In-Between', the somehow elusive resonance.

[44] De Jaegher, H., Pieper, B., Clénin, D. & Fuchs, T., "Grasping intersubjectivity: an invitation to embody social interaction research", in Phenomenology and the Cognitive Sciences, 16(3)/ (2017), 491-523.

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LA PAROLE OPERANTE COMME SPECIFICATION DE L'INTENTIONNALITE MOTRICE CHEZ MERLEAU-PONTY

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ABSTRACT. Operative Speech as a Specification of Motor Intentionality in Merleau-Ponty. This paper outlines Merleau-Ponty's interpretation of higher-order cognition as a fundamentally embodied process that is enacted by motor subject situated in natural and cultural environment. More specifically, I exemplify Merleau-Ponty's interdisciplinary approach to cognition on his interpretations of motor intentionality, operative speech, and mathematical reasoning, which are based on neuropathology, linguistics, and gestalt psychology, respectively. In this analysis, I aim to show that the body is involved in cognition as an operator of the phenomenal structuration of the environment even at the level of linguistic, rational, and abstract experience.

Keywords: Merleau-Ponty; phenomenology; embodied cognition; higher-order cognition; motor intentionality; philosophy of language; mathematical reasoning.

1. Introduction

Mon but dans ce texte est de décrire comment Merleau-Ponty interprète la cognition d'ordre supérieur comme un processus fondamentalement incarné et mis en œuvre par des actes d'un sujet situé dans un environnement naturel et culturel. Plus précisément, mon objectif est de montrer que le corps est impliqué dans la cognition en tant qu'opérateur de la structuration phénoménale de l'environnement même au niveau de l'expérience linguistique, rationnelle et abstraite.

On sait bien que Merleau-Ponty a inspiré un nombre important de théoriciens de la cognition incarnée. En particulier, les enactivistes comme Francisco Varela, Evan Thompson, ou Shaun Gallagher se sont appuyés sur les travaux de Merleau-Ponty en ce qui concerne l'incarnation et la perception. Ces chercheurs ont apprécié que Merleau-Ponty, étant un phénoménologue, était aussi très ouvert à la recherche scientifique, ce qui faisait de lui une sorte de chercheur en science cognitive avant la lettre.[1] Comme le souligne Vörös, par exemple, la phénoménologie de Merleau-Ponty est particulièrement bien adaptée pour un dialogue avec les recherches cognitives-scientifiques actuelles, car elle ne commence pas par la réflexion pure mais, au contraire, s'appuie sur

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[1] Voir par exemple S. Gallagher, « Merleau-Ponty's Phenomenology of Perception », *Topoi*, 29(2), 2010, 183-185; « Cognitive Science », in R. Disprose, J. Reynolds (Eds.), *Merleau-Ponty: Key Concepts*, Acumen, 2014, 207–217.

des d'études psychologiques, psychiatriques, neurologiques, ou biologiques.[2]

Merleau-Ponty explique son rapport à la recherche scientifique d'une manière encore plus précise dans son cours de 1953. Il rejette « l'empirisme et la science purement causale », mais souligne que la science fournit des « faits dont la philosophie doit, [et] peut, tirer partie »[3]. Pour lui, la réflexion philosophique et l'étude des faits scientifiques ne sont pas hétérogènes, et il y a même « nécessité d'introduire les faits »[4] scientifiques dans la philosophie. Pour lui, le rôle des faits tels que les descriptions neurologiques et psychiatriques de l'apraxie « n'est pas de suppléer la réflexion » philosophique, mais de « nous fournir des variantes de notre expérience qui nous éveillent à ce qu'elle contient »[5] et qui ne sont pas accessibles autrement. Dans le cadre philosophique de Merleau-Ponty, les faits positifs tel que les déterminants physiques-causaux décrits par la pathologie nerveuse sont donc toujours pris en compte, mais jamais considérés comme explicatifs. Sur ce point, son interprétation du sujet incarné et de la cognition se situe assez proche des théories relationnelles et dynamiques issues de l'enactivisme autopoïétique ou le cadre conceptuel 4E. [6]

Cependant, la réception actuelle de Merleau-Ponty par les cognitivistes semble attaindre ses limites avec le thème de la cognition supérieure. Les théoriciens de la cognition incarnée ne discutent généralement pas des idées de Merleau-Ponty sur le rôle de l'intentionnalité motrice dans la cognition supérieure. Il est pourtant clair que pour Merleau-Ponty, le corps et la motricité corporelle jouent un rôle très important dans la cognition supérieure. Merleau-Ponty note, par exemple, que l'on « ne pense pas sans le corps transfiguré, porteur de significations, qui est le schéma corporel ».[7] Le corps en ce sens est, pour Merleau-Ponty, « le porteur d'un nombre indéfini de systèmes symboliques » car ces systèmes « s'effondrent si le corps cesse d'en ponctuer l'exercice et de les installer dans le monde et dans notre vie ».[8] Pour Merleau-Ponty, le rôle du corps et de sa mobilité dans la cognition d'ordre supérieur est clairement fondateur.

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[2] S. Vörös, « Mind Embodied, Mind Bodified. Merleau-Ponty and the Enactive Turn in Mind Sciences ». *Etudes phénoménologiques – Phenomenological Studies*, 4/2020, 7, 13.

[3] M. Merleau-Ponty, *Le monde sensible et le monde de l'expression*, Metis Presses, 2011, 154.

[4] Ibid., 153.

[5] Ibid.; cf. ibid., 93.

[6] Toutefois, plusieurs commentateurs se sont aussi opposés à un tel rapprochement entre Merleau-Ponty et la science cognitive. Voir, par exemple, R. M. Muller, « Merleau-Ponty and the radical sciences of mind », in *Synthese*, 198/ 2021, 2243–2277; C. Pollard, « Merleau-Ponty and embodied cognitive science », in *Discipline Filosofiche*, 24(2)/ 2014, 67–90. Cependant, Pollard (op. cit., 89) finit son article par reconnaître que le mode d'enquête « transcendantal-philosophique » de Merleau-Ponty *n'exclut pas* les descriptions empiriques et scientifiques. Voir aussi Vörös, op. cit., 7, 14 ; S. Gallagher, « Rethinking Nature: Phenomenology and a Non-reductionist Cognitive Science », in *Australasian Philosophical Review*, 2 (2) / 2018, 125–137.

[7] M. Merleau-Ponty, *Le monde sensible et le monde de l'expression*, Metis Presses, 2011, 162.

[8] M. Merleau-Ponty, *Résumés de cours*, Gallimard, 1968, 18.

Corrélativement, dans le domaine de la recherche sur la cognition incarnée, peu attention a été accordée aux sujets qui sont devenus important dans la recherche plus spécialisée de Merleau-Ponty au cours des vingt dernières années. En particulier, les travaux de Merleau-Ponty sur le langage datant de l'après-guerre, y compris ses premiers cours au Collège de France, peuvent approfondir de manière considérable notre compréhension de l'interprétation classique de l'incarnation et de l'expérience perceptive développées dans la *Phénoménologie de la perception* et la *Structure du comportement*.

Donc, bien que mon but ici ne soit pas d'analyser la relation positive et fructueuse de Merleau-Ponty à la recherche empirique,[9] mon ambition est de fournir une illustration concrète de l'approche intégrative et interdisciplinaire de Merleau-Ponty. En outre, j'aimerais clarifier les affirmations de Merleau-Ponty sur la relation entre la corporéité et la cognition supérieure en abordant trois sujets principaux. Tout d'abord, je vais décrire comment, s'appuyant sur une étude concrète issue de neuropathologie, Merleau-Ponty développe le concept d'intentionnalité motrice comme une capacité de différenciation dynamique des figures perceptives. Ensuite, je vais expliquer comment Merleau-Ponty s'approprie des éléments importants de la linguistique structuraliste de Saussure et l'idée de langage comme un système de différences entre les signes et comment il relie cette idée à son interprétation de l'intentionnalité motrice. Finalement, je vais brièvement expliquer comment Merleau-Ponty interprète la pensée mathématique, qu'il comprend comme un cas particulier de la parole parlante ou opérante. Cela devrait permettre d'esquisser une théorie merleau-pontyenne de la cognition supérieure comme un processus fondamentalement incarné et supporté par des activités intentionnelles d'un corps situé et mobile.

2. Intentionnalité motrice comme différenciation de l'environnement phénoménal

L'exposé de Merleau-Ponty sur l'intentionnalité motrice se fonde principalement sur le cas bien connu de Schneider, un ancien combattant victime d'une lésion cérébrale. Selon l'interprétation originale de Gelb et Goldstein,[10] Schneider souffrait d'agnosie visuelle ou d'une « cécité psychique », c'est-à-dire d'une incapacité de proprement articuler les formes perceptives (*Gestalten*). Schneider ne reconnaissait généralement pas les objets par la seule vision, ce qui affectait également ses expériences tactiles et motrices. Plus important encore, Schneider avait des difficultés à effectuer des mouvements dits « abstraits », qui n'étaient pas sollicités par son environnement sensorimoteur immédiat.

[9] Sur ce point, voir surtout J. Reynolds, « Merleau-Ponty's Gordian knot: Transcendental phenomenology, science, and naturalism », in *Continental Philosophy Review*, 50(1) / 2017, 81–104 ; K. Romdenh-Romluc, « Science in Merleau- Ponty's phenomenology: From the early work to the later philosophy », in D. Zahavi (Ed.), *Oxford Handbook of the History of Phenomenology*, Oxford University Press, 340–359. (2014, 89); S. Matherne, « Merleau-Ponty on abstract thought in mathematics and natural science », in *European Journal of Philosophy*, 26(2) / 2018, 780–797.

[10] A. Gelb & K. Goldstein, *Psychologische Analysen hirnpathologischer Fälle*. Johann Ambrosius Barth, 1920.

Selon Gelb et Goldstein, les difficultés de Schneider provoquaient une perte de la fonction de représentation, attitude catégoriale, ou de la capacité de projeter spontanément ses intentions dans l'environnement.

Schneider et l'interprétation de Gelb et Goldstein sont encore discutés aujourd'hui dans la littérature.[11] Quant à Merleau-Ponty, il a des doutes sur l'explication de Gelb et Goldstein. Il affirme, par exemple, que l'expérience visuelle n'est jamais simplement ajoutée aux expériences tactiles ou motrices, et ne peut donc pas être simplement soustraite de la perception totale du patient, comme l'affirment Gelb et Goldstein.[12] Selon Merleau-Ponty, Schneider ne manquait pas simplement certaines parties de son expérience (comme les sensations visuelles) ou une faculté épistémologique spécifique (comme la fonction de projection ou de représentation). La déficience semble plutôt se définir par le fait que la structure globale de l'expérience de Schneider est moins différenciée, organisée d'une manière moins complexe.

Cette interprétation peut être élaborée par une analyse des performances compensatoires de Schneider. Par exemple, Schneider ne pouvait pas déterminer immédiatement la position d'un point de son corps qui était touché, mais il pouvait le localiser en mettant tout son corps en mouvement et en spécifiant progressivement la localisation du point par des mouvements exploratoires supplémentaires.[13] Ce qui est encore plus intéressant, Schneider pouvait accomplir des tâches motrices autrement impossibles en s'appuyant sur des structures culturelles sédimentées, telles que le langage ou les séries arithmétiques, qu'il utilisait comme des « scénarios» pour l'action. Par exemple, il analysait des indices perceptifs en termes de structures préétablies fournies par le langage, puis subsumait les premiers sous les seconds à l'aide d'inférences logiques.

Selon Merleau-Ponty, les actions compensatoires de Schneider doivent être comprises comme des tentatives de développer la structuration de son environnement phénoménal, qui compensent la détérioration de ses capacités motrices et son retour à une relation au monde plus globale. Par conséquent, la fonction originale de l'intentionnalité motrice, qui est altérée chez Schneider, ne doit pas être comprise comme un complexe d'états ou de fonctions liés au contenu ou à la représentation, mais plutôt comme un processus de structuration.[14] De ce point de vue, percevoir signifie utiliser activement ses capacités corporelles pour articuler des figures

[11] Voir G. Goldenberg, « Goldstein and Gelb's Case Schn.: A classic case in neuropsychology? », in Ch. Code, C.-W. Wallesch, Y. Joanette, A. R. Lecours (eds), *Classical Cases in Neuropsychology*, vol. II, Psychology Press, 2012, 281-299. En rapport avec Merleau-Ponty, voir surtout R. T. Jensen, « Motor intentionality and the case of Schneider », in *Phenomenology and the Cognitive Sciences*, 8(3) / 2009 ; T. Mooney, « Plasticity, motor intentionality and concrete movement in Merleau-Ponty », *Continental Philosophy Review*, 44(4) / 2011, 359–381 ; G. B. Jackson, « Maurice Merleau-Ponty's concept of motor intentionality: Unifying two kinds of bodily agency », *European Journal of Philosophy*, 26(2) / 2017, 763–779.

[12] Voir M. Merleau-Ponty, *Phénoménologie de la perception*, Gallimard, 1945, 150-151; *Le monde sensible et le monde de l'expression*, Metis Presses, 2011, 141-142.

[13] M. Merleau-Ponty, *Phénoménologie de la perception*, Gallimard, 1945, 137; *Le monde sensible et le monde de l'expression*, Metis Presses, 2011, 141.

[14] Voir R. T. Jensen, « Motor intentionality and the case of Schneider », in *Phenomenology and the Cognitive Sciences*, 8(3) / 2009, 386–387.

perceptives. Comme l'écrit Merleau-Ponty en se référant à Grünbaum,[15] l'intentionnalité motrice implique « la capacité de différenciation motrice du schéma corporel dynamique » qui correspond à « une certaine manière de mettre en forme ou de structurer l'entourage ».[16]

3. Le langage comme système diacritique

Or, les écrits de Merleau-Ponty de l'après-guerre permettent de montrer une stricte continuité entre son interprétation de l'intentionnalité motrice et ses vues sur le langage. Comme Merleau-Ponty l'explique dans une note de travail de 1953, la théorie saussurienne du langage, qui définit le signe par sa valeur « diacritique », et les travaux plus récents de Goldstein[17] rejoignent « l'idée profonde de la pathologie nerveuse » selon laquelle une maladie n'est pas une « soustraction » de certaines parties de notre expérience, mais une « dédifférenciation » de l'expérience comme un tout.[18] La continuité entre l'expérience perçue et parlée que Merleau-Ponty ainsi retrouve, lui permet à son tour d'argumenter en faveur d'un rôle constitutif du corps et de la motricité aux niveaux « supérieurs » de la cognition.

Comme on le sait, après avoir publié la *Phénoménologie de la perception* en 1945, Merleau-Ponty entreprend une étude approfondie de la linguistique de Saussure. Vers 1951, la parole et le langage deviennent les sujets centraux dans son projet de livre *La Prose du monde*. Ses trois premières cours au Collège de France (1953-1954) sont consacrées à l'expression culturelle, à l'usage littéraire du langage et au problème de la parole. Dans ces travaux, Merleau-Ponty développe son interprétation du langage et souligne à quel point il imprègne toute notre vie, y compris nos expériences corporelles.

À cette époque, Merleau-Ponty adhère à l'idée de Saussure selon laquelle « dans la langue, il n'y a que des différences sans termes positifs »[19]. De ce point de vue, la signification d'un signe est déterminée non pas par ce qu'il contient positivement, mais par sa différence avec les autres signes. En d'autres termes, la signification des signes est déterminée par leur valeur diacritique.[20] Merleau-Ponty apprécie le cadre structurel de Saussure car il lui permet de critiquer l'idée objectiviste selon laquelle les signes possèdent une unité positive

[15] A. A. Grünbaum, « Aphasie und Motorik », in *Zeitschrift für die gesamte Neurologie und Psychiatrie*, 130(1) / 1930, 397-398.

[16] M. Merleau-Ponty, *Phénoménologie de la perception*, Gallimard, 1945, 177-178 et 146.

[17] Voir K. Godstein, *Language and language disturbances; aphasic symptom complexes and their significance for medicine and theory of language*, Grune and Stratton, 1948.

[18] M. Merleau-Ponty, *Le problème de la parole,* Metis Presses, 2020, 123; voir aussi ibid., 119-120.

[19] F. de Saussure, *Cours de linguistique générale*, Payot, 1971, 166; cité par M. Merleau-Ponty, *La prose du monde*, Gallimard, 1969, 45.

[20] Cf. M. Merleau-Ponty, *Résumés de cours*, Gallimard, 1968, 33. Selon toute évidence, Merlau-Ponty reprend l'idée de « diacritique » non pas de Saussure lui-même, mais de l'ouvrage d'un de ses successeurs, R. Jakobson, (voir *Kindersprache, Aphasie, und allgemeine Lautgesetze*, De Gruyter Mouton, 1969).

et se réfèrent à des référents univoques ou des objets en soi. Si les signes n'ont de sens que par référence à d'autres signes, et non aux objets, ils ne signifient pas en vertu de leur relation à quelque chose qui existerait en dehors d'un système signifiant.

Cependant, contrairement à l'interprétation traditionnelle du structuralisme, Merleau-Ponty interprète le système diacritique du langage comme fondamentalement ouvert et dynamique. Pour lui, les actes de parole individuels ne sont pas simplement subordonnés au système linguistique, mais le remodèlent dynamiquement. Merleau-Ponty soutient que Saussure lui-même mettait en cause la distinction entre les actes de parole contingents et leur valeur générale dans le système de la langue.[21] La parole, écrit Merleau-Ponty, « ne réalise pas seulement les possibilités inscrites dans la langue, … elle modifie et soutient la langue tout autant qu'elle est portée par elle »[22]. Plutôt que d'être une simple enveloppe externe et un instrument de la pensée, la parole est pour Merleau-Ponty un véhicule intentionnel permettant de se mettre en rapport avec un type particulier de signification et de la saisir. Cette approche implique que le système linguistique et, par conséquent, conceptuel est soumis à un développement par la manière dont les sujets parlants s'approprient ou produisent, à travers leurs actes de parole individuels, des variations linguistiques et dont ils les intègrent dans la totalité des normes communicatives préétablies.

Comme on le sait, l'accent mis par Merleau-Ponty sur le rôle de la parole et des actes linguistiques individuels a souvent été perçu comme une incompréhension de la théorie de Saussure.[23] Selon la lecture structuraliste « doctrinale »[24], la linguistique structurale sépare strictement les aspects systématiques du langage des aspects contingents, et par conséquent la synchronie de la diachronie. De ce point de vue, la parole ne peut être comprise linguistiquement que dans le contexte du système linguistique, car elle implique potentiellement des déformations non systématiques et accidentelles. Les énoncés individuels provoqueraient des changements diachroniques du système dans la mesure où ils sont précisément non systématiques, et ne refléteraient pas la volonté d'un sujet de transmettre un sens spécifique. Définie en ces termes, la linguistique structurale ne peut étudier ni l'innovation linguistique ni l'activité innovatrice au niveau de la pensée abstraite et conceptuelle.

Toutefois, tenant compte du contexte éditorial de l'édition de 1916 du *Cours de linguistique générale* et des écrits originaux de Saussure, les affirmations sur l'incompatibilité des travaux de Merleau-Ponty avec une compréhension structurale du langage

[21] M. Merleau-Ponty, *Résumés de cours*, Gallimard, 1968, 33.

[22] Ibid.

[23] Voir sur ce point A. P. Foultier, « Merleau-Ponty's Encounter with Saussure's Linguistics: Misreading, Reinterpretation or Prolongation? », in *Chiasmi International*, 15 / 2013, 129–150 ; B. Stawarska, « Uncanny Errors, Productive Contresens. Merleau-Ponty's Phenomenological Appropriation of F. de Saussure's General Linguistics », in *Chiasmi International,* 15 / 2013, 151–165.

[24] Voir les travaux de B. Stawarska, *Saussure's Philosophy of Language as Phenomenology: Undoing the Doctrine of the Course in General Linguistics,* Oxford University Press, 2015; *Saussure's Linguistics, Structuralism, and Phenomenology*, Palgrave Macmillan, 2020.

se révèlent peu convaincantes. Bien que Merleau-Ponty n'ait pas eu accès à d'autres écrits que le *Cours*, il était particulièrement attentif à ce qu'il percevait comme des ambiguïtés conceptuelles du texte. Il met précisément l'accent sur les aspects de la pensée de Saussure qui ont été marginalisés par les éditeurs de l'édition de 1916 du *Cours* et les interprétations traditionnelles du structuralisme et qui sont maintenant redécouverts au sein de la recherche saussurienne. Comme le souligne aujourd'hui Stawarska, la distinction de Saussure entre langue et parole « est de degré et non de nature, et relative plutôt qu'absolue ».[25] Ainsi, selon Saussure, les actes de parole individuels ne sont pas déterminés unilatéralement par les valeurs systématiques d'une langue, comme le prétend l'approche structuraliste traditionnelle. Au contraire, les deux ordres sont interdépendants et incorporent constamment les différenciations de l'autre.[26] Dans cette optique, la langue n'est pas un système fermé sur soi, mais un équilibre de stabilité et de changement qui est ouvert aux actes des locuteurs individuels.[27]

Comme l'explique précisément Merleau-Ponty, la parole expressive ne communique donc ni les expériences subjectives indépendantes du langage ni des valeurs inscrites préalablement dans une langue supra-individuelle, mais articule plutôt « l'excès de ce que nous vivons sur ce qui a déjà été dit » ; par conséquent, « le contact prétendu avec [les choses] n'est pas au début de la langue, mais au bout de son effort ».[28] Cela signifie, en bref, que les objets n'existent pas indépendamment de nos relations avec eux, mais qu'ils apparaissent plutôt en fonction de notre capacité à articuler leur structure phénoménale à travers les systèmes « diacritiques » dont nous disposons collectivement. La perception, comme nous l'avons vu, est un tel système dynamique de différenciation fondé sur notre motricité[29] – et le langage en est un autre, fondé sur la parole opérante. Au sein de ces systèmes diacritiques entrelacés, nous ne nous rapportons jamais linguistiquement à de simples référents, mais plutôt à ce qui reste à dire, dans notre situation totale, par rapport à ce qui a déjà été articulé dans notre langue et notre culture.

Par conséquent, Merleau-Ponty soutient que la pensée abstraite articulée conceptuellement, qui était censée être absente dans le cas de Schneider, est le résultat du processus de « différenciation parallèle du langage et de la situation ».[30] Pour Merleau-Ponty, la fonction « supérieure » telle que l'articulation linguistique de la pensée n'est donc pas simplement ajoutée à une fonction « inférieure » telle que l'action sensorimotrice, mais se constitue plutôt à travers une structuration plus fine de ce qui reste seulement globalement organisé, ou « polymorphe », dans notre expérience

[25] B. Stawarska, *Saussure's Linguistics, Structuralism, and Phenomenology*. Palgrave Macmillan, 2020, 84.

[26] Cf. ibid., 82, 118.

[27] Cf. ibid., Chapitre 13, qui analyse l'apport de Merleau-Ponty sur ce point.

[28] M. Merleau-Ponty, *La prose du monde*, Gallimard, 1969, 158-159 et 155.

[29] Merleau-Ponty parle même d'une « perception diacritique », se référant à la linguistique de Saussure. Voir *Le monde sensible et le monde de l'expression*, Metis Presses, 2011, 203-204.

[30] M. Merleau-Ponty, *Le problème de la parole,* Metis Presses, 2020, 121.

sensorimotrice. Inversement, les pathologies du langage correspondent à un retour à une organisation plus amorphe de l'expérience.[31] Pour Merleau-Ponty, il y a donc une stricte continuité entre le niveau sensorimoteur et le niveau linguistique, qui est fondée sur une différenciation phénoménale accomplie par le corps moteur et la parole comme un instrument de sublimation de nos intentions motrices.

4. Rationalité incarnée : exemples de géométrie et algèbre

Pour illustrer plus concrètement l'approche de Merleau-Ponty de la parole comme véhicule à travers lequel l'intentionnalité motrice est prolongée et sublimée, je vais maintenant aborder brièvement un type de cognition que les théories intellectuelles présument représenter le sommet de la rationalité et donc de la désincarnation : la pensée mathématique.

Ici encore, Merleau-Ponty plaide en faveur d'un rôle fortement constitutif du corps. Dans la *Phénoménologie de la perception*, il affirme par exemple que « le sujet de la géométrie est un sujet moteur ».[32] Dans la *Prose du monde*, il soutient de la même manière qu'il n'y a pas de pensée désincarnée dans l'algèbre.[33] Dans les deux cas, Merleau-Ponty maintient que la configuration des signes mathématiques, tels que les diagrammes géométriques et les symboles mathématiques, joue un rôle fondamental dans notre accès aux idées mathématiques[34] et que cette configuration est un phénomène perceptif qui est profondément lié à l'action corporelle. Alors que, pour les cadres théoriques intellectualistes, c'est une question d'indifférence comment, parmi les diverses manières possibles, nous nous représentons un objet mathématique, Merleau-Ponty soutient que cela n'est vrai qu'en dessous d'un certain seuil, et non absolument. Dans la mesure où la réalisation d'un acte de compréhension mathématique requiert des *réorganisations structurelles* d'acquisitions culturelles antérieures, la pensée en géométrie et en algèbre est incarnée pour Merleau-Ponty.

Sur ce point, il est important de noter que Merleau-Ponty reconnaît l'argument de Gurwitsch[35] contre Wertheimer[36] et la psychologie gestaltiste en général, selon lequel une entité mathématique telle qu'un triangle ne peut être interprétée comme une gestalt perceptive, car sa signification ne dépend pas directement du contexte

[31] Ibid.

[32] M. Merleau-Ponty, *Phénoménologie de la perception*, Gallimard, 1945, 443.

[33] Voir surtout M. Merleau-Ponty, *La prose du monde*, Gallimard, 1969, 149-151, 161-181.

[34] Sur ce point, l'approche de Merleau-Ponty préfigure des aspects importants de la recherche contemporaine sur les mathématiques. Concernant la géométrie, voir par example M. Hohol, *Foundations of Geometric Cognition*, Routledge, 2020, Chapitre 4.

[35] A. Gurwitsch, « Some Aspects and Developments of Gestalt Psychology », in F. Kersten (Ed.), *The Collected Works of Aron Gurwitsch (1901-1973): Volume II: Studies in Phenomenology and Psychology*, Springer Science & Business Media, 2009, 58-61.

[36] M. Wertheimer, « The Syllogism and Productive Thinking », in W. D. Ellis (Ed.), *A Source Book of Gestalt Psychology*, Kegan Paul, Trench, Trubner & Company, 1938, 274–282.

perceptif.[37] Contrairement à un objet perceptuel concret, un objet mathématique a le pouvoir d'inaugurer un ordre de signification dans lequel les changements phénoménaux sont soit non pertinents, soit ils manifestent le même objet de manière plus complète. Cependant, selon Merleau-Ponty, une signification idéale n'est jamais complètement détachée de son contexte phénoménal. Plutôt, la nature spécifique des signes qui la présentent élève, pour ainsi dire, le seuil au-delà duquel le contexte phénoménal affecte leur signification.

Merleau-Ponty donc refuse également l'explication husserlienne de Gurwitsch, comparable à celle que Gelb and Goldstein ont appliqué au cas de Schneider, selon laquelle un objet abstrait (mathématique ou autre) est le corrélat d'une « attitude catégorielle » et par conséquent détachable du champ phénoménal spatio-temporellement concret.[38] Merleau-Ponty soutient que la « fonction de représentation » présumée, qui est censée permettre l'attitude « catégorielle », repose sur un certain fondement, et ne doit pas être séparée des « matériaux » dans lesquels elle se réalise.[39] Plus précisément, Merleau-Ponty affirme que l'attitude catégoriale et ses corrélats intentionnels sont est en réalité achevés par la structuration (*Gestaltung*) active de la relation entre un sujet et le monde appuyée sur des symboles culturelles.[40] L'attitude catégoriale ne préexiste donc pas comme une fonction épistémologique générale, mais se réalise au sein d'une situation spatio-temporelle concrète et reste à jamais ouverte aux réorganisations ultérieures, ou même à une désintégration.

S'appuyant sur les travaux de Wertheimer, Merleau-Ponty ainsi soutient que l'on ne peut saisir une signification proprement géométrique qu'en se rapportant à une « configuration » d'espace circonscrite par un triangle, par exemple, situé dans l'espace orienté de notre champ visuel, ou dans le champ de notre imagination visuelle.[41] De plus, Merleau-Ponty affirme que le système de positions spatiales circonscrites par le triangle est aussi un champ de mouvements possibles pour moi en tant que sujet moteur. Une figure géométrique n'est donc donnée ni comme un fait positif enregistré par les sens, ni comme une essence transcendante saisie par la raison. C'est plutôt une *essence concrète*, c'est-à-dire une gestalt située dans notre champ perceptif et moteur. Par conséquent, plutôt que d'être *une partie du monde*, un objet matériel ou idéal, une figure géométrique relève de notre *relation au monde*. Les propriétés géométriques spécifiques ne nous

[37] M. Merleau-Ponty, *Phénoménologie de la perception*, Gallimard, 1945, 444.

[38] Voir A. Gurwitsch, « Some Aspects and Developments of Gestalt Psychology », in F. Kersten (Ed.), *The Collected Works of Aron Gurwitsch (1901-1973): Volume II: Studies in Phenomenology and Psychology*, Springer Science & Business Media, 2009, 54-61.

[39] M. Merleau-Ponty, *Phénoménologie de la perception*, Gallimard, 1945, 157.

[40] M. Merleau-Ponty, *Le problème de la parole,* Metis Presses, 2020, 121.

[41] Voir M. Merleau-Ponty, *Phénoménologie de la perception*, Gallimard, 1945, 443-448; M. Wertheimer, « The Syllogism and Productive Thinking », in W. D. Ellis (Ed.), *A Source Book of Gestalt Psychology*, Kegan Paul, Trench, Trubner & Company, 1938, 279-80. Voir également l'interprétation de ces passages par M. Hass & L. Hass, L., « Merleau-Ponty and the Origin of Geometry » in F. Evans (Ed.), *Chiasms: Merleau-Ponty's Notion of Flesh*, SUNY Press, 2000, 177–187 ; L. Hass, *Merleau-Ponty's Philosophy*, Indiana University Press*,* 2008, 150-155.

sont pas accessibles sur la base d'une simple analyse logique d'un objet géométrique en tant que représentation mentale. Au contraire, on ne parvient à saisir une vérité touchant un objet géométrique tel qu'un triangle qu'en réorganisant notre rapport à lui et en transformant sa configuration phénoménale concrète.

Ainsi, afin de démontrer une vérité géométrique, le géomètre doit intervenir dans la figure du triangle comme le pôle vers lequel ses mouvements sont dirigés ; il « explore » la configuration spatiale que le triangle lui ouvre, il se situe en un point et de là tend vers un autre point ; il étend un côté du triangle, puis trace une ligne à travers le sommet qui est parallèle au côté opposé, et ainsi de suite.[42] C'est donc en réorganisant une configuration phénoménale concrète, par exemple en l'explorant perceptivement ou en y ajoutant des lignes auxiliaires, que le géomètre arrive à voir et à démontrer pour tout autre géomètre que la somme des angles d'un triangle est égale à deux angles droits.

De même, Merleau-Ponty maintient que le mathématicien n'accède à certaines propriétés algébriques des nombres qu'en structurant la série numérique linéaire d'une manière spécifique. Dans le cas de la formule de Gauss $\Sigma\, n = (n \div 2) \times (n + 1)$, par exemple, la série numérique est structurée de telle sorte que ses membres forment des paires de même valeur.[43] L'importance d'une formule mathématique consiste en ce qu'elle contracte certaines transformations structurelles de la série de nombres, ce qui articule un aspect mathématique de la série qui ne serait pas disponible autrement. Sans la formule de Gauss, il faudrait compter la somme de la série en procédant d'une manière progressive, car la relation gaussienne n'est pas évidente dans la série donnée comme une série linéaire. Avec la formule, en revanche, l'exécution progressive des additions devient inutile.

En outre, une formule originale comme celle de Gauss a priorité sur toutes les autres formules algébriques correctes qui peuvent en être dérivées par formalisation et qui ont la même validité mathématique. Les formules dérivées ne conservent pas sa « lumière démonstrative » qui est liée à sa configuration structurelle unique.[44] Tandis que la formule originale permet d'effectuer à nouveau les étapes exploratoires qui y sont contractées, les formules dérivées ne rendent pas directement accessible une telle réactivation. Ici encore donc, Merleau-Ponty maintient que nous sommes en droit d'affirmer que la cognition algébrique est le corrélat d'une exploration sensorimotrice dans la mesure où la configuration particulière d'un ensemble de signes algébriques contribue à leur signification mathématique.

Par conséquent, Merleau-Ponty maintient que nous ne pensons véritablement en mathématiques, et il n'y a de développement des mathématiques en tant que discipline, qu'en modifiant la manière dont les

[42] M. Merleau-Ponty, *Phénoménologie de la perception*, Gallimard, 1945, 444-446.

[43] Voir surtout M. Merleau-Ponty, *La prose du monde*, Gallimard, 1969, 149-151; *L'institution, la passivité. Notes de course au Collège de France (1954-1955)*, Belin, 2003, 95-96; M. Wertheimer, *Productive Thinking*, Birkhäuser, 2020, 108-142.

[44] M. Merleau-Ponty, *L'institution, la passivité. Notes de course au Collège de France (1954-1955)*, Belin, 2003, 96.

structures mathématiques relativement générales héritées de la tradition sont concrètement structurées dans notre champ d'expérience. Dans cette optique, la compréhension géométrique et algébrique résulte d'une exploration sensori-motrice spécifique du champ phénoménal corrélatif à un espace géométrique ou à un système algébrique donnés.

Ici encore, la désintégration pathologique de l'intentionnalité motrice de Schneider offre un contraste instructif avec l'argument positif de Merleau-Ponty. Alors que la pensée productive en mathématiques implique généralement la production d'organisations plus complexes et plus finement structurées d'acquisitions mathématiques antérieures, le cas de Schneider se distingue par le fait que sa capacité à effectuer de telles réorganisations est significativement déficiente en raison de sa blessure corporelle.

Schneider comprenait linguistiquement et intellectuellement ce qu'est un triangle ou un carré, et la relation entre ces significations ne lui échappait pas. Cependant, il ne pouvait pas accéder à des propriétés géométriques autres que celles évidentes des structures géométriques telles qu'elles lui étaient factuellement présentées. Par exemple, Schneider comprenait que les triangles s'inséraient dans les carrés, mais pas si les triangles devaient être d'abord tournés.[45] De même, Schneider était capable d'additionner, de soustraire, de multiplier ou de diviser, mais seulement en ce qui concerne les objets placés devant lui ; les problèmes plus abstraits, il ne les résolvait qu'à l'aide d'opérations manuelles telles que le comptage des doigts.[46] De même, il ne pouvait pas comprendre, par exemple, que le « double de la moitié » d'un nombre donné est ce nombre même, alors qu'il pouvait effectuer l'opération arithmétique correspondante.[47]

En tant qu'inversion pathologique, le cas de Schneider donc confirme l'affirmation de Merleau-Ponty selon laquelle le sujet de la géométrie et de l'arithmétique est un sujet moteur incarné : une diminution de la capacité à articuler phénoménalement les objets par l'intentionnalité motrice, causée par une lésion cérébrale, est en corrélation avec la diminution de la capacité de Schneider à comprendre les relations géométriques, arithmétiques et algébriques. Cela signifie, en bref, que, tout comme dans le domaine sensorimoteur, la cognition d'ordre supérieur de Schneider a été altérée dans la mesure où sa lésion a limité sa capacité motrice à produire des différenciations comparativement plus complexes de toute structure phénoménale donnée.

5. Conclusion

Pour conclure, je résume brièvement ce que je considère comme les aspects les plus intéressants et les plus prometteurs de l'approche phénoménologique de la cognition supérieure incarnée de Merleau-Ponty. Comme je l'ai montré sur les exemples liés aux difficultés neuropathologiques de Schneider et à ses performances compensatoires, Merleau-Ponty soutient qu'il existe une continuité fondamentale entre les domaines sensorimoteurs et intellectuels de la cognition. Les deux

[45] M. Merleau-Ponty, *Phénoménologie de la perception*, Gallimard, 1945, 165.

[46] Ibid., 167.

[47] Ibid.

domaines doivent être liés à nos capacités corporelles d'articuler les structures phénoménales qui y apparaissent. À la fin des années quarante, l'adoption d'un cadre structuraliste saussurien aide Merleau-Ponty à mieux rendre compte des aspects intersubjectifs et culturels de la cognition, ce qui l'amène à reconnaître qu'il existe également une certaine discontinuité entre la cognition sensorimotrice et la cognition dite supérieure. Certaines « acquisitions » de sens peuvent être conservées même si les fonctions « inférieures » sont désintégrées, comme cela s'est produit dans le cas de Schneider. Cependant, comme on a pu le voir avec l'exemple des mathématiques, Merleau-Ponty soutient que ces structures acquises nécessitent une « reprise » active si elles doivent conserver leur plein sens. Même les structures générales telles que les figures géométriques ou les séries arithmétiques et algébriques nécessitent une reprise active de structuration phénoménale. Ainsi, l'interprétation structurelle dynamique de la cognition de Merleau-Ponty offre une interprétation originale de la relation entre les types de cognition dits inférieurs et supérieurs. Comme je l'ai souligné, Merleau-Ponty a pu déterminer que le pouvoir articulatoire du langage devait être considéré comme une différenciation plus fine du pouvoir articulatoire que nous trouvons dans l'expérience perceptive sous la forme de l'intentionnalité motrice.

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ENACTIVISM AND PERFORMANCE ART: PUTTING ON DISPLAY OUR PERCEPTION

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ABSTRACT. Seeing, according to the enactive approach, is not something that happens inside our brain, rather it is something we do, but, as I will argue thanks to the performance art, it is something we do together. The performing arts, with their characteristics – autopoietic feedback loop, spectator/performer exchange, oscillation of the dichotomous subject-object pair - constitute a model through which to investigate the nature of our perception, which is constitutively relational, participative, and transformative.

Keywords: enactivism, performing arts, perception, enactive loneliness, transformation.

Perceiving as a way of acting together

Perception, according to the enactive approach, is not something that happens inside our brain, rather it is something we do; it rests on the background of our sensorimotor abilities and it is constrained by our environment and socio-cultural context; in this sense, it is much more similar to climbing a tree or reading a book than to a digestive process. Despite some significant differences, it is correct to say that several authors working in the field of the enactive approach agree in opposing the idea that by perceiving we make internal representations. Starting from Varela-Thompson-Rosch's seminal work of 1991, *The Embodied Mind*, the main polemic target of the authors related to the enactive approach is represented by the computational model of mind. This model constitutes the pivot of classical cognitivism which, since the 1950s, has been assumed by default as the approach to conceiving cognition within the science of the mind.

According to the enactive approach, external objects are not exclusively stimuli that trigger internal events affecting the nervous system; rather, they constitute opportunities for our dynamic interaction with them. The world, then, does not manifest itself to us as an image in the head but as a playground for our activity. Here, we do not mean the activity of the brain but the activity of an embodied mind that involves the whole of animal life. The brain obviously plays an important but not exclusive role in this dynamic and distributed relationship involving the eye-brain-head-body-ground-environment system.

Particularly interesting for my reflection is that, according to the enactive approach, the world does not open up to our observation for free, simply offering itself to our eyes – as in Ernst Mach's famous illustration that perfectly captures the snapshot

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conception of perception – but presents itself to us only if we actively bring skills and competencies into play.

The paradigm that the American philosopher Alva Noë suggests to adopt, and which well characterizes the temporal nature of our perceptive experience, is that of the blind man who, with his cane, through trials and attempts, comes to orient himself within the surrounding environment. This paradigm, by rendering the tactile nature of our vision in accordance with the intuition of Merleau-Ponty, allows us to consider the field of our experience as always indeterminate and never completely circumscribable. The world presents itself to us only through adjustments, remodulations of contact styles, and negotiations. Our perception, in this sense, is extremely fragile and always to be reconstructed through revisable attempts. As I will try to highlight, the point is that we do indeed gropingly unfold our perceptual experience over time along the lines of the tactile exploration developed by the blind man with his cane, but we do not do so relying exclusively on our solitary attempts, rather we do so resting, from the very beginning, on a socio-cultural scaffold that supports and directs us. Our process of perceptual exploration is not to be understood as predetermined, it certainly depends on what we do or what we are ready to do, but we are not alone in our attempt to focus the world. The perceptual experience is an achievement as Noë says but, as I will try to emphasize using the model provided by the performing arts, it is not a solitary achievement. Seeing is a way of acting that is articulated through an intricate series of sensorimotor modalities, interactions, tools, practices, institutions. Only in this tangle we can find ourselves.

It seems to me, as I will try to bring out, that the performative arts constitute an exemplary model through which to observe our dynamic interactions with the environment, our styles of access, in short, our way of establishing contact with the world. In order to attempt to shed light on how the performance arts put our perception on display, I will first critique Noë's "lonely" approach to perception through the analysis of an example related to a live work he used in his 2015 essay, *Strange Tools*, and secondly, I will use the theoretical tools provided by German performance art scholar Erika Fischer-Lichte.

In the comparison between the performing arts and Noë's proposal, the limits of the latter will emerge, as well as the clear similarities between the demands of the live arts and radical enactivism, including its relative alliances, as well defined by Daniel Hutto[1], with autopoietic orientation, ecological psychology, and Material Engagement Theory. I will not refer directly to this system of alliances here, but rather I will exclusively develop a comparison between Noë's proposal, although it has changed significantly over time, and the performing arts, in the conviction that productive ideas can emerge.

[1] Daniel D. Hutto and Erik Myin, *Evolving Enactivism: Basic Minds Meet Content*, Cambridge, MA: MIT Press, 2017, p. 75

Performing arts challenge enactive loneliness

It seems to me that Noë, in briefly mentioning the live work of Tino Sehgal presented at the Venice Biennale 2013, misses a valuable opportunity to include in his reflection, among other things that I will try to focus on, an intersubjective dimension. According to Erika Fischer-Lichte, the main characteristic of the performative would be precisely that of dynamizing oppositions and unhinging crystallized models, but it seems that Noë's proposal is impermeable to this destabilizing force.

The point is that, as I will try to highlight in this paragraph, the perceptive experience that is put on display in an exemplary way by the performing arts, in my opinion, does not rest exclusively, as Noë's proposal seems to imply, on a sensorimotor level but also on an intersubjective and socio-cultural one. This is a problem that afflicts Noë's reflection and that has its roots in his previous works even if it is clear that the American philosopher has tried to amend his proposal over the years.

In order to develop my reflection, I start from "the lonely world of the enactive perceiver" of which the philosopher Shaun Gallagher speaks in reference to the sensorimotor approach developed by Noë who

> fails to make any mention of intersubjectivity, or social perception, or to make any acknowledgment that object perception is different from person perception, or that our encounters with others might contribute to the sensorimotor capacities that are so important for enactive perception. Is there not an important sense in which we learn from others what to look for and how to manipulate and understand things? [2]

Noë's account of perception is focused on what Gallagher calls the «mechanical dynamics»[3] of object-perception where issues of intersubjectivity do not find room. Although the critique is addressed to the 2004 essay, *Action in Perception*, it seems to be entirely relevant to the latter text as well, although, as I have already mentioned, Noë has tried to reshape his proposal.

Gallagher even goes so far as to say that in Noë's enective address the idea that there are other people in the world does not even seem to be contemplated. His critique hinges on an example that Noë uses in order to get rid of the model of internal representations. Noë, in describing his attempt to reach a castle – Gallagher ironically hypothesizes that it could be the castle of Edinburgh, the city where Noë's dear friend Andy Clark lives – considers two solutions: to consult a map or to look around and if the castle is visible, to start walking keeping an eye on it. Noë adopts the second solution but misses, according to Gallagher, to consider a third option, that is to ask for directions: Edinburgh is full of people to ask for information and among them there is also Noë's dear friend, Andy Clark.

This problematic aspect of Noë's proposal is even more evident when his analysis comes into contact, albeit marginally, with the performing arts, which instead require a perspective that takes into account, among other things, the intersubjective dimension.

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[2] Gallagher, Shaun, *Intersubjectivity in perception,* in Continental Philosophy Review 41, 2008, p.178

[3] *Ibidem*

Before moving on to the example related to the performing arts, I think it's worth considering first of all a central theoretical place in Noë's reflection. The American philosopher supports the idea that our perception is an achievement that depends on the skills and competencies that we are ready to put at stake. In order to define the kind of achievement linked to our perceptual experience, which allows him to account for the shift from not seeing to seeing or seeing differently, Noë uses, on several occasions, an example that I think is very effective. When we enter an art gallery, we first perceive the artworks on display as indistinct; like faces we meet for the first time at a party, they all look the same, we find it hard to bring them into focus. Only later on, because we are captured by a particular characteristic, intrigued by the title, or because a friend of us points out some aspects, we will be able, by means of sensorimotor adjustments, to establish contact with a work of art and thus define relationships of similarities and differences. The support provided by Noë's friend in the above example is, however, accidental and certainly does not constitute a central element in his analysis. The encounter with the artwork takes place in Noë almost in the absence of socio-cultural support, in fact, the environment, as it is characterized, seems to be exclusively physical. The problem that I would like to highlight is that the axis of his proposal seems to revolve essentially around the sensorimotor models, leaving out, as I have already mentioned, the intersubjective dimension.

On the basis of this premise, and thanks to Shaun Gallagher's insights to which I have referred, I will try to argue my critique by examining the brief mention that Noë makes in *Strange Tools* to the live work of Tino Sehgal, where, in my view, *the lonely world of the enactive perceiver* comes to the fore. Rather, it seems to me that Sehgal's live piece functions as a *mise en abyme* of our joint ability to access the world.

In this "constructed situation", as Sehgal likes to define his live pieces, a small group of people sits on the floor of a room in the Giardini Della Biennale; one of the performers makes sounds, produces a faint rhythm while the others react to these stimuli by moving their bodies through small movements. The performers are in a condition of mutual listening and, not marginally, as Noë himself notes, one has the impression that «they imitate each other, but not quite directly, always as if going to some basic core quality of a movement or feeling»[4]. From time to time some performers enter and others leave. Although the movements seem to be governed by the principle of improvisation, the whole system is presented as perfectly organized.

As Noë writes:

> When you enter the gallery, the piece hardly jumps out at you. There are people on the floor moving slowly, making noise, but there are dozens of visitors milling around them. The piece is sort of invisible at first, just as it is unclear what, if any, logic or rule governs what is going on. My first response was to find the work uninteresting and to want to move on. Gradually

[4] Alva Noë. *Strange Tools,* Hill and Wang, New York, 2015, p.80

> the piece comes into focus, and when I left, about an hour and a half later, I felt that I had gotten to know something definite and particular, a thing, this art thing. [5]

This live piece suits perfectly Noë's reflection that the general form of the artwork is "see me if you can". Sehgal's work «dares you to try, to look hard enough so that you can»[6]. Thanks to this example it is possible to observe that characteristic shift of our perceptive experience from not seeing to seeing or seeing differently. Noë, in fact, only after an extended commitment over time comes to identify the performers. The inability to distinguish the performers among the crowd requires from the visitor an effort that, although it is usually under trace, we constantly make in our everyday experience to focus the object of our perception. In this sense, Sehgal's live piece responds to Noë's idea that «one of art's tasks is to afford us the opportunity to catch ourselves in the act of encountering the world»[7]. The problem is that this encounter does not occur in a solitary mode. What Noë fails to grasp is that perceptual experience develops *with* and *through* others. The sensorimotor models adopted by the other visitors and performers, their disposition in the space that functions as a ostensive gesture[8], the negotiation of the object of attention, the different styles of access – sitting for a long time to observe, exchanging impressions with those next to us, making a phone call and taking a fleeting glance, approaching the performers to the point of crossing the zone of intimacy – all contribute constitutively and not incidentally to defining the perceptive experience. In this sense, Noë's reference to the impression that the performers imitate each other seems to lead the reflection towards a more promising outcome. I believe that Sehgal's work provides an opportunity to grasp ourselves in the act of accessing the world through styles that we have – also – learned, that we imitate: we are all imitating, with different degrees of autonomy, others. Noë does not seem to catch himself in the act of imitating and being imitated. The question of imitation that he identifies by analyzing the movement of performers is never only about performers; this is what performance art should teach us.

The perceptive experience that emerges on the occasion provided by Sehgal's live piece does certainly concerns, according to Noë, the game of sensorimotor adjustments between the bodies of the performers and the spectator – problematic opposition that as we will see should collapse in reference to an enactive approach and in particular to performance art but that subsists in Noë's analysis – but also, not marginally, to the game of relationships between visitors who, with their more or less active participation, make themselves potentially available to any kind of interaction belonging to the family of "Excuse me, How do I get to the castle?".

Here there isn't merely at stake a relation between a subject and an object, but rather a space in which it is dynamically and collectively possible to produce a performance through what Erika Fischer-Lichte, as I will deepen in the next paragraph, defines an autopoietic feedback loop.

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[5] *Ibidem.*

[6] Alva Noë. *Strange Tools,* p.102

[7] Ivi, p.80

[8] Cf. Daniel D. Hutto and Erik Myin, *Evolving Enactivism: Basic Minds Meet Content*, Cambridge, MA: MIT Press, 2017, pp.171-176

What Sehgal's live work opens up is precisely this space of relationship between bodies that transform each other. Noë misses the point: here the issue at stake is not only to focus the object of one's own perception but to grasp oneself in a system of relationships from within the relationship itself in which the subject-object poles are dynamized. The problem then is that, as we shall see, Noë does not accept the challenge of the performing arts.

Enacting the transformation

In her 2004 essay *The Transformative Power of Performance: a New Aesthetics*, Erika Fischer-Lichte, assuming a position that is not flattened on Performance Studies but rather develops in the field of theatre studies, defines a series of conceptual tools that are extremely productive for the purposes of my reflection. I will dwell here particularly on the notion of the autopoietic feedback loop she coined.

In the opening of her essay, the German scholar examines Marina Abramovich's performance, *Lips of Thomas*, presented at the Krinziger Gallery in Innsbruck on October 24th, 1975. Erika Fischer-Lichte uses this example as a paradigmatic model of the performative turn that became established in Western culture from the early 1960s. The Yugoslavian naturalized American artist, on that occasion, developed a series of actions that were not intended to represent a fictional world but rather to transform her own bodily state and the condition of the spectators. Entering the space, Marina Abramovic, first of all, stripped off her clothes, then hung a photo on the back wall, sat at a table eating a one-kilo jar of honey, drank a bottle of wine from a crystal goblet which she then shattered with her right hand, thus beginning to bleed. The actions of self-referral continued with the engraving on the belly of a five-pointed star and with the practice of self-flagellation. At this point the artist stretched herself out on blocks of ice and remained, in pain, in that position for about half an hour until the public intervened, taking her away and thus ending the performance.

What the audience and the performer jointly gave life to on that occasion was an event that did not fall within the standards of the figurative arts nor of the theatrical arts. The spectators, once the usual models of behavior to which to refer collided, sank into a state of deep crisis. They constituted themselves therefore not only as percipient and thinking subjects but also as subjects capable of action. Their previously unplanned and unplannable action, which consisted of active engagement in the construction of the performative event, involved the modification of the object of their own experience through a dynamic in which agency was spread.

Interestingly, a conception of the perceptual modality that must necessarily resort to an image of the percipient subject as essentially active is on display here. As can be guessed and as we will see better in a moment, the notion of subject, understood as a crystallized term in opposition to an already given object, is certainly not safe in this context.

Starting from the analysis of *Lips of Thomas*, Erika Fischer-Lichte shows how, within the performance, some dichotomous pairs – subject-object, seeing-touching, body-mind – oscillate until they collapse. Here we do not witness the opposition between a

subject to which is attributed all the cognitive-experiential load and an object devalued of any value, rather through the exchange actor-spectator we are witnesses not of a simple reversal but of a dynamic movement that makes us lose track of the subject and the object understood as polarized terms.

As Erika Fischer-Lichte states:

> Through this process, the relationship between subject and object was established not as dichotomous but as oscillatory. The positions of subject and object could no longer be clearly defined or distinguished from one another. [9]

What therefore produces the performative event is a dense weave of interactions that Erika Fischer-Lichte defines autopoietic feedback loop. This notion, which makes explicit reference to the work of biologists Umberto Maturana and Francisco Varela – landmarks of enactivism –, defines that «self-referential, autopoietic system enabling a fundamentally open, unpredictable process»[10]. The autopoietic feedback loop works as a self-organizing system, within which new unplanned elements are continuously integrated and emerge from time to time. It is essentially constituted by the actions and reactions of the participants in the event and, although it is precisely performance art that thematizes it, it is present in a minimal form in every spectacular event, even the most formalized.

Precisely because all participants – actors and spectators – are included within a system in progress that produces itself, the performance arts offer everyone the opportunity to undergo change and transform themselves. Erika Fischer-Lichte's reflection on this last aspect is related to Victor Turner's anthropology and his notion of "liminality" developed in the context of research on rituals with reference to Arnold van Gennep's work. The latter in his famous study of 1909, *Rites of Passage*, analyzing a large number of ethnological materials, defines the transitional rites through three phases: 1) the phase of separation in which the subject who is to be transformed is removed from his daily condition; 2) the threshold phase or transformation, where the subject is placed in the condition of experiencing completely new experiences; 3) the phase of incorporation, where the transformed subject returns to his daily life. Victor Turner defines the threshold state as a state of liminality, from the Latin *limen*, which consists of a kind of transient existence «betwixt and between the positions assigned and arrayed by law, custom, convention and ceremonial»[11].

It is the *between* the privileged category within the autopoietic loop that produces performance; what is at stake here is the experience of the threshold, of the passage, the crossing of pre-established positions, the disruption of the stability of binary oppositions, the metamorphosis, the

[9] Fischer-Lichte, Erika, *Ästhetik des Performativen*, Suhrkamp Verlag, Frankfurt am Main, 2004; translated in English by Saskya Jain, *The Transformative Power of Performance: a new Aesthetics,* Routledge 2 Park Square, Milton Park, Abingdon, Oxon, 2008, p.17

[10] Ivi, p. 39

[11] Turner, Victor, *The Ritual Process – Structure and Anti-Structure*, London and New York: Routledge,1969, p. 95

mutation of one's own condition. In the performance arts, unlike rites of passage, it is not a matter of considering «the transition *to* something and the resulting transformation *into* this or that» [12] rather it is about the transformative power of the passage itself.

The interesting cue offered by the performing arts model is the fact that the actor and the spectator do not modify, exclusively and separately, respectively, their own bodily state and the content of their perceptual experience. By transformation here we mean, more radically, the grasping oneself within a relationship in which one participates in the dynamization of the subject-object polarization that also entails, but as a secondary and local effect, a mutation of the perceptual experience and thus the shift from not seeing to seeing of which Noë speaks. Here, then, it does not make sense to speak of users and producers; rather, it is more legitimate to speak of co-producers who actively participate in the configuration of the performance without having full power to determine every aspect of it. Actors and spectators, then, with their actions and reactions «constitute elements of the feedback loop, which in turn generates the performance itself» [13].

Performance art puts on display an essential condition of our perceptual experience: we are constitutively in *betwixt and between*; we are originally immersed in a transformation in which we are never alone. It is precisely in the space of crossing that we can catch ourselves acting our perception, bring it forth, develop it over time, piece by piece, and not dispose of it as if it were ready to use, off the shelf, simply to contemplate as in the snapshot model.

Social place/place of focused perception

Towards the end of her essay, Erika Fischer-Lichte reflects on how the introduction of certain theatrical techniques in the mid-19th century was aimed at characterizing the theatrical space as a *place of focused perception* rather than a *social place*. The German scholar refers in particular to the techniques of darkening of the auditorium, which isolated the spectator and directed the economy of attention, thus determining precise criteria for the selection of sensory impressions. A few centuries later, overcoming this dichotomy of *social place*/*place of focused perception*, performance art, in my opinion, opens a space that is a *place of focused perception precisely because it is a social place.*

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[12] Fischer-Lichte, Erika, *The Transformative Power of Performance: a new Aesthetics,* p. 199

[13] Ivi, p.50

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THE PARADOX OF VIRTUAL EMBODIMENT: THE BODY SCHEMA IN VIRTUAL REALITY AESTHETIC EXPERIENCE

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ABSTRACT. New technologies implied in art creation and exhibition are modifying the traditional landmarks on which aesthetics has always focused. In particular, Virtual Reality artworks call the body into question when it comes to living a bodily experience within exhibitions accessible through technological tools that expand the human body's capabilities and motor potential. The body's status is challenged in its traditional unity, that of a subject of experience living in a world where the spatial configuration is relatively constant. Conversely, in Virtual Reality, the spatial aspect is novel to our body which needs to adapt to unpredicted and disorientating motor schemas. Therefore, the Virtual Reality aesthetic experience takes place into a novel configuration for the human body: hybrid and split into the virtual realm.

Keywords: Aesthetics; Virtual Reality; Embodiment; Digital art; Bodily awareness

Introduction

The current landscape of art is increasingly often involving technology. On the one hand, as regards the *creation* of the artwork, the artist's role is often delegated to technology tools that physically give form to the work of art. 3D printers now *print* an object that is perfect considering the parameters inserted in the device at the beginning of the process. Here, the artist's creative process is separated from the execution and the process of creation leaves no chance to errors that may occur when a human hand is painting, sculpting, or playing. On the other hand, as regards the *fruition*, the work of art's status, form or place, is no more instantly recognizable. Indeed, new technologies make it possible to exhibit a potentially infinite number of images through the screens. It also happens that the exhibition hall is literally covered by screens that coat even the floor and the ceiling, allowing a complete immersion for the viewer in the work of art, displayed through images in a very high definition. The use of technology in art could also be configured in a more pervasive way with the employment of Augmented Reality (AR) or Virtual Reality (VR).

In this context, the aesthetic object is radically changing its conformation and, specifically, how we come into contact with it. While before we were in front of something that could be a painting or a photograph or a sculpture, now our body is really part

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of the artwork. At the same time, our body alone is not enough to fully perceive the virtual artwork because we need tools like VR headsets or haptic suits to enter the virtual world the artist has created. The focus is therefore our body, called into action and extended at once. As never before, it becomes the living matter of the artwork, not only simulating its participation as it happens in front of a movie or a theatre performance but fielding its perceptive properties into the aesthetic experience.

The role of the body towards the artwork

Science itself, moving away from the idea of the body as a mere medium through which stimuli can reach the brain, found that the mechanism of empathy and, in general, of emotion recognition, takes place at a bodily level. The mirror mechanism explains how the mere observation of other's actions or emotions activates brain networks that transform the visual – or auditory– information into motor and visceromotor representations of the action or emotion[1]. This sensorimotor transformation also encompasses the affective quality of this action or emotion. The style of the action and the affective quality of the emotion are perceived literally through our body, reproducing them through its sensorimotor system[2].

Therefore, it is clear that the primary role in the intersubjective interaction is assigned to the body and the motor system. They allow us to perceive the world and to come into contact with another subjectivity. Now, the contact that we regularly have with the world happens through a multimodal integration whose condition of possibility is the presence of our whole body and its specific sensibilities. Our body represents the ground zero of any knowledge of the world. Merleau-Ponty gives an exemplary explanation of this. His concept of *body schema* reveals that the body is the intertwining of all the objects of the world that acquire relevance, meaning because it is the body itself that is the common «texture»[3] of all things. For this reason, it is a necessary instrument of all understanding. The body, explains Merleau-Ponty, is the condition of possibility of attributions of meaning not only to *things* but also to *cultural objects* as speech that «Avant d'être l'indice d'un concept il est d'abord un évènement qui saisit mon corps»[4].

From the perspective of neuroscience, the importance of the body in perception is investigated by Gallese and Guerra[5] which explain the *embodied simulation* mechanism.

[1] G. Rizzolatti, C. Sinigaglia, "The mirror mechanism: a basic principle of brain function" in *Nature Reviews Neuroscience*, 17(12), 2016.

[2] G. Di Cesare, C. Di Dio, M. J Rochat, C. Sinigaglia, N. Bruschweiler-Stern, D. N. Stern, G. Rizzolatti, "The neural correlates of 'vitality form'recognition: an fMRI study: This work is dedicated to Daniel Stern, whose immeasurable contribution to science has inspired our research" in *Social cognitive and affective neuroscience*, 9(7), 2014, pp. 951-960.

[3] M. Merleau-Ponty, *Phénoménologie de la perception*, Gallimard, Paris 1945 and M. Merleau-Ponty, *Le Visible et l'Invisible*, Gallimard, Paris 1964.

[4] M. Merleau-Ponty, *Phénoménologie de la perception*, Gallimard, Paris 1945, p. 272.

[5] Gallese V., Guerra M., *Lo schermo empatico. Cinema e neuroscienze*, Cortina, Milano 2015

Here, the mere observation of manipulable objects determines a motor activation in the observer's brain even in the absence of any intention to perform movements towards the object. Our representation of the objects in the world happens in relational terms[6]. They hypothesize that embodied simulation is at the basis, together with cognitive abstraction, of our ability to create and participate in imaginary worlds of movies and artworks. This means that the sensorimotor system structures not only the execution of an action but also its *imagination*[7].

In light of these considerations, the relationship between the viewer and the artwork looks remarkably similar to the one between human beings. Many authors have shown that the encounter between the spectator and the artwork really happens on an intersubjective level: Mikel Dufrenne devoted extensive reflections to this issue that led to one of the key concepts in his entire work: the aesthetic object is defined as a «quasi-sujet»[8]. The encounter is intersubjective because the aesthetic object is seen as another subjectivity, an *other* to interact with.

Virtual reality, virtual art, virtual body

What happens instead when the use of the most recent technological techniques and tools determines a radical change of traditional landmarks on which aesthetic reflection has always put its focus? Digital artworks and even more VR artworks are designed to actively involve the viewer and to let him be part of the staging of the artwork. The newest works of art aim to make the world they present really close to us: these artworks are built to give us the sensation of inhabiting a world that is other from us, as if it were ours (see fig. 1 and 2). Touchscreens, haptic suits, Oculus Rifts or VR Headsets are an attempt to physically connect the real world where our body is located and the imaginary worlds of artistic creations[9].

[6] Ibi.

[7] Ibi.

[8] M. Dufrenne, *Phénoménologie de l'expérience esthétique*, tome I, P.U.F., Paris 1953 and M. Dufrenne *La notion d'a priori*, P.U.F., Paris 1959 and K. Chagnon *L'œuvre d'art comme «quasi-sujet»?* in *Mikel Dufrenne et l'esthétique. Entre Phénoménologie et philosophie de la nature*, curated by J.B. Dussert e A. Jdey, Presses Universitaires de Rennes, Rennes 2016.

[9] V. Kuchelmeister, "The virtual (reality) museum of immersive experiences", in *Proceedings of the Conference on Electronic Visualization and the Arts*, 2018.

Fig. 1 "*Carne y arena*", Alejandro G. Iñárritu. This documentary was presented in the 2017 Festival of Cannes by the director Alejandro Iñárritu. The subject is inside the documentary scenes, he is in the desert where a group of soldiers is beating some Mexican migrants that are seeking to cross the American border. The exhibition hall is covered by warm sand on the floor and a warm wind blows in the room to enhance the sensation of being in the desert.

Fig. 2 "*The Chalkroom*", Laurie Anderson. In this Virtual Reality environments awarded "Best VR Experience" at the 74th Venice International Film Festival, the experiencer can levitate and float through a vast eight-room architectural environment.

Here, in exploring a virtual scenario, the spectator, or now, the participant, experiences the sensation of being in another place compared to the place in which their physical body is.

To deepen the changing of the relationship between the viewer and the artwork, it is helpful to recall the work of Mikel Dufrenne. He reflects on the modalities through which the aesthetic object expresses its meaning. The *world* of the artwork, that is its peculiar atmosphere, does not acquire a sense in the distinction between real or unreal. The truth of the artwork, its significance, and its sense is shown and refers directly to the *form* in which the spectator is presented with it, in the *sensible*. All that is expressed coincides with the way it is expressed, the *sensible form* of its expression.

The more digital art expands its boundaries, the more *participation* in the artwork happens through a real interaction-action that implies the use of specific technological tools to experience the *sensible*. The aesthetic object's form and significance appear only if the spectator, now the experiencer, collaborates with technological devices. Here, the dimension of the *embodiment* is shared. Indeed, bodily participation in the artwork happens by adapting our body to work synergistically with technical tools that enhance the motor action potential of the body itself. Therefore, the idea is that in virtual realities, the mapping of the space around us, that is motor space, by the neurons, should encompass a new configuration that is the product of the incorporation of technological tools in the perceptual act.

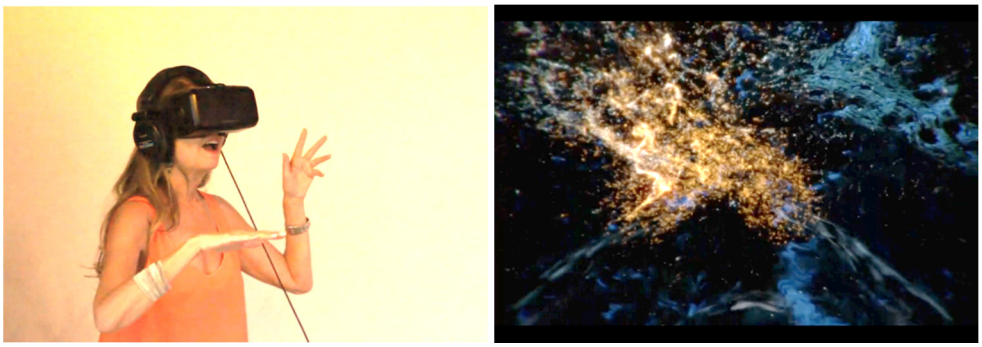

Fig. 3. "*Sentient Flux*" Nicola Plant

Nicola Plant, an artist who has created some relevant VR exhibitions, develops projects whose aim is to highlight the embodiment of intersubjective dynamics. In the "*Sentient Flux*" exhibition (see fig. 3), the experiencer becomes herself actor because of her actions and interaction with Virtual Reality. The experiencer wears an Oculus Rift, and her movements are mapped by a Kinect system. In the virtual environments in which she finds herself placed, the movements she performs leave a trace drawing a trail of luminous particles in the space. With the sense of sight, the experiencer can therefore see her virtual hands touching this trail of light, while, in fact, her sense of touch of her real body does not receive any stimulus.

My hypothesis is therefore the following. Firstly, the motor action potential of the body appears to undergo a sort of *split*. It takes to consider a concrete case –similarly to Nicola Plant "*Sentient Flux*"– in which a subject is simultaneously wearing a haptic suit and a VR headset. If she had the chance to grasp an object in the virtual environment using a virtual double of her arms, due to her sense of sight, she could see the object and her virtual arms heading towards it to grab it. Although she can *see* the grasping of the object with her virtual arm, this gesture does not correspond to any tactile stimulus on the real body. Merleau-Ponty's reflections on the sentient and sensed body[10] could help consider another perspective. Our body often has a virtual double in VR, but this double is only a body that we can objectify and, therefore, only a sensed body. The virtual body we can see in VR could be considered an incomplete *body* because it has no chance to *perceive* anything. Thus, it cannot be a *sentient* body. On the basis of the previous considerations about the role of the body as a unified presence that is involved in the mapping of the surrounding environment, it is easy to see that in a virtual place, this unity of the body as the ground zero of any perception, is modified.

[10] M. Merleau-Ponty, *Phénoménologie de la perception*, Gallimard, Paris 1945 and M. Merleau-Ponty, *L'OEil et l'esprit*, Gallimard, Paris 1964.

Secondly, it is come to create a sort of *hybridization* between the world of the viewer-experiencer and the world of the work of art. The boundary between the reality in which our body is located and Virtual Reality is now really blurred[11]. Christian Lemmertz, an important artist active in the field of VR artworks, revealed during an interview that it is as if, for the first time ever, the spectators were able to *see*, with their own eyes, what is inside his mind, in the artist's mind. The idea is to gain access, as never before, to the first-person experience of another human being, someone different from ourselves, obviously considering the current limits of technology. The possibility is to share what the other has in her mind, no longer only describing or imagining it, but living a bodily experience of this, an experience that could become part of our own experience.

The phenomena of split and hybridization emphasize the paradox of an embodied presence within an environment, the *virtual* environment that is, by definition, other than the *real*.

The potential of digital art

The traditional process of composition of a work of art has always been guided by the need to find the perfect shape, to give form to the object of thought even though not necessarily a beautiful shape as the twentieth-century avant-gardes have shown. The artist, the painter, the sculptor, or the director have always dealt with a process in which the objectification of their thought was essential to return the spectator their experience and provide a form of expression to their idea. Equally, the spectator's experience has always been that of a remote recipient for whom the act of receiving implies a duration of time, a later moment in time to elaborate someone else's idea. The reception of art has always included a *re-flection*, that is the reflection of the artist's experience on our subjectivity. In this moment of contact between two subjectivities, that of the artist and that of the spectator, Mikel Dufrenne saw the peculiar function of art. The power of art is to show individuals the possibility of a return to a common origin, a place in which any chance is open because the world has not yet assumed a defined form[12]. The *art*'s tension towards this place where everything begins again and infinite «*possibles»* dwell is the revolutionary potential of any artistic practice[13].

Going back to actual artistic practices, if we think of a VR artwork built for us to live the first-person experience of the artist, it can clearly be noticed the lack of any distance between us and the artist's subjectivity because her idea literally hits us. In this case, we can *share* a unique sensible form that reaches us with no reworking. We are not shown the sensible form of an idea, but we experience it, we can feel this *sensible* as if it were ours. In this way, the origin is always and as soon as we enter it, already formed. The contact with the origin is never formless.

In my opinion, this is anything but a threat to our sensibility: the chance we might have in the future, when technologies

[11] L. Floridi, *The onlife manifesto: Being human in a hyperconnected era*, Springer, New York 2015.

[12] M. Dufrenne, *Art et politique*, UGE, Paris 1974.

[13] M. Dufrenne, *Phénoménologie de l'expérience esthétique*, tome I, P.U.F., Paris 1953 and M. Dufrenne *La notion d'a priori*, P.U.F., Paris 1959.

will have reached a higher level of precision, is to share on an entirely different level our experience with others. To develop such technologies and build such works of art, it is necessary to go deeper in the knowledge of our perception and in the way our frameworks of action work in a different reality, a *virtual* reality.

The spectator's body in virtual museums

The last year when the Covid-19 emergency spread in the whole world has seen the growing use of virtual tours or exhibitions in many museums around the world. Since people were forced to stay at home, sometimes with much more free time than ever, the internet has become the precious system to gain access to galleries, exhibitions and museums. Sometimes, the virtual display of art collections consisted of high definition photos of the artworks made available on the museum or gallery website. But in other cases, the visit to the exhibition was organized as if the movements of the remote spectator could really be those of a person exploring the exhibition's spaces. It was possible to enter a room and zoom into a painting simulating the movement of getting closer to the artwork with the body. It was also possible to decide which path to follow into the exhibitions, which room to enter before or visit again later. Such exhibitions were visible from the first-person perspective because the 360° tour was built to give the illusion of being present also with the body.

The impossibility of being physically present has led to the attempt of re-creating the experience of *being* a body and moving with it inside the exhibition hall. This experience has been built by means of technological tools. Here the shift is double: on the one hand, the camera operator who recorded the exhibition hall with multi-cameras to record 360° videos used her movements in order for her own body schema to be shared and employed by the spectators on the exhibition website. On the other hand, there is the fruition of the 360° video recording by the spectator who, through her device, can simulate the viewing of the exhibition, somehow overlapping the camera operator's body schema and taking possession of it. It is clear that the degree of immersion for the spectators depends upon the specific device used.

Quantitative or qualitative

The theme of *simulation* raises questions about the nature of the traditional aesthetic experience compared to the Virtual Reality one. Thinking about the former, as viewing a painting or a theatrical performance, it has been seen that the motor system of the spectator somehow replicates the movements of the actors or the moving lines in a painting. The correct word for such replication is *simulation* because we are not really performing the movements or walking down the path we see in the painting but only looking at it. On the other hand, the VR aesthetic experience is not only a simulation because our body is involved and is an active part of the work of art. The word virtual itself alludes to the concept of potency in its Latin root. It means something that is not yet real but may become act. Therefore, it may seem that the change from a traditional aesthetic experience and a virtual one is a matter of *intensity* of their connection to reality. But

in point of fact, the nature of this difference is not quantitative. It is rather qualitative because in the case of a traditional work of art, the object of the simulation does not belong to the spectator in person. It refers to the external experience of seeing a painting or a theatrical performance. On the contrary, in the case of a VR artwork, the spectator lives a first-person experience of the world of the artwork.

Multidisciplinary connections: artificial bodily awareness

Since the body plays a leading role in the aesthetic perception and, in general, in our experience of the world, it can be interesting to reason about the most recent advancements done in a field where the human bodily experience of the world is being studied and modelled to reproduce it through another kind of body: the artificial body of robots.

The fields of cognitive and social robotics are moving towards building systems that are human-like not only from the point of view of physical appearance but also in terms of cognition, learning, and behaviour during interactions[14]. Modern robotics is interested in the development of robots with an experience of being a body. «Social robots need a model of the "Self"»[15], which is connected not only with the mere experience of one's own body but also with i) the awareness of being a body in the environment, ii) how to maintain embodied relations with others and iii) the establishment of a coherent in time experience of being a body.

The research in this field is interested in expanding the understanding of the mechanisms underlying the human ability to act in the world and adapt to the environment[16]. Since the discipline of aesthetics in terms of the study of sensible knowledge is nowadays experiencing the presence of additional elements as technological tools involved in the perceptual process, it could be interesting to adopt a multidisciplinary approach to broaden the experimental knowledge of human and artificial bodies involved in perceptual acts. From the point of view of aesthetics, the research may be oriented towards the possibility of expanding the surface of our perceiving body with technological tools so that even the sensations coming from the virtual bodies could become individual bodily experiences. On the other hand, the robotic perspective could explore how information coming from the environment or from the robot's artificial body may become bodily awareness for it. Now that the body has gained technological relevance, the field of aesthetics, by virtue of its being science of sensations and body, turns into a suitable place for a multidisciplinary discussion.

[14] S. Incao, F. Rea, A. Sciutti, "A Self for robots: core elements and ascription by humans", 2021, http://doi.org/10.5281/zenodo.4762300.

[15] M. Lee, *How to Grow a Robot*, Cambridge, Massachussets: MIT Press, 2020.

[16] C. Moulin-Frier et al., "DAC-h3: A Proactive Robot Cognitive Architecture to Acquire and Express Knowledge About the World and the Self", *IEEE Trans. Cogn. Dev. Syst*., 10(4), 2018, pp. 1005–1022.

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INTERSUBJECTIVITY AND EMBODIMENT IN THE FIELD OF PSYCHOTHERAPY

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ABSTRACT. Intersubjectivity is one of the most important concepts of the phenomenological school of thought. The approach assumes that our being in the world is based on relations with Others. The idea has a central role not only in the philosophy of perception but in psy-sciences as well. Mostly all branches of psychology agree that the self is constituted by its relations. However, there is much less consensus on how decisive these relations are. Therefore, the question of intersubjectivity has become the question of how we perceive human beings: as biological or social entities. Psy-sciences have never had one coherent and consensual paradigm, although nowadays the natural scientific standards are the most prevailing in the field, which prioritizes biological explanations over socio-cultural aspects. The study attempts to connect the phenomenological approach to intersubjectivity to the psychological approach to embodiment. For this, first, it elaborates on an essential problem of psy-sciences, transmitted by classical philosophy, namely the mind-body dualism, which implicitly establishes the current paradigm. Then, it aims to describe how the phenomenological approach, especially the philosophy of Maurice Merleau-Ponty, could dissolve the classical dualism through the assumption of the body-mind-world unity. Merleau-Ponty was one of those thinkers of the 20th century who laid down the foundations of the scientific paradigm of embodiment. Afterward, I illustrate the phenomenological concept above through Ben Rumble's psychological approach, which applies the embodiment paradigm for the therapeutic process as a professional. The final part of the study attempts to establish a relation between the psychological attitude based on embodiment and the psychoanalytic theory of Sándor Ferenczi, the Hungarian psychoanalyst.

Keywords: embodiment, intersubjectivity, psychoteraphy, phenomenology, psychoanalysis, critical psychology, Sándor Ferenczi

Introduction[1]

There has never been a consensus among professionals on the boundaries of the discipline, the main subject matters, and the

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[1] When the study refers to psychology, it refers to 'psy-sciences' in general. It is almost impossible to speak of psychology as a homogeneous paradigm or discipline, as is the case in other scientific domains. Instead, it is more accurate to think of it as a discourse (Foucault 1981) in which diverse theoretical approaches and therapeutic procedures frequently compete, while their interactions jointly produce the knowledge on the psychological processes of human beings. Psy-sciences are the practices and grounding theories of psychology, psychiatry, psychoanalysis, pedagogy, criminology, special education, etc. (Rose 1999). There are various kinds of techniques, from contradictory theoretical backgrounds. Therefore, we should not generalize them; however, we should speak about a kind of paradigm that mainstream psychology is based on, and which nowadays follows the modern, natural scientific method.

most suitable methods (Robinson 2000). Psy-sciences are still fluctuating between natural scientific and human scientific viewpoints. After the neuropharmacological revolution in the 60s-70s, neuroscientific and cognitive interpretations have come to the fore, that prioritize biological explanations over socio-cultural reasons (Deacon and Lickel 2009; van der Kolk 2014; Walsh, Teo and Baydala 2014). The *American Psychological Association* officially defines psychology as the 'study of the mind and behavior' (APA 2015), thus emphasizing the natural scientific framework in the description of the human psychic structure, its health, and illness. On this basis, mainstream psychology - which includes academic teaching, theorizing, research, and the most common treatment techniques resulting from them - is dominated by the cognitive-scientific and neuroscientific model (Kőváry 2017:55). Under this paradigm, mainstream psychology currently subsumes mental health problems to a medical model and localizes mental disorders in the brain and nervous system (Davis 2011; van der Kolk 2014; Miller 2003).

Today's cognitive psychologists, for example, may know of Wilhelm Wundt's pioneering research in the late nineteenth century. The real nature of his research is likely to be ignored, however, as the cognitivist focuses on the experiments that seem most familiar or relevant to today. The resulting view ignores Wundt's social psychological and anthropological work, which to him was an essential part of psychology. The resulting, Whiggish perspective is that Wundt was the father of today's cognitivists - robbing him of his wider, more philosophically complex vision (Harris 2009:22).

In contrast, a psychological paradigm based on relationality and intersubjectivity assumes that the self is unfolding through the connections of early childhood which claims something very similar to the tenet of the phenomenological school of thought (Bálint 1968; Chodorow 1999; Fónagy and Target 2003; Zimmerman et al. 2019). As it postulates, the self is constituted and unfolds through its relation to Others (in this case "others" could be not only persons but cultural agents, institutions, etc.). According to phenomenology, the intersubjective relation is not only a connection between two minds or consciousness, but it has a bodily dimension, as the connection comes into being in the present, here, and now. Mental processes are described as 'embodied' because an incomplete but cognitively productive re-experience is produced in the brain as if the individual were there in the very situation, the very emotional state, or with the very object of thought (Niedenthal and Maringer 2005). Also, therapy is an interpersonal event and in this sense an embodied event where the client and the therapist could reenact those significant relations that the self is composed of (Rumble 2010:134).

Current mainstream psychological interpretations and treatments marginalize the experience of the lived body and its relations in favor of the single mind. Many critiques of the natural scientific paradigm argue that mental disorders are not individual pathologies but symptoms of social problems, and therefore the body has a critical role as it is a discursive space in which the micro and macro levels of power meet (Fisher 2009). Mark Fisher argues 'Capitalist realism insists on treating mental health as if it were a natural fact, like weather (but, then again, weather is no longer a natural fact so much as a political-economic effect). [...] we need to ask: how has it become acceptable that so many people, and especially

so many young people, are ill?' (Fisher 2009: 19). The critique of power and its mediating institutions (like the mainstream scientific paradigm, including present-day psychology) links individual experiences to a complex approach to social relations. Thereby, this form of analysis broadening the perspective of sciences with aspects such as culture, society, economy, and those power-related discourses that produce a particular form of knowledge about the human being in every epoch (Fox, Prilleltensky and Austin 2009; Foucault 1981).

The study attempts to re-read some theoretical concepts on therapy through the phenomenological approach on intersubjectivity and the psychological approach on embodiment. By this, it would like to emphasize the importance of the body and its relations in the most important psychological concepts and the healing process. For this, the study first elaborates on one basic problem of psy-sciences, inherited by classical philosophy, namely the mind-body dualism, which inherently defines the current paradigm of the discipline (Chiesa 2011). Then, it describes how the phenomenological approach, especially the philosophy of Maurice Merleau-Ponty, could dissolve the dualism through the assumption of the body-mind-world unity ([1964] 1992). Merleau-Ponty was one of those who laid down the foundations of the embodiment paradigm which has now become very popular. Afterward, I illustrate the phenomenological concepts through Ben Rumble's ideas, who apply the embodiment paradigm for the psychotherapeutic process as a professional (Rumble 2010). The last part of the study attempts to establish a relation between the psychological attitude based on embodiment and the early intersubjective theory of the well-known Hungarian psychoanalyst Sándor Ferenczi (Kiss 2021).

What Has Psychology Inherited from the Mind-Body Dualism?

People tend to locate mental disorders in the realm of the mind, while the body is most commonly secondary in the theories and therapeutic practices of mainstream psychology. This tendency is partially based on that tradition of western modernity which divides the mind and the body as two entirely different faculties of the human being. The Cartesian mind-body opposition implies the primacy of the former over the latter: the mind is the reasoning part, the governor of the passive body, and therefore more valuable than the flesh, which is biologically determined and subsumed to its instincts (Hatfield 2013). According to this rationalist philosophy, nature works in mechanistic schemes, like a clockwork, and the body is the part of it with its vital processes, emotions, and affections (Aune 1970; Hatfield 2013).

The positivist scientific worldview implicitly incorporated the ubiquitous topos of dualism that underpins modern psy-sciences as well (Chiesa 2011). Its early branch, behaviorism conceptualized the body as an automaton that responds to stimuli (Mills 2000). Although later psychological developments have refined this mechanistic conception, the idea of the passive body implicitly lives on in the most influential scientific trends, such as cognitive sciences, thus it still has had an impact on university education, research directions, methods, and therapeutic procedures (Fox et al. 2009).

In the cognitive model of mental disorders, the body is peripheral to the mind. More specifically, the paradigm centralizes its field of research around cognitive processes and speaks about the body as the apparatus of sensory processing (Adams 2010; Wilson and Foglia 2017). Perception is thereby localized in the brain where cognitive structures process sensory information from the external world. Meanwhile, clinical literature based on the natural scientific perspective cursorily conceptualizes the experience of the lived body and its significance in psychic processes. 'The perceiver and the perceived are always united by a situated relation and its partial perception. Here, presence and absence are constant partners in the world, no longer a dichotomy' (Sanz and Burkitt 2001: 49).

The embodiment paradigm, not only in psychology but in a wide variety of disciplines, tries to show that ignoring the lived body hinders understanding of the human being and its relation with the environment. The paradigm, therefore, seeks to introduce a holistic perspective on the body and perception. In the case of psychological practice, it emphasizes that feelings and behavior are not attributable only to the mind, but also to the interaction of the body with its environment (Meier et al. 2012; McBride and Kwee 2018).[2]

The embodiment paradigm relates with numerous threads to the phenomenological movement. 20th-century phenomenology attempted to resolve the body-mind dichotomy that has characterized Western thought. The movement paid particular attention to the experience of the perception and the body as its primary and active medium. According to it, the body is not a fixed object, but it is always dynamically constructed in the here-and-now of every situation. Therefore, the body is providing an invisible dimension to our being. This dimension is what phenomenology calls 'world' (Merleau-Ponty [1964] 1992; Renaud 1991). The work of the French phenomenologist, Maurice Merleau-Ponty, is fundamental to the embodiment theory of the body. He argues that mind, body, and the world exist in a complex, 'intertwined' relation (chiasmus); i.e., sensation and thinking are not separable from each other or the given situation, but embedded in the world (Merleau-Ponty [1964] 1992). This also implies that perception is not generalizable, since each of us occupies a different position in the shared world.

[2] It is important to mention that in the cognitive paradigm, the idea of embodied cognition has been spreading in recent decades. The branch tries to emphasize the interdependent and inseparable relation between mind and body, and that the latter plays a significant role in cognitive processes, not as a mere medium but as an agent. Furthermore, the paradigm attempts to conceptualize the situatedness of the body, i.e., the influence of concrete interactions in cognitive processes (Schubert and Gün 2009). However, several studies on the topic highlight that empirical support for embodied cognition and the coherent theoretical framework that can be built by it is very incomplete (Körner, Topolinski and Strack 2015). One reason for this deficiency is that, although the embodiment paradigm seeks to incorporate the subjective experience of living in a body into psychology, it is precisely the subjectivity that is difficult to measure and even less generalizable for modern psychological research based on objective scientific standards.

> Unlike traditional mainstream psychology, for Merleau-Ponty, perception is reducible neither to the mind or to the brain of the individual. [...] He offers a theory of the phenomenal primacy of perception in which perception and its truth is located neither in the individual or in the environment around him or her. Rather, the perceptual faith in the solid existence of an objective world is something that exists between persons and the world. That is to say, perceptual truth is only established in the relation between people and the world, by the way in which they relate to one another and interact (Sanz and Burkitt 2001:39).

Merleau-Ponty exemplifies the complex relation of the three faculties with the image of the living 'flesh.' As the flesh is made up of intertwined tissues, the body, consciousness, and the world are interwoven (Merleau-Ponty [1964] 1992:133). This phenomenological understanding could help us to explain our corporeality in a deeper and more complex way, not only from a philosophical perspective but in many other ways. As we will see, the theory has fundamental insights into psychology and therapeutic processes.

The Body as a Hypothesis – Embodiment in Psychotherapy

Ben Rumble, in his study "*The body as a hypothesis and as a question: towards a concept of therapist embodiment*" elaborates on the dimension of the body in terms of psychotherapy (Rumble 2010). It is particularly important for him because, in his view, in the case of trauma and mental disorders, a disturbance in the client's relationship to his or her own body is also developing. Therefore, for effective treatment, it is necessary to address this bodily dimension too. Moreover, in some cases, it is the bodily presence that could help to resolve the client's problem. However, the question arises: how can the therapist understand this non-verbal, bodily dimension, of which the client, too, is unaware?

Rumble interprets the therapeutic presence of the body through two concepts which are also central to the phenomenological theory. These are (I) the body-image, the corporeality that unfolds in the intersubjective relations, and (II) the sensation, which refers to the materiality of the body. Rumble interprets the notion of body-image through the phenomenological concept of the body by Merleau-Ponty. The lived body, as has been discussed earlier, is the medium of our being-in-the-world. On this basis, the world is not an 'object,' but rather a familiar milieu, or habitation. Being-in-the-world is provided by various bodily habits, like our everyday reflective actions. I naturally orient myself in a familiar space (e.g., at my home, the city where I live), ride my bicycle, type with my fingers on the computer's keyboard. During these activities, I am inhabiting, living, and moving with my world, meanwhile forgetting the bodily dimension of these actions. Our unreflected processes, however, are not mere automatisms, but, as Merleau-Ponty calls them, 'lived intentions' (131).

The complex and reciprocal relationship between the self and the world shapes the body-image, which is not a mere cognitive representation, but a dynamic form that is constantly unfolding. An important insight for therapy is that in our intersubjective relations we perceive the Other's body in the same way. Relating to Others involves a sense of bodily connectedness. This

interconnectedness creates a background for the participants, a background that determines the character of their interaction, in which the possibility of explicit verbal and cognitive exchange could come about. In other words, bodily presence and interconnectedness provide the most fundamental dimension of any human relationship. The intersubjective relationship between therapist and client could unfold through the body image. This is a constant and non-verbal dimension. Rumble assumes that through this, the clinician could quasi-perceive what the client's experience of its body might be. These perceptions precede the dialogue of the therapy as a kind of 'unthought known' (134). The shared world and the bodily dimension, which mutually help the therapist and the client to resonate with each other, create a third, *hypothetical body*.

> [A]s a clinician I possess my own body as a set of present positions as I wait for the client, then stand, greet and sit with the client, for example. But it also seems that the more I am able to instill an inner stillness into my body as I listen to the client, the more the potential of my body image is open to being influenced by the client's embodied presence. A third more elusive body emerges between us, which I experience as a kind of hypothesis 'is this the body you mean?' to be drawn on privately in my own clinical thinking, or shared with the client as seems appropriate (134).

A coherent body-image, which comes about in parallel with the environment, is thus necessary to perceive the world not as a series of disintegrating objects, but as a whole. However, trauma or mental disturbances could break down the coherence of the mind, body, and world unity.[3] As much research has shown, trauma is retained as a bodily memory for the survivors (van der Kolk 2014; Orbach 2004). It is a memory that resurfaces again and again in fragmented and dissociated forms. Rumble describes the various disturbances affecting body-image as 'pockets of embodied distress' (Rumble 2010:133). If the 'pockets' disrupt the body-image, the event of the therapeutic relationship becomes questionable, since the bodily background that could mediate the verbally and cognitively formed meanings is missing.

Although Merleau-Ponty's ideas on intersubjectivity add useful and novel insights to our understanding of therapy, the assumption of the hypothetical body in the case of the trauma is blocked. The formation of it could be interrupted by the client's traumatic body memory and the 'pockets of embodied distress.' To find a solution to this seemingly unsolvable problem, Rumble goes one step back and examines the body not only as an intersubjective construction but as a living and sensation-laden material. The body is present in the therapy not only as a hypothesis but also as a living matter through its affects. The body-image is never given, the participants have to create it through their

[3] Rumble mentions two extreme examples of the disruption of body coherence. At one end of the scale, there are schizophrenia-like conditions. Here, the body image becomes disintegrated, open, and elusive. As Artaud describes, it becomes a sieve. On the other end, there are body-image disorders, such as anorexia or bulimia. In this case, an excessively rigid body image develops which is not flexible and cannot respond dynamically to the given situation (Rumble 2010:133).

interaction. However, the materiality of the body is always present, manifested through its sensations. Rumble refers to the psychoanalyst, Armando Ferrari (2004). He assumes that our relationship to the world is first and foremost the consequences of our perceptions and sensations gained through our lived body. On this basis, Ferrari postulates the body as a 'concrete original object:' original because the materiality of the body is not merely the result of abstract relations; concrete because the body provides the here-and-now of the sensation; object because the body is the primary object of consciousness.

To find a solution to this problem, Rumble mentions the theory of affective communication from infant studies (Rumble 2010:136). According to this, there is a specific intersubjective role of the affects from the early, pre-verbal period. It ensures the affect attunement between the infant and his or her caregiver. The child's affective expressions have a communicative function. They anticipate the caregiver's responses. Affective communication among the two, the rhythm and success of the call, and the response determine the emotional relationship between the two parties and also the quality of their attachment. This is a responsive emotional attunement, in which the caregiver's task is to interpret and then modulate the child's call, thus keeping its arousal within tolerable parameters. Through this, the child can mentalize his or her arousal and affections, which ultimately helps to develop self-regulation.[4]

Consequently, it is impossible to understand consciousness without understanding sensation and corporeality. Mind, body, and world are interwoven like living flesh. In fact, sensations make us think: in sensation the body always wants to let us know something, therefore we have to pay attention to its messages. Normally we are able to interpret them, but in the case of trauma, for example, decoding becomes much more difficult. 'Distress pockets,' mentioned earlier, break down the unity of the body, the mind, and the world. As a result, overwhelming emotions circulate regardless of the body-image, as a kind of energy excess that cannot find its place. Surplus energy acts as a foreign force that overwhelms the person's space for thinking, which dissolves the connection between body and mind. Therapeutic relation has the capacity to reconstruct this split, through the care of the

[4] In most cases, individuals who undergo therapy have problems not only with their lived body-image but also with their bodily affections. In early intersubjective trauma, for example, the body of the caregiver is an overstimulating sensation for the infant, who cannot insert it into his or her body image. The caregiver could eliminate these intolerable feelings by responding to them with attentiveness and love. This is what Bion (1967) identifies as the container function: the caregiver takes over and contains unbearable feelings (beta elements), fine-tunes the excitement, and then gives it back to the child in the form of playfulness and joy (alpha elements). On this basis, the feeling is a 'proto-thought,' modulated through care and tamed into thought (Rumble 2010:136). The carer's care provides a container, temporarily taking over overflowing feelings, and creates a sort of free space in the infant's mind which enables them reflection and thinking. In other words, the infant's thinking requires the stable bodily background created by the relationship with the caregiver and their capacity to be the container of the child's feelings.

therapist. It could reproduce the non-verbal, unconscious bodily presence and the hypothetical body image that emerges from the relation. The mutual dialogue shapes the intersubjective dimension of the therapy, or, as Rumble calls it, the 'rhythmic background of the verbal relationship' (Beebe and Lachman, 2002; Rumble 2010:130). As a cause of this background, the client's body starts to behave as it did in the early relationship with the caregiver. In response, the therapist usually develops certain bodily sensations, surprising physical reactions too.

In earlier psychodynamic concepts these have been interpreted as a kind of re-enactment and projective identification which is an avoidable phenomenon on the side of the therapist. However, the bodily responses could be interpreted in relation to the client, as the therapist's body is also an actor in the therapeutic connection. The professional is not just a mere surface of the client's thoughts, by the presence he or she is able to fulfill the same container function that Bion attributed to the carer (136). By this, the therapist becomes a surrogate body that takes over unbearable feelings from the client, and therefore, helps to create free space in their mind to regain the capacity to think. The basis of the intervention is the therapist's ability to track and modulate the client's arousal. To achieve this, it is also important that the therapist has to be aware of his or her relationship to their body.

> Based on the coupling which characterizes the intersubjective body, this more containing body might then return to and be felt by the client. The therapist's surrogate body, and the supplementary body it gives rise to, might then allow the milieu which disrupted the client's embodied being to slowly approach and possibly find words (137).

The Centralisation of the Relation in Early Psychoanalytical Theory

An early example of this relational model is the work of Sándor Ferenczi, a Hungarian psychoanalyst, and disciple of Sigmund Freud. Ferenczi puts great emphasis on the therapeutic relationship, the empathy that emerges within it, and the problem of the shared world. He was one of the firsts who placed intersubjectivity at the center of the therapeutic practice (Szecsődy 2007). Ferenczi's theory emphasizes the collapse of the shared world in the case of psychological problems, and thus sees the solution in their reparation. He thematized this idea in his three-phase trauma theory from 1933 (Ferenczi 1933 [2018]). In the first phase, the child is full of trust towards the adults around, but at the same time, he or she is also vulnerable to their internal processes. In the second phase, the adult unexpectedly or repeatedly does something perceived as frightening, painful, or overwhelming by the child. In the third phase, the child wants to understand the incomprehensible situation to be reassured, but the adult does not provide a framework for interpretation, either because he or she does not realize their actions or because of their sense of guilt. As a result, the adult may act as if the incident never happened or even discipline the child.

For Ferenczi, consequently, trauma is dialogic, since it is never an individual event, but an essentially intersubjective experience. Trauma is also the deprivation of meaning, and in many cases by parental power in early childhood. A 'competent infant,' who is not traumatized, slowly becomes able to understand his or her internal states because they are given meaning by the care of the mother

or caregiver (Ferenczi 1929 [2018]). In this sense, the caregiver acts as a kind of translator, tunes the child's emotions in a way that is appropriate to the shared world of the society. Translation is also a learning process. Through this, the child studies to recognize and interpret its inner states in the language of Others. In trauma, however, the parental power either imposes itself on or withdraws itself from the child's personal experiences (Lénárd and Tényi 2001:160.; Winnicott 1971 [2002]). In the process, the person is deprived of the cognition of his or her inner states, which in turn creates a phenomenologically empty self (Fónagy and Target 1997). Through the withdrawal of meaning, the person is alienated from the shared world of symbolic meanings. In the end, the child eventually becomes incompetent in situating his or her experiences in the symbolic and interpersonal space of meanings (Lénárd and Tényi 2001:157).

According to Ferenczi's theory on trauma, subjectivity unfolds through intersubjective relations, starting from the preverbal period. The origin of adult psychological problems is the rupture in this early relation, or more precisely, this rupture is the trauma itself (Bálint 1968). From this perspective, therapy has to resolve the traumatic fracture. However, if therapy involves the dis-subjectification of the client, for example through the reductive approach of universal diagnostic systems, the practice reiterates the original trauma at an institutional level. If the trauma is inherently intersubjective, its resolution must also take place within such a framework, in which both parties participate in the here-and-now of the situation and the shared world. This embodied therapeutic relationship opens up a space for jointly constituted meanings and senses. This would be the essence of Ferenczi's method: through the common meaning-making, the therapist acknowledges the client's feelings, and thus initiates and reinscribes them into the world from which he or she has been alienated through the early trauma (Ferenczi 1931 [2018]).

To maintain empathy and commitment to the client, Ferenczi stresses the importance of the therapist's active, flexible participation in the shared meaning-making process, which sometimes requires alteration from general rules for easier adaptation to the situation. He emphasizes that mutuality prevents authoritarian institutional interpretations. For this Ferenczi proposed the 'active technique' (Bálint 1968; Ferenczi 1931 [2018]) that gives priority to transference from the side of the client and counter-transference by the therapist. In the language of Merleau-Ponty and Rumble, this could provide the intersubjective background of the therapy. The adjective 'active' indicates that here, instead of the emotional abstinence promoted by Freud, the therapist must have been taking an active part of the emotional milieu created in therapy. In Ferenczi's view, an endeavor to quasi-objectivity limits and rigidifies the discourse pattern of the therapy, which could stall the healing work and may also repeat the authoritarian parental power experienced in the original trauma. Therefore, the active, emotional presence of the therapist was a fundamental element of healing for Ferenczi in the early era of psychotherapy (Ferenczi 1931 [2018]; 1932 [1998]).

> The analytical situation – i.e., the restrained coolness, the professional hypocrisy, and – hidden behind it, but never revealed – a dislike of the patient, which, nevertheless, he felt in all his being – such a situation was

> not essentially different from that which in his childhood had led to the illness. When, in addition to the strain caused by this analytical situation, we imposed on the patient the further burden of reproducing the original trauma, we created a situation that was indeed unbearable. Small wonder that our effort produced no better results than the original trauma (Ferenczi 1933 [2018]: 186).

Conclusion

In modern psy-scientific tradition, the role of the body is not emphasized enough. However, the paradigm of embodiment could serve as an effective framework of therapy to help develop an alternative bodily experience. The idea of embodiment does not only give an extra dimension to therapeutic work. Since our bodily existence grounds our being-in-the-world, without it, neither therapy nor any intersubjective relations are imaginable, as phenomenological thought emphasizes as well. The concept of body-image helps to conceptualize the idea of the shared world in the space of therapy, and the idea of sensation helps to share personal bodily experiences between therapist and client. Furthermore, the interplay between phenomenology and psychology presented by the study illustrates how interdisciplinary thinking could serve as a tool for a critique of mainstream psychology and provide a more complex understanding of trauma, psychic disturbances, and therapeutic relation. Natural scientific psychology could give us useful insights into the physiological laws of the human mind, cognitive processes, and perception; however, it hardly gives any explanation for complex psychic events regarding human existence, like anguish, love, friendship, or guilt (Davis 2011). Phenomenological thought, on the other hand, could bring us closer to understanding these topics, from the aspect of the ever-changing nature of being. For this reason, elevation to other disciplinary fields would lead us to a profound understanding of our internal states and our relations with others.

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THE CONSTRAINTS OF EMBODIMENT AND LANGUAGE-THOUGHT RELATIONS

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ABSTRACT. This paper aims to impugn the magnified role of specific natural languages in structuring and shaping cognition in the context of language-thought relations. Since language-thought interactions are being increasingly explored in different kinds of empirical studies showing or attempting to show context-specific or general influences of language over thought and thinking, there is reason to tame the excesses of language-specific influences over thought, thinking and cognition. In this regard, any context-specific influences of languages over thought and thinking in being grounded in certain modes/modalities of cognition must be governed by the constraints of body-world interactions that operate on modes/modalities of cognition. Thus, this paper will argue that language-specific influences over thought, thinking and cognition are possible to the extent that they are permitted by the constraints of embodiment.

Keywords: language; thought; thinking; embodiment; cognition

1. Introduction

The connection between language and thought is a matter of thoroughgoing inquiry and analysis in current studies of language and cognition as they are certainly linked to each other. While it is perhaps uncontroversial that language and thought are related and linked in human cognition, the representational structures and categories of language and thought need not be *uniquely* linked for human cognition to be structured by the concepts and conceptualizations made available by specific languages. For one thing, the level or degree of interdependence between language and thought is not always unambiguous owing to the very nature of the influence of language over thought since this influence can be more context-specific and sometimes general enough (see Zlatev and Blomberg 2015). Thus, this matter comes to be linked to general assumptions from the Sapir-Whorf Hypothesis (Whorf 1956). The influence of language over thought, thinking and reasoning can be very context-specific when the relevant influence is located in specific modes/modalities of cognition such as color, space, visual motion, time perception etc. And if that is so, this lends credence to the postulate that the constraints of embodiment determine how modality-specific linguistic symbols come to be grounded in neurally instantiated modality-specific systems (Barsalou 2008). That is because any context-specific

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influences of languages over thought and thinking can be restricted to certain modes/ modalities of cognition such as color, space, visual motion, time perception etc. In this way, any constraints of body-world interactions that operate on these modalities of cognition come to invariably apply to thought and thinking, precisely because such constraints are reflected in linguistic structures and their representations too. Constraints of body-world interactions impose conditions on the operations of cognition in modality-specific systems. For instance, one's experience of color contrasts in the case of different shades of blue in a sunny coastal area may induce the person to detect color changes triggered by the contrast in shades of blue effortlessly, regardless of how that person's language encodes the specific color contrasts. This will have an impact on the evocation of concepts associated with the salient color contrasts which can in turn coincide with the use of the relevant color terms in a specific language. If that language encodes the relevant contrast, this co-modulation of concepts associated with colors and linguistic representations would be found to be facilitated. But this may not presuppose any unidirectional influence from language over thought and perception. Rather, this points to the possibility of body-world interactions shaping the nature and form of concepts and conceptualizations that can modulate the evocation of linguistic representations. Thus, language-thought relations must come to be conditioned by such constraints of embodiment.

2. Language, Conceptualization, and Profiles of Reality

Language and the world of concepts are intimately linked because with the acquisition of a language, one also acquires a conceptual system. The perceptual system built on the sensory systems (hearing, vision, tactile perception, olfaction etc.) is also modulated and influenced by the conceptual system which is partly shaped by language during the course of language acquisition. The perceptual categories of objects, events, scenes, processes are often structured by integrative higher-level conceptual categories in a manner of top-down modulation, and these conceptual categories are also partly built on sensory-motor representations and partly shaped by linguistic categories imposed by languages in the ambient culture. This naturally leads to the supposition that languages shape and influence thought, thinking and perception. As a matter of fact, quite a good number of cognitive consequences have been said to spring from the language-specific conceptualizations of number, color categories, motion, space, time perception etc. (see Gentner and Goldin-Meadow 2003; Levinson 2003; Majid et al. 2004; Casasanto and Boroditsky 2008; Wolff and Holmes 2011; Lupyan 2012). But on closer inspection, some of these consequences can be traced to the properties of our cognitive organization. Two specific reasons seem important. First of all, the conceptual system *as a whole* is not structured or constituted by language. Second, for the part of the conceptual system that is partly

shaped by language during language learning, it is eminently plausible that the conceptual system minus language with its operations manifested in interactions with the outer world often induces and motivates certain modes of conceptualization and perception that hook onto suitable linguistic expressions/structures that roughly but otherwise aptly express them. The working of the conceptual system minus language may thus coincide with the working of language, thereby conveying the impression that it is language that is doing the central job when specific linguistic structures align with the conceptual categories expressed. To take just an example, knowing (or learning) a language different from the first language has been associated with the reconfiguration of the conceptual system housed in the mind/brain (see Bylund and Athanasopoulos 2017). The underlying assumption here is that when one learns a new language, a new mode of conceptualization is also learnt and this paves the way for the emergence of a new way of talking about things conceptually available in the new language learnt. In the context of the research reported in Bylund and Athanasopoulos (2017), it is about learning a new way of talking about time that (supposedly) gives rise to a new way of thinking. It is thought that a new way of thinking thus obtained confers on the language user(s) an ability to switch varied ways of thinking as a mark of what can be reckoned to be a kind of cognitive flexibility. The norms of conventional rules in the grammar of a language carry with them a sort of a recipe for new conceptual operations. Crucially, the fundamental idea on which this view is ultimately based is this: different languages permit different profiles of reality which are, in fact, different ways of organizing the same (or even similar) chunk of experiences. This forms the bedrock of the *linguistic relativity hypothesis* or the *Sapir-Whorf Hypothesis* (Whorf 1956). It is worth mentioning that Whorf formulated this hypothesis after studying the Hopi language and notably the Eskimo language in which different words for different shades of snow are found[1] (see for a different view, Pullum 1991). This in fact led him to postulate that human thoughts as well as the profiles of reality our thinking and behavior shape and constitute are laid out along lines dictated by the specific languages we speak. Therefore, Whorf (1940: 230) says the following.

> We dissect nature along lines laid down by our native languages. The categories and types that we isolate from the world of phenomena we do not find there because they stare every observer in the face; on the contrary, the world is presented in a kaleidoscopic flux of impressions which has to be organized by our minds— and this means largely by the linguistic systems in our minds. We cut nature up, organize it into concepts, and ascribe significances as we do, largely because we are parties to an agreement to organize it in this way — an agreement that holds throughout our speech community and is codified in the patterns of our language.

[1] Even though Whorf was not the first person to spotlight the curious case of the Eskimo lexicography that involved different words for 'snow' (it was Franz Boas who highlighted this first in his 1911 book *The Handbook of North American Indians*), it is Whorf who drew attention to the possibility that the multiplicity of snow-words can be linked to the multiplicity of language-related concepts in his 1940 article 'Science and Linguistics' (see Pullum 1991: 276).

It may be interesting to note, in this connection, that Whorf was in particular opposed to the universality of what he called 'natural logic'--the system of inferences linking talking to thinking as consolidated in mathematics and symbolic logic--of which different languages are taken to be different but parallel expressive mediums. Instead, he saw natural logic as an extension of human language itself because it allowed him to say that any formulation of natural logic must be bound by the grammar of the language used for the formulation. This way natural logic turns out to be relative to the concepts a language accommodates and admits of. On the current interpretation, natural logic can be regarded as the suite of cognitive processes, representations, and operations associated with thoughts, thinking, reasoning and cognizing. Despite the appeal of the *Sapir-Whorf Hypothesis,* it has faced criticisms for advancing conceptual relativism (Pinker 2007; McWhorter 2014). But, be that as it may, Chafe (2018) has made the interesting point that language influences thoughts by way of the creation of semantic structures that are extracted from real-world experiences. Whatever the case may be, the goal of this paper is *not* to actually encapsulate facets of this debate. Instead, the central goal of the paper is to contend that the special role of natural languages in mapping out the realm of cognition must be explored with caution and as much guardedness as may be desirable, especially when any assumption is made about the entry into cognition through particular languages. It is also noteworthy that there is no need to cleave to the universality of Whorf's natural logic but the variation in natural logic among linguistic communities and humans need not be solely governed and shaped by natural languages, for it can be variable due to contingencies of body-world interactions and also of non-linguistic cognition.

We may now home in on cases that are regarded as 'context-specific' influences of language over thoughts, as Zlatev and Blomberg (2015) have argued. We may take, for example, Slobin's (2003) well-known study of motion verbs in Spanish and English. This study checked if thoughts about motion in tasks of 'thinking for speaking' (speaking, writing, listening, reading, viewing, understanding, imaging, remembering etc.) are affected by the way languages encode the conceptualizations of motion. It needs to be recognized that languages such as Spanish incorporate the conceptualization of path in motion verbs and languages like English include manner in verbs of motion (as in 'slide' or 'roll'). The supposition that Spanish speakers would visually interpret path more easily and English speakers would land on a salient visual interpretation of manner appeals to this very distinction. This is indeed what has been reported in Slobin's study. It makes one consider this to be a kind of 'motion warp' in the mind much like the 'time warp' discussed by Bylund and Athanasopoulos (2017) who conducted a duration reproduction task with Swedish and Spanish speakers and found that Swedish speakers were influenced by the stimulus length, while Spanish speakers were affected by the stimulus size/quantity or volume (the Swedish conceptualization: long/short time; the Spanish conceptualization: much/small time). In addition, Spanish-Swedish bilinguals were found to be influenced by the specific language encoding, depending on the language context. This is a kind of time warp. The warping takes

place in the mind only in the sense that the mental representations of motion or time can be significantly altered by the relevant linguistic representations. Thus, it seems as if the forms of conceptualizations of motion or time can be 'warped' by the linguistic representations acquired. At this juncture, it is of particular concern to recognize that the view of specific languages influencing *and* determining the thoughts we have and entertain seems to centralize and condense language as the factor shaping cognitive structures and conditioning cognitive processing. But this can be misguided and flawed.

For one thing, even if language users are induced to use a particular type of language-specific conceptualization rather than another, it is by no means necessary that language-based conceptualizations in language users within a single linguistic community or even within an individual are uniform. Hence even when language users tend to saliently use one sort of conceptualization compatible with the linguistic representation in the given language, they need not, and perhaps should not, be expected to deploy the same concepts when completing a task, say, the reporting of mental imagery. After all, people do differ in their conceptual systems and, if conceptual systems vary across humans, different individuals of even the same linguistic community may bring to bear different concepts from the conceptual machinery upon specific tasks demanding the influence of language-specific conceptualizations (see Lamb 2000). This may obtain, regardless of whether or how concepts and reasoning are influenced by language-specific conceptualizations. This suggests that it is highly plausible that even when language users are observed to saliently use a kind of conceptualization compatible with the linguistic representation in the given language, they may do so with the aid of variable concepts whose sources of variation need not be traced solely to linguistic representations. These divergences in conceptual systems then minimize the role of language-specific conceptualizations in shaping concepts and thinking/reasoning based on them, for after all concepts and thinking/reasoning may be affected by a lot of non-linguistic processes and real time body-world interactions. For another, any observed convergence on the selection of a specific language-based conceptualization in a group of participants may be explained by appealing to common patterns in non-linguistic processes and body-world interactions that favor the selection of a specific language-based conceptualization. For instance, if Swedish speakers have been found to be influenced by the stimulus length in the line growing condition (indicating distance) as part of the experiment in the study of Bylund and Athanasopoulos (2017), the convergence on the stimulus length-motivated interference in Swedish speakers may be due to the evocation of cognitive schemas or impressions triggered by the line and the non-verbal prompt (a cross for the displacement operation). The linguistic cue provided before the presentation of the stimulus simply helped pick up the right cognitive schema or impression out of a number of schemas and impressions already formed in response to stimuli of lines and containers filling in the experiment. The same considerations apply to the Spanish speakers for whom by the volume-motivated interference was greater. The description of the experimental procedure in Bylund and Athanasopoulos (2017: 913) is useful for the argument being made here: "A prompt preceded each stimulus,

indicating whether duration or displacement was to be estimated. The prompt consisted of a symbol (an hourglass for duration and a cross for displacement estimation) and a verbal label". That this alternative interpretation is viable is substantiated by the results of a second experiment conducted by Bylund and Athanasopoulos (2017). Both the Swedish and Spanish groups were affected by the spatial interference in the lines condition in the absence of linguistic cues. This shows that cognitive schemas or impressions of both lines (indicating distance) and container filling (indicating volume) were perhaps active in the minds of both groups, and one of them (lines, in this case) happened to become more perceptually salient in the specific contingencies of body-world interactions. What is crucial here is that the Spanish group was affected by the lines even though the language-based conceptualization in Spanish should favor the volume-motivated interference. Similar arguments revealing gaps and plausible flaws can be extrapolated to Slobin's (2003) study as well.

Furthermore, there are a number of other general concerns that warrant attention as well. Language-specific conceptualizations may sometimes be in conflict with the actual working of our cognitive organization in the real world. We may consider the case of the manner of motion and the path of motion. The conceptualizations of these may have contextually grounded salience effects when we visually engage with objects, scenes, people etc. in everyday life. These effects are not fully determined or governed by mental representations. They are often structured and modulated by the properties of body-world interactions engaging with physical events and motions out there in the world. That is because body-world interactions usually engage the brain in touch with the contingencies and regularities of the outer world, thereby causing the contingencies and regularities of the outer world to be reflected in the cognitive system (Northoff 2018). Thus, for example, the path of motion of a baby crawling under a table may be more perceptually salient than the manner of motion, chiefly because crawling is what babies usually do (unless a divergent behavior in crawling is detected). Likewise, the path of motion of a heavy object falling from above suddenly detected by a person taking a stroll may turn out to be more perceptually salient because the detection of the path of motion can save the person from being injured. But, on the other hand, if a vehicle is found to be hurtling round the corner of a street, the manner of motion instead of the exact path of motion of the vehicle may be more perceptually salient for a passerby. Besides, the manner of motion is usually as perceptually salient as the path of motion in pictures and paintings since these are abstractions to be inferred from the static representations. However, the manner of motion is, by its very nature, more dynamic than the path of motion since the latter is more static by its nature, unless, of course, paintings or pictures are created to induce a bias in favor of either of them. Real-time interactions with the outer world can help isolate the perceptual salience effects of specific conceptualizations in many cases. Similarly, it is not hard to imagine varied conceptualizations of time being present in the minds of language users (possibly even in those having no time marking in their languages such as Amazonian languages) only some of which may be activated in a given situation based on the body-world interactions. One may consider, for

example, the perception of time on moving modes of transport such as boats, canoes, trains etc. and, if one experiences the passage of time by looking out for a certain duration of time, the distance-based conceptualization may seem prominent. On the other hand, a person working or spending time in a fixed location (say, a room) in a stationary position may well experience time in terms of a volume or quantity. However, the perception of movement even in a stationary position, say, in a movie being watched by someone, may possibly induce a distance-based conceptualization of time. In a nutshell, even if language users are induced to use a particular type of linguistic salience effect, it does not simply follow that the language-based conceptualizations *cause* language users to saliently use one or the other sort of conceptualization in specific linguistic tasks (Mondal, 2017).

Moreover, it is highly likely that a number of plausible conceptualizations of time constructed during the language users' engagement in linguistic tasks are all present in their minds, and linguistic expressions produced by the specific language users or presented as cues appear to be rough paraphrases of the actual conceptualizations. After all, any linguistic expression provides the *contours* of the actual conceptualizations. This reinforces the impression that the underlying cognitive representations are structured by the relevant properties of particular languages. That is so because language users have no way other than that of producing or comprehending the specific linguistic expressions their languages allow. This may have nothing whatsoever to do with the actual thinking strategies for time. Thus, the "calibration problem" between categories of language and categories of thought remains entrenched in view of the fact that categories of thought can have an independent realm (Lucy 1992). Nonetheless, there is no denying that language-based conceptualizations of thinking strategies exist in language speakers' mental repertories and not all of these thinking strategies may be deployed in a given situation, given that language-general influences over thoughts cannot be flatly shrugged off (Zlatev and Blomberg 2015). This is so because certain thoughts may be easily accessible and expressible in a language (especially in the lexicon of a language) via the interface between syntax/phonology and meaning (Jackendoff, 2002). The proposal in this paper is rather to reject the idea that language-based conceptualizations of thinking strategies for time, motion, space etc. do the whole job when language users engage in diverse tasks of language use. The interactions with the objects, people, processes in the environment dynamically modulate the activation of language-based conceptualizations and also the actual thinking strategies (linguistic or non-linguistic).

3. Linguistic Conceptualization, Constraints of Embodiment, and Cognitive Reality

We may now concentrate on the link between linguistic conceptualization and the kind of cognitive reality it may liaise with and eventually project. It has been observed that bilinguals or even multilinguals exercise a sort of cognitive flexibility when using multiple language-based conceptualizations. But any cognitive flexibility observed in bilinguals may reflect cognitive reality rather than any linguistic version of reality.

For instance, when bilinguals switch from one way of thinking about time or motion to another from the context of one language to that of another, it is not necessarily a particular language that induces the bilinguals to do so. The raw cognitive imprint or impression that a word or a perceptual event evokes may actually facilitate this switching of ways of thinking. As a matter of fact, the idea behind the *label feedback hypothesis* (Lupyan 2012) can be turned on its head. The underlying idea of the *label feedback hypothesis* is that the processing of a given stimulus can change as a function of the co-activation of a corresponding verbal label via a sort of top-down modulation. If so, on the current view argued for in this paper, this would actually mean that the cognitive system as a whole can itself switch to different modes/strategies of thinking or cognitive representations (some of which may be language-based conceptualizations) as conditioned by differences in body-world interactions. The switching behavior in bilinguals in the study of Bylund and Athanasopoulos (2017) can be accounted for in this way. It is essential to understand that the observed linguistic effects on cognitive strategies in thinking are nothing but stabilized regularities of a fluctuating cognitive system. Evidence for this view comes from the fact that the activation of modal semantic features in both brain-damaged patients and normal people is not deterministic but rather dynamically governed by many factors some of which are contextual and some of which are purely cognitive in themselves (Kemmerer 2019: 47-50). For example, brain-damaged patients with action production deficits retain an intact understanding of action verbs such as ‘kick’, plausibly by relying on the visual motion features of such verbs. Also, precentral motor cortices in subjects reading a series of verbs have been found to be sensitive to not only action verbs but also stative verbs. This strongly suggests that language-based conceptualizations are not themselves fully based on language in the brain structures. Therefore, there is reason to think that the constraints of embodiment are not selectively and exclusively oriented and confined to language. Crucially, the aspects of the cognitive system minus language can project certain modes of thinking. This is also because context-specific influences of languages over thought and thinking involve modal linguistic symbols that are guided by body-world interactions in being ultimately anchored in neurally instantiated modality-specific systems (Barsalou 2008).

In this connection, it is also vital to consider the proposal that observing modulations of neural activity for perceptual or non-linguistic stimuli that can be predicted by certain well-demarcated properties of languages must be the best evidence that language shapes human thought (Thierry 2016). Thus, this appears to be a neurolinguistic version of linguistic relativity. As a matter of fact, Thierry (2016) has provided data from a number of neurolinguistic studies on the influence of language-based conceptualizations on color processing, perceptual processing and categorization, motion perception etc. For instance, pictures for the words "sea' and "horse" presented in the same order as the one in which the words appear here in a picture-to-picture priming task triggered a higher amplitude of the N400 wave (an ERP (event-related

potential) wave measuring the brain response to a stimulus over a time course). In addition, no conceptual priming effects were found for the pictures of the words "sea" and "horse" presented in the same order. This is interpreted to suggest that the unrelated pictures for the words "sea" and "horse" are linked to the lexical-semantic concept of the English compound "seahorse" and this perceptual linking is mediated and facilitated by the linguistic concept of "seahorse". But this conclusion may be unwarranted. It is plausible that the unrelated cognitive impressions or schemas triggered by the unrelated pictures were evoked and a higher amplitude of the N400 wave signaled just that, *not* the formal linking of "sea' and "horse" as lexical structures in order to reach the lexical-semantic concept of the English compound "seahorse". When the amplitude of the N400 wave was significantly reduced when the pictures were presented in the reverse order (the horse picture first and then the sea picture), the pictures were somehow conceptually related, plausibly due to the experience of familiarity of these images in the experiment or of situations evoking memories of horses seen by the sea. In any case, it is evident that it is the cognitive impressions or schemas triggered by the unrelated pictures that were not somehow related conceptually but they may or may not directly evoke the concept of "seahorse" and, even if they do, it is the cognitive evocation of a linguistic concept just like the evocation of the linguistic concept of a car key through the images of a car and/or a key. Similar arguments can also be extended to another study testing motion perception in Germans and English speakers who were engaged in a motion event-picture matching task, as reviewed in Thierry (2016). Endpoint-match stimuli elicited an electrophysiological signature of greater amplitude in German speakers, but no differences in electrophysiological signature between endpoint-match and trajectory-match stimuli were found in English speakers. Since English encodes both the trajectory and endpoint of an event and German as a non-aspect language encodes only the endpoint, the results were interpreted to mean that language-based conceptualizations of aspect shaped the neural processing of motion. Again, it is plausible that the shape shown in the picture target as matched with the endpoint shape in the animation (a square towards which a dot moves) had a perceptual salience effect on speakers of both German and English groups, regardless of how the matching of the trajectory appealed to both groups. It may also be noted that the trajectory of something moving is a more abstract, fleeting and less concrete concept than a shape, and hence the perceptual salience of a shape is not out of question.

Overall, the discussion above indicates that the cognitive flexibility in bilinguals is open to cognitive reality by virtue of which any word in a(ny) language bilinguals know that can (potentially) activate or evoke the same cognitive schema (or mental impression) can do an equal job. Therefore, the cognitive reality language projects by way of the establishment of a higher-order representational system on the neuro-cognitive system as a whole (that is, the brain) is constitutive of the linguistic projection of reality. But the linguistically structured cognitive reality is always *part* of the overall cognitive reality that our sensory-motor, affective, cognitive systems all together project.

The projection of cognitive reality onto the actual world may thus override any linguistic projection of reality, except when the form of linguistic cognition as part of the neuro-cognitive system exerts an influence on cognitive processing. Taken in this sense, the observed linguistic effects on cognitive strategies in thinking during language use are stabilized regularities of a fluctuating cognitive system. And there is no need to think that the conceptual space of cognition is a fixed system which can be molded by linguistic influences. Rather, the neuro-cognitive system can be thought of as a dynamical system that is attracted to aspects of conceptualization targeted by certain words but not others. So, it is not the words or linguistic constructions that alter the shape of the conceptual space. Instead, the conceptual system itself changes in real time to accommodate various configurations of cognitive processing our body-world interactions give rise to, involving varied aspects of conceptualization (Mondal 2021). The role language plays here is that of a pointer, but then anything non-linguistic can also be a pointer in more or less the same way. The experience or concept of storms or rains may come to the mind when one hears the loud sounds of thunder even though no one utters the word "thunder". Most of our day-to-day affairs of cognitive processing are governed by facets of body-world interactions in this way.

4. Conclusion

This paper has argued that the variation in thought and thinking is perhaps more pervasive due to the brain-world interactions in linguistic experiences but this variation need not be explained by variation in languages. Therefore, this position is not tantamount to supporting any kind of *universalist* thesis for thought and thinking as defended by Pinker (2007), for example. Any conformity of thoughts to certain common patterns is decidedly due to the shared concepts that all humans have over and above any variation that exists owing to a multiplicity of factors of which language is but one.

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"THE SYMPATHY OF EXPERIENCE WITH LIFE!" – UNDERSTANDING PRACTICAL KNOWLEDGE FROM HEIDEGGER TO GADAMER AND BACK*

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ABSTRACT. For both Gadamer's project of a philosophical hermeneutics as for Heidegger's early understanding of facticity (*Faktizität*) as practical knowledge, the problem of application is central and is always linked to the specific conditions under which an individual decides to act within a community. Both also agree on the fact that the sciences of man do involve more than the epistemic subject, this is why the context i.e. the phenomenological concept of 'world' becomes part of the understanding process, one that cannot be ignored or transformed into an abstract matter. Understanding is therefore also in a specific way 'historical', as the application is dictated by momentary circumstances in life situations, which come before any use of theoretical knowledge and thus do not represent an appendix to theory. While Gadamer continuously insisted on the idea of a practical knowledge (*Wissen*) that surpasses the separations between theory and praxis, *sophia* and *phronesis*, Heidegger radicalized the idea of active thinking as an experience of language in connection to an essential 'perception' of Being itself, that goes beyond any subjectivity. The term by which he often characterizes this essential thinking (*wesentliches Denken*) is *Vernehmen*: a kind of receptive thinking. This conception of receptive thinking, as some conversations around the *Zollikon Seminars* and *Le Thor/Zähringen* will briefly show, lead Heidegger also to some interesting considerations on the human body.

Keywords: practical knowledge, historicity, life, body, *Vernehmen*, phenomenological hermeneutics, world.

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* Note: the English version of Heidegger and Gadamer fragments which still remain untranslated or their translations were not available to me is my own. If no English translation is specified, the quotation indicates the complete edition Martin Heidegger Gesamtausgabe (GA) and the collected works Gesammelte Werke (GW) of Hans-Georg Gadamer followed by volume and page number. I have also kept the Greek expressions in the original quotations and replaced them with the transliteration in the main text. Last not least, I would like to thank the working-group "Knowing That-Knowing How" of the Babes-Bolyai University Cluj for discussing the first draft of this paper during a workshop-session and Ana Munte/CIIS/University of Tübingen for reading the manuscript and making suggestions aiming at clarifying some contexts and linguistically improving the text.

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1. The Closeness of Practical Knowledge to Life as a Historical and Hermeneutical Stance

To pursue understanding as non-thematic orientation during simple life practices corresponds to Heidegger's early intentions, which found their first expression in his elaboration of a hermeneutical phenomenology. During the lecture of the war emergency semester 1919, Heidegger underlines an anti-theoretical and non-mechanistic intention in Husserl's principle of all principles as he explains:

> Principle of the principles of the phenomenological attitude: everything that is original in intuition is to be accepted how it is. No theory as such can change anything in this, for this principle of principles is no longer itself theoretical; in it the basic attitude and attitude to life of phenomenology is expressed: the sympathy of experience with life! That is the fundamental intention. - Nothing to do with irrationalism and philosophy of feeling. Rather, this basic attitude is inherently clear, like basic life itself. [The] phenomenological basic attitude [is] not routine -Machine Acquisition: Farce of Phenomenology. It is not a mere handle, but an attitude that is laborious and slow to acquire. (GA 56/57, 216)

In the context of Heidegger's search for original experience (one can note during the early lectures the striking repetition of expressions as 'fundamental', 'basic', 'original', see Elm, 1999) the return of the principle of all principles of phenomenology to 'life itself' refers to a special concept of practice. This means not as much the purposeful handling with objects, which is exhausted in their production and use, but rather aims at something that is 'sympathetically' acquired in habit i.e. in dealing with what is encountered by simply living in a community. Heidegger understands this in connection with the ἕξις / *hexis* in the Aristotelian sense of the word, as a kind of 'having' which aims at the permanent possession of virtue but can only be achieved momentary, through the concrete action in time, guided by the preferential choice (προαίρεσις / *prohairesis*). In an impressive passage of the lecture on the basic concepts of Aristotelian philosophy from the summer semester of 1924 (GA 18, *Grundbegriffe der aristotelischen Philosophie / Basic Concepts of Aristotelian Philosophy*[1]), Heidegger's "probably most beautiful" lecture (Pöggeler, 1999, p. 9), the connection between *hexis*, *arete,* and *praxis* is described as follows:

> ἕξις is the determination of the authenticity of existence in a moment of being receptive to something, the different ἕξεις as the different ways of being receptive. ἕξις is fundamentally the determination of the actual being, here related to the human being: The πρᾶξις is characterized by the ἀρετή, the ἀρετή is characterized as ἕξις προαιρετική. πρᾶξις as the 'how' of Being-in-the-World shows up here as the context of Being, which we can also call, in another sense, existence. (GA 18, 176)

Practical existence is linked to an ability to be receptive and to respond with the 'knowledge' of what needs to be done in a

[1] In the English translation of Robert D. Metcalf and Marc B. Tanzer. The next quotations refer to GA 18.

concrete situation. Therefore, Being-in-the-World always goes hand in hand with an understanding of the part the individual has to play in a 'worldly' context as a 'hermeneutical' stance, which has passed from the beginning beyond any solipsism.[2] With this, expertise or knowledge of what to do and how to do it (*Sachwissen*) – which results in a surprising overlap between theory, practice, and technology – becomes a matter of ethics. The most important thing in practice – which differs from the mere extension of technical knowledge (*Sachwissen* or expertise) – is the stability of character; this way, the actor won't get confused by the concrete changes occurring in different situations and would still be able to get through the task (cf. ibid. 182). The attitude that Heidegger will put at the center of his analysis of the *Dasein* of *Being and Time* two years after the lecture on the *Grundbegriffe*… is resoluteness (*Entschlossenheit*) as a condition of actual being. (GA 2, 355 ff.) Even if the term is not introduced in *Being and Time* as an ethical term and the final form of expression has not yet been found in 1924, when Heidegger already speaks of the *prohairesis* as being-resolute (*Entschlossensein*, GA 18, 141 etc.), this still corresponds in my opinion to the elaboration of the Aristotelian ἕξις προαιρετική in the *Grundbegriffe*. Using the definition in the *Poetics* according to which the *ethos* reveals the respective determination of the speaker (see GA 18, 169 with reference to Ar., *Poetics*, 1450 b 8), Heidegger concludes: "In such speeches, in which one doesn't want to be determined to do something or to bring others to a certain decision, there is no ἦθος." (ibid.) As a *how* (and not as consistent *what*) of Being-in-the-world, resoluteness/ *Entschlossenheit* is nothing less than the backbone of human existence. Without this decisiveness, speech would become pointless.

Still, Heidegger always underlined the fact that he never wanted to work out an ethics and certainly did not want any moral conclusions to be drawn from his plead for authenticity. Almost two decades after *Being and Time,* in his *Letter on Humanism* (1946), he delivers the thought behind this decision, by pointing out the essence of thinking as already being 'action'. Hans-Georg Gadamer also sees in the division between a 'theoretical' and an 'applied' ethical thinking the main problem of ethics:

> But it could be that Heidegger is right when, when asked: "When do you write an ethics?", he starts his Letter on Humanism with the sentence: "We still do not think decisively enough about the essence of action." Indeed, there seems to be an indissoluble difficulty in ethics itself, which became explicit through Kierkegaard's criticism of Hegel and of ecclesiastical Christianity. Kierkegaard has shown that all knowledge at a distance is not enough for the basic moral and religious situation of man. Just as it is the intention of Christian preaching to be experienced and heard at the same time, so too the ethical choice is not a matter of theoretical knowledge, but of the brightness, sharpness, and distress of the conscience. (GW 4, 177)

[2] This is the sense of Heidegger's hermeneutical turn in phenomenology which happens before the first explicit critique to Husserlian intentionality as is it shown by the *Prolegomena zur Geschichte des Zeitbegriffs / Prolegomena on the concept of time*, 1925, GA 20, §11, 140 (Translation of the lectures by Theodore Kisiel, *History on The Concept of Time, Prolegomena*, Indiana University Press, 2009).

One could argue about the idea of an ontological thinking as action, which has already had included the ethical problem. Still, Gadamer touches here the nerve of all the problems that arise within practical philosophy (as much in ethics as in hermeneutics): Beyond a theoretical knowledge of the good of action, the application is always about the right choice of an individual and the right moment to act, or, as Aristotle would have put it, a sense for "what is possible here and now" (GW 4, 183). There are no further abstract rules for practical application. No code can serve as a substitute for the particular conditions of individual experience that arise by getting involved and participating in action: this means, one must constantly care not to get biased and to maintain a horizontal view that passes beyond the own subjective area (or the mere area of expertise). This is in the truest sense practical knowledge as a non-theoretical, participatory attitude. All of this has grown on Aristotelian soil, both with regard to the search of the early Heidegger for the original experience of existence and with regard to Gadamer's endeavors to justify the humanities as sciences of man. In each of the cases, the context of the pre-theoretical 'world' of the social and political community plays a major role. This ontological framework around the epistemic intention makes the attempt to reduce social behavior to statistic patterns very difficult because it always involves the understanding of expectations, needs and the anxieties of the community at a given time (as Aristotle shows it in in his *Rhetoric* and what Heidegger also refers to in an existential context in *Being and Time*). As Jean Grondin argues:

> Perhaps more importantly, Aristotle saw that this presence of the >knower<, this proximity or attentiveness to what is at stake is a mode of >knowledge<, one, Gadamer contends, that can be fruitfully applied to the interested knowledge displayed in the human and social sciences. In short, if Gadamer's practical understanding appears less linked to Heidegger's project of a hermeneutic of preoccupied existence, he does retain its notion of reflectivity and application in order to better understand what understanding is all about. (Grondin, 2002, 41)

And with regard to early Heidegger, Rubio/Fernandez write: "The experience of practical life, subject to contingency and change, becomes the core of the Heideggerian hermeneutic of facticity". (Rubio, Fernandez, 2010). The knowledge of how to deal with the contingency of practical life must hence remain linked not to a theoretical principle, but to a special kind of hermeneutical intuition which in both Heidegger as in Gadamer primarily requires an understanding of one's situation in time i.e. a 'historical' sense.

2. Phenomenological Hermeneutics of Ancient Philosophy from Heidegger to Gadamer: The Intuition of the Useful Good and the Self-Interpretation of Life

Both Gadamer's search for an 'understanding of understanding' and the Heideggerian early project of an understanding of facticity acknowledge that the problem of application has to remain central. As far as the sciences of man do involve

more than the mere epistemic subject, the context (the phenomenological concept of 'world') cannot be ignored or transformed into an abstract or subsequent matter. Understanding is primarily historical, as the application is dictated by the actual need to act, which comes before and not after any use of theoretical knowledge and thus does not represent an appendix to theory. So, before any subjective will to understand it is 'life itself' that dictates when the understanding of the subject is needed, or, simply said: Knowing what and how to do it only makes sense if the action is understood as contextually and situationally motivated. As Heidegger puts it in the lecture from the war emergency semester 1919:

> "If you look into life intuitively, to its motivation and tendencies, then the possibility to understand life as such arises. Then, that absolute comprehensibility of life itself becomes apparent. Life is not irrational. (This has nothing to do with rationalism!!) (…) The phenomenological intuition as the experience of experience, understanding life is a hermeneutical intuition (understandable, meaningful). The inherent historicity of life itself is the core of the hermeneutical intuition." (GA 56/57, 219)

Neither knowledge of what is true nor the knowledge of what is truly 'good' (for me) can be understood as 'mechanic' of application, as a transfer from 'abstract' theory or a code of behavior to the contingent conditions offered by 'practice'. Nor can they be seen as part of a rationalization process that has as an ultimate purpose the objectification, the dissolution of the individual and the particular into an abstract or general goal.

For Gadamer, the phenomenological intuition as hermeneutical reflection acts as a parallel to (Aristotelian) ethics, which runs first of all through this easily ascertainable commonality: Both the desire to understand and the reflection on the good are not initially desired for themselves but have the purpose of being directly applicable to something i.e., to be *useful* to something (other than themselves.) All knowledge results from practice, as Gadamer repeatedly states, and even *theoria* as the highest practice of thinking is knowledge that remains applicable as far as it is eventually aimed at praxis. It is this, and not some kind of objectifying knowledge that gives 'hermeneutic relevance' of Aristotle:

> For moral knowledge, as Aristotle describes it, is clearly not objective knowledge—i.e., the knower is not standing over against a situation that he merely observes; he is directly confronted with what he sees. It is something that he has to do. (*Truth and Method*, [TM] 312)

But long before the philosophy of hermeneutics presented in *Truth and Method* had been drawn up, in his writing from 1930 *Practical Knowledge*, Gadamer comments on *Nicomachean Ethics* (EN 1155 b ff.) as follows:

> What is useful is aimed at because of a prior distance from the next best (ἡδύ). In order to be able to strive for something useful, a sense of time and a prior design for something more distant are required. In this further lies the reason for the choice of the closer that is useful for this purpose. This distant relation to its use makes beings addressable and expressible from the basis of their being. (…) But it is meant to be use-

> ful for this purpose, its usefulness is understandable, and so there is a *logos* that makes it evident. *Logos* also means 'calculation'. (GW 5, 233)

It is easy to get the idea that, for the Greeks, practical knowledge is about the correct calculation of usefulness, a combination between ethical intellectualism (according to the Socratic formula "virtue is knowledge") and a kind of technical utilitarianism (which also has its roots in the Socratic orientation towards the craft). Gadamer, however, avoids this reading and shows that in the process of using things, the purely manual aspect (craft) of the *techne* must always aim at something that is beneficial for all i.e., generally useful. This means that in view of the possibility of transferring technical and general knowledge, the knowledge of useful things always tends to be linked to concerns about the ethical and moral dimension of use, which the manufacturer no longer controls:

> Knowledge of useful things is therefore knowledge of an individual in the general determination of its usefulness, that is, in disregarding its individuality. Precisely with this, however, a prior disposition of the individual from the foresight of the desired benefit is made possible: *Techne*. It is precisely in the distant tension of the useful to its benefit that this provision can be made independent for the precautionary production for general use. (...) Because *techne* is a knowledge of the manufacturability of the useful before all use. But it is precisely this precautionary procuring of the useful that separates the useful from the useful use. One is the manufacturer, another is the user. (GW 4, 233)

Technology in itself has indeed nothing to do with the ethical dimension of its application. But the fact that *it is designed for* the purpose of application, is part of a practice that must be considered and for which technology is no longer responsible. The separation of technology and ethics is at the same time the reason for a strange, indissoluble bond between the manufacturer's practical knowledge (which basically differs from purely theoretical knowledge only in that it depends on the manufacture of something that can be used for another purpose, and not about the knowledge for oneself) and the practical knowledge of the freedom of application, a situational knowledge that aims at general use (the practice of practice, so to speak). What is useful in a particularly given fact situation and what is generally to be used are neither interchangeable nor fixed, since the importance of such objects is not so much connected with the technique of their manufacture as with the concern for the whole. Furthermore, "fact", as Gadamer puts it, "is a hermeneutic term, that is, [it is] always related to a connection of the assumption or expectation, a connection of the inquiring understanding of a complicated kind." (GW 4, 47). What is useful can become harmful in the hands of the ignorant or the ill-intentioned. Practical knowledge is not exhausted in technology, and the problem of application remains the constant task of this knowledge, which ultimately - including the Aristotelian criticism of Plato's idea of the good - is a knowledge of what is always *good for someone* (cf. GW 4, 238). The practical knowledge or the expertise (of both the good craftsman and the good statesman) cannot be split into two separate moments as it is neither directed

theoretically towards something good in itself, nor are the skills that create good works merely mechanic. Before any separation and remaining as a constant interaction between theory and practice a 'sense of the whole', a hermeneutic sense accompanies every task with a knowledge of oneself, an understanding of oneself in one's world. One cannot be surprised that the conclusion Gadamer draws here can sound very much like Heidegger's affirmation of the 'absolute comprehensibility of life itself'.

> "So it is always a self-interpretation of life, on which follows the generalizing, schematizing, typifying concept formation of practical philosophy and on which it is based." (GA 10, 264)

3. The Theory within the Praxis. Gadamer's View on Practical Knowledge as Participating Distance

By defining the root of what theory is as "seeing what is" (GW 4, 47), Gadamer names in the next breath the complicated facts about the theoretical object, which is not just an existing or perceived one, but also something to meet or contradict expectations and assumptions. "Not quite as complicated, but more difficult to achieve," Gadamer adds, "it is in everyone's life practice to see what is, instead of wishing what it is." (Ibid.) This calls for a step back from personal and collective foremeanings and prejudices, which inevitably arise by belonging to a community. The distance required for the confrontation with something that remains hidden in everyday' s life, is, however, something that must be achieved momentarily, as prejudices arise only during one's involvement in concrete events or situations. Participating distance? Distance in the midst of events? Since the concept of a theoretical experience evidently represents a paradox (only the repeatability of an experience in an experiment removes it from the particular and situational and thus also from its character of event), it can initially appear surprising that Gadamer is so much interested in the possibility of practical knowledge as a universal hermeneutical knowledge. How is such a knowledge conceivable, considering the variability in social interaction? This question, which involves the one on the consubstantiality of ethics and politics, leads Gadamer back to the beginnings of philosophical self-reflection before Aristotle's separation between philosophy and politics to its Socratic-Platonic roots. (see Fr. Renaud's account on Gadamer's interpretation on Plato, *Die Resokratisierung Platons*). For Gadamer, understanding the Socratic gesture consists in the reversal of sheer negativity (the insistence on the ignorance regarding the good, just, etc.) and the positive recovery of the ethical - as practical, not as metaphysical - quantities in the concrete knowledge of the right action i.e., what contributes for oneself *and* for the community (the *koine sympheron*). This is what the anti-theoretician Socrates stands for, while Plato's theory of ideas goes beyond his aporetic knowledge. But is such a natural connection between one's own and the general well-being, the knowledge of what is useful for me and what is generally good, so easy to assume? Was not the discrepancy between a general knowledge at a distance ("the good itself, the good for all") and the individual conscience regarding the indefensible choice and action not previously identified

as the main difficulty in ethics? The consubstantiality of ethics and politics, which is difficult to understand for modern times, is a central problem for both Plato's philosopher king and for Aristotle, who would separate metaphysics from the ethical (practical) knowledge. Despite the criticism of an independent idea of the good that is detached from practice, one thing is certain: Knowledge of what is good and beneficial, as Gadamer tirelessly repeats, can never be absorbed as practice in technology, nor can it be transferred into a form of abstract knowledge. Gadamer's writing from 1930 *Practical Knowledge* is a programmatic draft for his entire work in this direction: It is about the elaboration of the main features of an universal science without an application method. This is based on a confrontation of the political-philosophical drafts of Plato and Aristotle, a 'unity of effect' (*Wirkungseinheit)*, which Gadamer will never cast doubt on. He explains the development of the knowledge about the good in the sense of Aristotle *logicizing* (*Logisierung*) the ethos as in 'transferring the ethical problem from the dialectical paradox of the Socratic question into the analytical clarity of the [philosophical] term' (GW 5, 248). The paradox of the Socratic identification of wisdom with the good itself in the context of the difficulties in the transmission of virtue and knowledge dissolves into the identification of *bios* and *logos* in the particular case of Socrates. The Socratic-aporetic *logos* may reflect the absence of a theory, but it also remains the living representation of a movement that seeks to realize the good: the exemplified practice of love for wisdom i.e., the only mystery in which Socrates admits to having been initiated (cf. *Symp*. 177 d). But what about Plato's philosopher king? Is he the product of a wishful thinking that the sober Aristotle will bring back down to earth in the separation of *sophia* and *phronesis*? After all: is there a gap that cannot be bridged between the idea of the good, which is considered theoretically 'and dominates everything else' and the human, practical good? Gadamer denies this would be the case:

> Plato does not pursue politics according to theoretical principles - any more than he teaches the theory of ideas. The high path to the view of the heavenly place and the deep path of the one left to worry about his own being are one and the same path. Philosophy is politics not because Plato believed in a naive-abstract synthesis of the good in the cosmos and the human world, but because the philosopher and the true politician live in the same concern. There must be true knowledge in both, that is, they must know the good. But one cannot know the good from a distance and for everyone, but originally for oneself. (GW 5, 239).

The good for oneself can only concern one particular individual and cannot be the subject of an empty generalization. It is not as much knowledge from a distance, but a hermeneutical attitude as prior distance from what promises to be the next best pleasure and permits an overview on what might be useful on the long run. It is the same training that hepls the philosopher-king abstract from what is individually beneficial and makes him turn the idea of good for the well-being of the polis into his own goal. This, however, involves a series of separate decisions on what might be the good thing to do ('now'). The only constant is his own resolute attitude, since there cannot be one separate idea of the good behind the good acting. And furthermore, it was

Aristotle who, by recognizing this fact, was able to exclude politics from philosophy and separate practice from theory:

> "Because there is the concept that determines what is meant and makes it available for all repetition (the *logos kat'auto*), this theoretical possibility of philosophy must be separated from politics. Not because there is the individual's knowledge of himself, of which there can be no theory, but because there is a theory, that is, a knowledge for all beyond the difference between such a knowledge and knowledge for oneself. This is how he differentiates between *sophia* and *phronesis*." (Ibid., 240).

Gadamer himself recognizes in it the "hermeneutical relevance of Aristotle" (TM, 309 ff.) and takes the *phronesis* as an example for what represents a truly hermeneutical ability, namely, to go through the general with regard to the individual and vice versa. Application, the hermeneutical-practical concern, is not aimed at the creation of favorable conditions under which understanding or acting for one's own benefit can be exercised as an experiment, but it is an exercise in talking and reading without prejudice. This is what real knowing of one's hermeneutical i.e., historical situation means. Therefore, at least regarding the sciences of man, practical knowledge means not the successful transfer of theory to practice as it is in the case of technical knowledge, that may allow the subordination of undesired particularities under a general working principle. It is exactly the opposite, since the goal would not be to eliminate individuality; conversely, it is about allowing the other to come into its own as a possibility of being human that is understandable (not only to himself, but to anyone). Therefore, Gadamer speaks about (hermeneutical) distance[3] as an endeavor to distinguish between true and false foremeanings and prejudices, as time-bound and situational, but from 'within' the emersion into the historical situation. How is this possible? As Gadamer explains in "*Truth and Method*", this attempt has the logical structure of the question. Its "essence is to open up possibilities and keep them open" (TM, 298). It is not as if one could not fail in regard to the fundamental problem of hermeneutics, but rather, "a person trying to understand something", Gadamer assures us, "will not resign himself from the start to relying on his own accidental foremeanings, ignoring as consistently and stubbornly as possible the actual meaning of the text, until the latter becomes so persistently audible that it breaks through what the interpreter imagines it to be". (TM, 271)

Ultimately, it is about an ethical choice that is prepared to let the other be in his otherness and, under certain circumstances, to let the interpreter change his mind about his claim. Gadamer opposes the tendency to have one's own fore-meanings and prejudices confirmed by the text, with nothing but the 'hermeneutic will to understand as the interpreter is prepared for it [the text] to tell him something" (ibid.). Distance is hereby required, a distance that goes hand in hand with the utmost attention and self-involvement. Firstly, this presupposes the understanding of the temporal distance, a distance that takes one's own historicity into account and allows room for maneuver to reveal the matter within a common (ontological) 'horizontal' community. Secondly, it is

[3] Gadamer*, Truth and Method*, [TM], 376

about a hermeneutical distance which, as participation in an event that is viewed purely for itself (and for no other purpose), preserves the freedom of the viewer and his speech. And thirdly, it might be important to preserve the idea of distance in practical knowledge i.e., to remain committed to an idea of practice that, as knowledge of the hermeneutically complex nature of a thing, does not only know about the production of means but also understands the further use and abuse of technology. As Gadamer puts it, it is about cultivating a kind of practical intelligence that can hardly be distinguished from wisdom. This also corresponds to the interpretation of the Platonic-Aristotelian unity of effect and Gadamer's persistent conviction that the Aristotelian separation of *phronesis* and *sophia* does not contradict the "hidden unity" (GW 10, 246) of theory and practice. On the contrary: it is precisely through his doctrine on ethics, which narrows down *logos* and *ethos*, that Aristotle avoids the sole rule of technical knowledge and, conversely, inserts the latter into a world of reason that pervades all areas of life.

> The wisdom shows itself in the theoretical as well as in the practical area and in the end consists in the unity of theory and practice. The word *Sophia* says that. But then Aristotle will remain a privileged partner in our conversation - he who, compared to the ideal of modernity of a world that can be controlled by knowledge and ability, represents the ideal of reason for us, the ideal of a world that has become sensible, understandable, in which we have to live. (GW 10, 246)

4. Back to Heidegger: Receptivity in Perception and Corporeity in the Praxis of Thinking. From *Vernehmen*[4] to the 'Reach of the Human Body' (a phenomenological exercise in *Le Thor*)

While Gadamer continuously insisted on the idea of a practical wisdom that goes beyond the separations between theory and praxis, Heidegger radicalized the experience of language as the location (*Ort*) where Being can be ‚heard' or listened to. The term by which he characterizes the essential thinking (*wesentliches Denken*) is *Vernehmen*. In this last section, I will focus on some key passages regarding this capacity of receptive thinking. This conception of receptive thinking, as the final discussions in *Zollikon* and *Le Thor/Zähringen* will show, lead Heidegger to a very specific view on the human body[5].

Heidegger first speaks of „*vernehmen*" or „*das Vernehmen*" in the early twenties, where, in the context of Aristotelic interpretations, he uses it to supplement and partly replace the expressions *'meinen'* or *'vermeinen'* which he had borrowed from the Husserlian terminology. His goal was to establish his own translation of the Greek terms νοεῖν and νοῦς. As an alternative to

[4] Interestingly enough, there is a big variety in the English translations of *vernehmen* regarding *Being and Time*. John Macquarrie and Edward Robison often use *awareness* and *perception* and Joan Stambaugh's main option is for *apprehension*. All these terms show that *Vernehmen* as a form of receptive thinking remains beyond the separation between sensibility and thinking, a separation which Heidegger puts in the center of metaphysical thinking. See also "Vernehmen-Wahrnehmen-Sinngeschehen", A. Noveanu, Tübingen, 2021. My option for this short passage was to keep the original German term.

[5] See Espinet, 2012 In: Alloa, Bedorf, Grüny, Klass (Ed.), further Nielsen 2003, 2014.

the more common expressions ('thinking', 'reasoning', 'understanding' or 'mind'), this term also had the important function of distinguishing Heidegger's phenomenological approach from the strongly neo-Kantian environment. Nevertheless, these conceptual correlations were also possible due to the relatively broad conceptual sphere of both "*Vernehmen*" and νοεῖν[6], which promised unexplored possibilities for a radical rethinking of Husserl's view on intentionality as twofold (the intentional act, *noesis* and the intentional content, *noema).* A linguistically forced new beginning, as it is often the case with Heidegger, whose existential thrust against the philosophical tradition of Cartesian origin and against the generally modern tendency of the reduction of phenomenality to consciousness could not be yet interpreted in a vitalistic or irrationalistic way because of the constant reference to ancient ontology. As early as the twenties, Heidegger repeatedly emphasized the gap between his fundamental ontological approach on the one hand, and existentialism and phenomenological anthropology on the other, both equally successful in France and Germany. With the new and radical thinking of what he calls the only genuinely philosophical question, Heidegger aims to go back where philosophy had originally begun the search for Being. Still, because of the naïve, unbroken relationship to its origin, the ancient ontology lacks in Heidegger's view the insight into its own intentions. Heidegger's new beginning, however, promises a break with the history of western metaphysics and the 'repetition/recovery' (*Wieder-holung*) of the (first) beginning, which, as such, could not experience itself and therefore had lost its original intention.[7] The first step in this recovery is putting the human being, the *Dasein* back into his living context: the Platonic-Aristotelian community becomes the *world* found in phenomenological description.[8]

As a characteristic of a fundamental belonging to the world – and not as a by-product of the metaphysical subject of consciousness – the *Befindlichkeit/* Attunement (Heidegger, 1996)[9] in "*Being and Time*" is existentially recognized as a character of *Dasein* as Being-in-the-World. Having constantly missed this fundamental connection between world and Dasein (which had led to unfruitful debates on proofs for the reality of the world[10]) is the result of substantialist ideas, which are linked to the modern concept

[6] In both cases, the terms switch between aspects regarding sensuality and mental phenomena. Cf. German Dictionary by Jacob Grimm and Wilhelm Grimm, 16 vols. in 32 volumes. Leipzig 1854-1961. Quellenverzeichnis Leipzig 1971, *Vernehmen*, Vol.25/911 see also Passow, Leipzig 1952, ed. 2004, pp. 355, the aspects regarding *animadvertere*. Heidegger also retains the moment of attention/awareness: »Vernehmen is the translation of the Greek word νοεῖν, which means: noticing something, acknowledging it and making it present « In: *Vorträge und Aufsätze/Lectures and Essays*, Stuttgart 1954, p.134.

[7] On the meaning and concept of *repetition* in Heidegger's work, see Helmuth Vetter, In: *Denkwege* 3, (Ed. Barbaric, Koch) p. 214 ff.

[8] See for example *Being and Time*, [BT], Part One, sections II-IV

[9] *Being and Time*, translated by Joan Stambaugh, New York, 1996 [BT, 1996] Macqaurrie and Robinson [BT, 2001] translate *Befindlichkeit* as "state of mind".

[10] S. *Being and Time*, Translated by Macquarrie/ Robinson, p. 249: "The 'scandal of philosophy' is not that this proof has yet to be given, but hat *such proofs are expected and attempted again and again. (…)*

of reason. Heidegger counteracts the idea that thinking should be seen as the activity of an inherent asset of the epistemic subject by turning the relationship of *'Vernehmen'* to *'Vernunft*/reason' and transferring it from an 'inside' (the consciousness) to an 'outside'(the world). As a relationship to the world, this primary relation is a phenomenon to be traced outside the classical theoretical setting of a subject 'within' a categorically available substance of reason, that releases both the act of *Vernehmen* and its product as opposing object (*Gegen*-stand)).[11]

During the so-called turn, Heidegger focuses on the willingness to listen/to perceive as a characteristic of the essential thinking (see GA 65, GA 45). *Vernehmen* also appears in the context of the later attempts to explain human existence as Being-in-the-World also with reference to corporeality as an "area of being able to perceive".[12] The conversations with the Swiss psychiatrist Medard Boss are conducted more intensively and become subject of the famous "*Zollikoner Seminare/Zollikon Seminars*[13]". For a decade and up to seven years before Heidegger's death these seminars discuss questions of psychosomatic medicine in a way that suggests that the long-rejected theme of the body certainly accompanied Heidegger's thinking. What follows are a few closing remarks about the Seminars in *Zollikon* and the late seminars in *Le Thor* and *Zähringen*[14].

Vernehmen, as Heidegger explains, would owe itself to a non-biological process, which still testifies to the corporeality of all thinking as being rooted in its Being-in-the-World. Human corporeality is determined from the beginning in such a way that, it only 'forms' in connection to the significant encounters 'out' in the world. In a dialogue with Boss in 1972, Heidegger describes it as follows:

> Everything now, what we call our corporeality, up to the last muscle fiber and the most hidden hormone molecule belongs essentially into existence; it is therefore basically not lifeless matter, but (rather) an area of that non-objectable, optically invisible *Vernehmen* of the significance of the encounterer, of which the whole existence consists. This corporeality is formed in such a way that it is to be used to deal with the lifeless and living material of the encountered.[15]

This is why a demonstration that two things which are present-at-hand are necessarily present-at-hand together, can give rise to the illusion that something has been proved, or even can be proved, about Dasein as Being-in-the-world. If Dasein is understood correctly, it defies such proofs, because, in its Being, it already *is* what subsequent proofs deem necessary to demonstrate for it."

[11] Consequently, Heidegger will not start from the intellect as an ability to understand, nor from reason as the origin of *Vernehmen*, and will also avoid to speak about 'consciousness'. Against all these metaphysically embossed terms Heidegger competes both with the early project of the hermeneutics of facticity and with the later thinking of the event (*Ereignis-Denken*).

[12] Conversation with Boss, in *Zollikoner Seminare* [ZS], Ed. Medard Boss, Frankfurt a M. 1987, p.3

[13] The English translation *Zollikon Seminars* Protocols-Conversations-Letters by R. Askay and. F. Mayr and was published in 2001. The following quotations indicate the edition in German by Boss [ZS].

[14] *Four Seminars*, translated by Andrew Mitchell and Francois Raffoul, Indiana 2003

[15] ZS, p. 292-293.

That all physicality as part of the human Being-in-the-World would be ontologically 'formed' or 'built' due to the encounter with significance is a strong affirmation. In the same conversation, when Medard Boss expresses his fear that the thesis of the transformation of a non-material, ontologically formed ‚corporeity' (*Leiblichkeit*) into the actual body or bodily organs could meet with incomprehension on the part of his medically trained colleagues, Heidegger refers to the expression ἐνέργεια and warns against the multiple misunderstandings that emanate from the changing meanings of this term, whose history of effects would extend to Einstein's formula of the equivalence of mass and energy. As a 'very limped comparison' for human existence, Einstein's formula would be just another proof that the 'essential' matters continued to be the topics of philosophy (*ibid*).

But it would perhaps be wrong to present these late and, in part, private expressions of Heidegger as an incipient, yet very well hidden 'theory' on corporeity. I would therefore propose – as an anecdote as well as a phenomenological exercise - a short look into an examination of representation and perception concerning the phenomenological topic of "making something present". This will not serve as conclusion but as an invitation to reflect on some considerations that could make understandable why the body could for so long represent 'the most difficult problem' of Heidegger's fundamental ontology. It is fragments such as the following that puts Sartre's famous reproach regarding the mere six lines dedicated to the body in *Being and Time* into another perspective.[16]

*

It is the 8th of September 1968 in Le Thor and Heidegger has gathered around him a few promising young people. Giorgio Agamben is among them. Jean Beaufret takes notes. They are having discussions over the day and in the afternoon, they will maybe visit Rene Char in The Busclats. They are talking about Hegel's Absolute and the way it appears to consciousness and the discussion drifts a bit during this last day's session[17]:

> The question of representation, thus taken up, is now the occasion for a sort of exercise in phenomenological kindergarten where everything all of a sudden becomes difficult because too simple, and where everyone finds themselves extremely "clumsy". (…)
>
> -*Repraesentatio*, that is representation (*Vorstellung*). For instance: The Louvre in Paris. For us, right now, it is a "representation". Where is it? In our heads? How can we the avoid saying, even more scientifically: in our brains? The autopsy of the brain does not reveal any representations.
>
> It is then said that it concerns an image. The question thus arises: when we represent the Louvre to ourselves, is it an image that we make present to ourselves? No, it is rather the Louvre itself. *Always*, and even in the "making present", even when we relate to something simply in thought, I am in relation with the things themselves, as I am now

[16] This is what I have tried to show in my paper *Sein und Zeit und die Zollikoner Seminare*, in Harald Seubert (Ed.) *Neunzig Jahre Sein und Zeit*, Freiburg/München 2019 pp. 220-238.

[17] *Four Seminars*, translated by Andrew Mitchell and Francois Raffoul, Indiana University Press, 2003 p. 31ff.

> in relation to the book here that I look at and with which I am concerned. (…) In opposition to a "making present" the relation here is that of a "perceiving".
>
> What is the characteristic of perception? A participant says, *aisthesis*, and is then told that "with the Greeks, and precisely in the distinction between *aisthesis* and *noesis*, hell has already begun. What is important is the notion of "corporeality"[*Leibhaftigkeit*]: in perception what presences is "bodily"[*leibhaftig*]. This answer is in turn another question: what is that "body" from which the adjective "bodily" is formed"? (…)

It will take a few more steps for the sentence:

> This lived body is something like the reach of the human body (last night, the moon was closer than the Louvre).

Along with the insight:

> The word body that just appeared could jeopardize everything.

Shortly after a few attempts to get a grip on the dangerous subject, the group in *Le Thor* would return to Hegel.

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BODILY PROCESSING: WHAT PROGRESS HAS BEEN MADE IN UNDERSTANDING THE EMBODIMENT OF COMPUTING SYSTEMS?

Martina PROPERZI*

ABSTRACT. In this article I will address the issue of the embodiment of computing systems from the point of view distinctive of the so-called Unconventional Computation, focusing on the paradigm known as Morphological Computation. As a first step, I will contextualize Morphological Computation within the disciplinary field of Embodied Artificial Intelligence: broadly conceived, Embodied Artificial Intelligence may be characterized as embracing both conventional and unconventional approaches to the artificial emulation of natural intelligence. Morphological Computation stands out from other paradigms of unconventional Embodied Artificial Intelligence in that it discloses a new, closer kind of connection between embodiment and computation. I will further my investigation by briefly reviewing the state-of-the-art in Morphological Computation: attention will be given to a very recent trend, whose core concept is that of "organic reconfigurability". In this direction, as a final step, two advanced cases of study of organic or living morphological computers will be presented and discussed. The prospect is to shed some light on our title question: what progress has been made in understanding the embodiment of computing systems?

Keywords: Embodied Artificial Intelligence; Morphological Computation; Reservoir Computing Systems; Organic Reconfigurability; 3D Bio-Printed Synthetic Corneas; Xenobots

1. Introduction

To raise the question of the embodiment of computing systems clearly implies the assumption of a particular point of view, the one distinctive of so-called Embodied Artificial Intelligence (EAI). EAI is a flourishing research field. Its origin dates back to the last decades of the XX century and namely when the strong criticism towards classical AI began and was raised by philosophers and cognitive scientists, such as Dreyfus, Searle, and Harnad.[1] In contrast to scholars working in the field of classical

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[1] H.L. Dreyfus, *What Computers Can't Do. New York*, MIT Press, New York (NY), 1972; J.R. Searle, "Minds, Brains, and Programs", in *Behavioral and Brain Sciences*, vol. 3/1980, pp. 417-457; S. Harnad, "The Symbol Grounding Problem", in *Physica D*, vol. 42/1990, pp. 335-346.

AI, who almost exclusively concentrated their efforts on the artificial emulation of knowledge – interpreted as overlapping with intelligence itself –, EAI proponents focus, instead, on building artificial agents that are able to inhabit the real world through some kind of intelligent behavior that mimic the one performed by natural agents.[2] In this context, "behavior" refers to the regularity observed in the agent-environment adaptive dynamics, with both the agent and the environment that are expected to be complex entities. Accordingly, the assumption underpinning the shift in interest and approach at the origin of EAI is a new scientific interpretation of intelligence.[3] The classical symbol system hypothesis, according to which intelligence overlaps with centralized information processing of abstract and observer-dependent descriptions (i.e., knowledge), is rejected. Intelligence is seen as the process of enacting multiple-sourced, concrete and environment-dependent information. In other terms, intelligence is equated with meaning-making processes emerging from sensory-motor behavioral structures.[4] To quote Bryson and Theodorou: « [Intelligence is] The property of an agent that allows that agent to change its world in response to contexts, opportunities and challenges».[5]

EAI scholars look at embodiment as a core condition for intelligent behavior. Here, "embodiment" typically refers to the property of having a robotic body.[6] As observed by Steels, classical AI systems «do not include a physical body, sensing, or acting. If intelligent robots have been considered, sensing and action has been delegated to subsystems that are assumed to deliver symbolic descriptions to the central planning and decision-making modules».[7] In contrast, standard EAI systems have behavior-based architectures, the so-called subsumption architectures,[8] which are implemented in reactive robots able to perform intelligent behavior – at least that is the

[2] In particular, the behavior of simple organisms in adherence with an evolutionary stance. Indeed, as observed by the MIT roboticist Rodney Brook, a pioneer of EAI, «human level intelligence did not suddenly leap onto the scene. There were precursors and foundations throughout the lineage to humans» (R. Brooks, "Intelligence Without Reason", in J.P Mylopoulos and R. Reiter (Eds.), *IJCAI' 91: Proceedings of the 12th International Joint Conference on Artificial intelligence*, Kaufmann, San Francisco (CA) 1991, pp. 569-595, p. 567).

[3] R. Brook, "Elephants Don't Play Chess", in *Robotics and Autonomous Systems*, vol. 6/1990, pp. 3-15.

[4] R. Pfeifer and J. Bongard, *How the Body Shapes the Way We Think. A New View of Intelligence*, MIT Press, Cambridge (MA), 2007.

[5] J.J. Bryson and A. Theodorou, "How Society can Maintain Human-Centric Artificial Intelligence", in M. Toivonen-Noro and E. Saari (Eds.), *Human-Centered Digitalization and Services*, Springer, Singapore 2019, pp. 305-323.

[6] T. Ziemke, "The Body of Knowledge: On the Role of the Living Body in Grounding Embodied Cognition, in *Biosystems*, vol. 48/2016, pp. 4-11.

[7] L. Steels, "The 'Artificial Life' Route to 'Artificial Intelligence'", in C.G. Langton (Ed.), *Artificial Life: An Overview,* The MIT Press, Cambridge (MA), 1995, pp. 75-110, p. 78.

[8] Subsumption architectures are networks of finite state machines augmented with timing elements and fed by behavior language groups.

hope of their human builders.[9] Nonetheless, this standard version of EAI was criticized by theorists of embodied (artificial) intelligence themselves for iterating basic assumptions of classical AI. More specifically, a mechanistic conception of the body, which would imply a radical form of internalism in the understanding of intelligence.[10]

To overcome this impasse, novel versions of EAI, such as the so-called enactive EAI,[11] among others, are currently promoting a biology-inspired interpretation of artificial embodiment, focused on engineering the self-preserving structures of the natural body, namely homeostasis and allostasis, through layered/nested architectures. The idea is to ascribe meaning-making processes to minimal forms of online intelligence derived from the complex causal interactions of the body-environment system, according to a radical externalism that stands up to the radical internalism ascribed to classical EAI. References are made to Maturana and Varela's theory of autopoiesis,[12] Christensen and Hooker's autonomy theory,[13] and the so-called somatic theories of emotional intelligence, such as those of Damasio, Panksepp, and Prinze.[14] Reviews in the field show that coexistence among classical and novel approaches is not without consequences for the identity of EAI.[15] Other than the self-portrait provided in negative terms of «what it is *against*, i.e. traditional AI»,[16] EAI is still looking for a positive self-characterisation. The elaboration of new disciplinary frameworks is thus required, which are able to account for the coexistence of standard and novel approaches to EAI.

In this article I will address the issue of the embodiment of computing systems from the point of view distinctive of an emerging disciplinary framework for EAI, i.e., unconventional

[9] Well-known examples are provided by the MIT Mobile Robots developed by Brook and associates.

[10] As observed by Dreyfus, «what AI researchers have to face and understand is not only why our everyday coping couldn't be understood in terms of inferences from symbolic representations […], but also why it can't be understood in terms of responses caused by fixed features of the environment, as in Brooks' empiricist model. AI researchers need to consider the possibility that embodied beings like us take as input energy from the physical universe, and respond in such a way as to open themselves to a world organized in terms of their needs, interests, and bodily capacities without their brains converting stimulus input into reflex responses, as in Brooks's animats» (H.L. Dreyfus, "Why Heideggerian AI Failed and How Fixing It Would Require Making It More Heideggerian", in *Artificial Intelligence*, vol. 71/2007, pp. 1137-1160, p. 1142).

[11] T. Froese and T. Ziemke, "Enactive Artificial Intelligence: Investigating the Systemic Organization of Life and Mind", in *Artificial Intelligence*, vol. 173/2009, pp. 466-500.

[12] H.R. Maturana and F.J. Varela, *Autopoiesis and Cognition*, Reidel, Dordrecht, 1980.

[13] W.D. Christensen and C.A. Hooker, "Autonomy and the Emergence of Intelligence: Organised Interactive Construction", in *Communication and Cognition-Artificial Intelligence,* vol. 17/2000, pp. 133-157.

[14] T. Ziemke, *The Body of Knowledge*, cit.

[15] T. Ziemke, "Embodied AI as Science: Models of Embodied Cognition, Embodied Models of Cognition, or Both?", in F. Iida, R. Pfeifer, L. Steels and Y. Kuniyoshi (Eds.), *Embodied Artificial Intelligence. Lecture Notes in Computer Science,* Springer, Berlin-Heidelberg, 2004, pp. 27-36.

[16] *Ivi,* p. 30, italics original.

EAI, based on the so-called unconventional approach to the artificial emulation of natural intelligence. Attention will be given to the paradigm of unconventional EAI known as Morphological Computation (MC). I will briefly review the state-of-the-art in MC with a focus on a very recent trend, whose core concept is that of "organic reconfigurability" (§ 2). In this direction, two advanced cases of study of so-called organic or living morphological computers will be presented and discussed (§ 3). The prospect is to shed some light on our title question: what progress has been made in understanding the embodiment of computing systems? (§ 4).

2. MC: A Brief Review of the State-of-the-Art

Information theorists usually distinguish between the concept of computing and that of computation.[17] The first typically refers to the use or study of the digital computer as a tool for storing and processing information, namely structured data, whereas the second more generally refers to any activity regarding information, whether it is obtained by a digital computer or not. During the last decades the aforesaid distinction has gained a growing interest. This has occurred to the simultaneous decline of Turing Computability, a theory that postulates that all kinds of computation can be described in terms of computing, i.e., digital computation.[18] In this context, the research area of Unconventional Computation (UC) has emerged to provide an alternative to Turing Computability together with the connected approach to the physics of computation.[19]

UC covers huge amounts of models, techniques, and technologies. Of particular relevance are those known as Natural Computation (NC).[20] NC includes neuro- and bio-inspired computation and quantum computation. Its core idea is to exploit patterns of complex dynamics, which are available in nature, as an intrinsic computational resource (to nature).[21] MC stands out from other paradigms of NC in that it discloses a new, closer kind of connection between embodiment and computation. It focuses, indeed, on the direct use of the body in computational tasks.[22] This is mainly achieved through a functional interpretation of body morphology, which is seen as overlapping with the function of shaping the information exchanges embodied in the

[17] C.S. Calude, "Unconventional Computing: A Brief Subjective History", in *CDMTCS Report*, vol. 480/2015, pp. 1-10.

[18] J.M. Shalf and R.M. Leland, "Computing Beyond Moore's Law", in *Computer*, vol. 48/2015, pp. 14-23.

[19] A. Adamatzky et al., "East-west Paths to Unconventional Computing", in *Progress in Biophysics and Molecular Biology,* vol. 131/2017, pp. 469-493.

[20] K. Rozenberg, T Bäck and J.N. Kok, *Handbook of Natural Computing*, Springer, Berlin-Heidelberg, 2012.

[21] Measures of spontaneous organisation are generally referred to as structural complexity. Intrinsic computation may be defined as structural complexity expressed in non-analytical terms. See: J.P. Crutchfield, "The Calculi of Emergence: Computation, Dynamics, and Induction", in *Physica D,* vol. 75/1994, pp. 11-54.

[22] P.R. Nowakowski, "Bodily Processing: The Role of Morphological Computation", in *Entropy*, vol. 19/2017, 295.

matter-energy exchanges of the physical bodies.[23]

From a technical point of view, MC is based on a family of recursive neural networks, called physical reservoir systems. Reservoir systems allow for complex temporal computations, i.e., transformations of non-linear input sequences into spatiotemporal patterns, through an abstract dynamic system called reservoir (cf. **Figure 1a**). A reservoir maps inputs onto spaces of high-dimensional state, analogously to what is performed by a kernel in Machine Learning. Spatiotemporal patterns are read by a readout mechanism trained with (a combination of) simple methods, such as linear regression/classification, local learning rules and synaptic plasticity. When the reservoir describes the dynamics (either physical, chemical or biological) of a natural system, it is called physical reservoir.[24] A physical reservoir has three main properties:

- High dimensionality: this property allows to separate inputs for classification tasks and to readout spatiotemporal patterns in prediction tasks.
- Non-linearity: this property transforms non-linearly to linearly separable inputs in classification tasks and extracts non-linear dependencies in prediction tasks.
- Fading memory: this property ensures that the reservoir state is dependent only on recent-past inputs in sequential data representation tasks.

Reservoir computing systems consisting of an input mechanism, a physical reservoir and a readout mechanism are called physical reservoir systems (cf. **Figure 1b**).

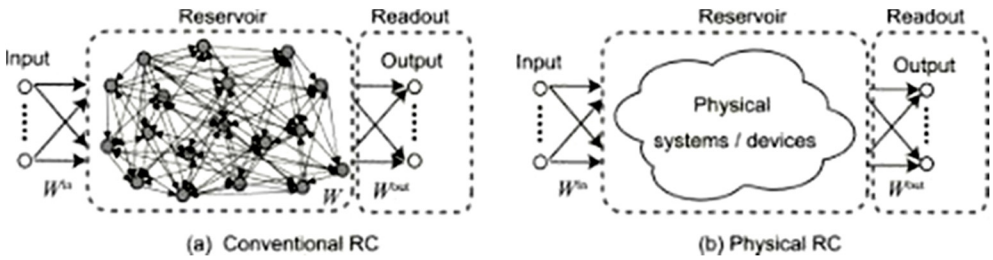

Figure 1: Conventional and physical approaches to reservoir computing systems. (a) In conventional reservoir systems the reservoir is an artificial recursive neural network. (b) In physical reservoir systems the reservoir describes a natural system or a device. See: Tanaka et al., *Recent Advances,* cit., p. 3.

[23] G. Dodig-Crnkovic and R. von Haugwitz, "Reality Construction in Cognitive Agents through Processes of Info-Computation", in G. Dodig-Crnkovic and R. Giovagnoli (Eds.), *Representation and Reality in Humans, Animals and Machines*, Springer, Cham, 2017, pp. 211-234.

[24] Tanaka, G. et al. (2018). Recent Advances in Physical Reservoir Computing: A Review, in *arXiv* [cs.ET]. https://arxiv.org/abs/1808.04962. Accessed 16 February 2019.

Standard applications of MC are discussed in the paper of Müller and Hoffmann.[25] For example, the octopus robotic arm developed by Nakajima, Hauser and Pfeifer,[26] and modelled as a reservoir by Nakajima, Hauser, Li and Pfeifer (cf. **Figure 2**).[27] Other examples are the bio-inspired robots based on masse-spring systems described with linear feedback loops and trained to emulate output streams that correspond to motor patterns, e.g., quadruped gaits.[28]

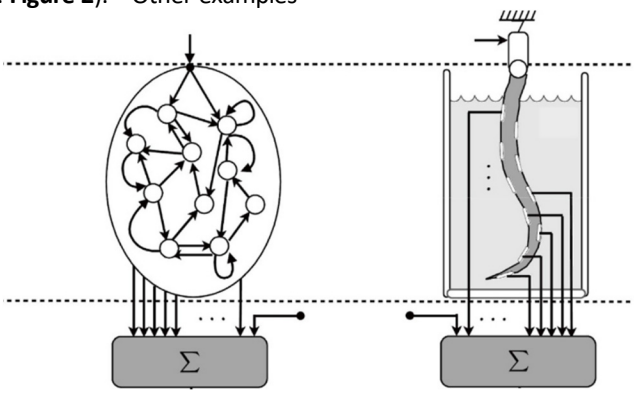

Figure 2: Analogy between a reservoir computing system and the octopus robotic arm modelled as a physical reservoir computing system by Nakajima, Hauser, Li and Pfeifer. The units of the physical reservoir are sensors coupled through a soft silicone material. See: K. Nakajima, H. Hauser, T. Li and R. Pfeifer, *Information Processing*, cit., p. 3.

However, a new generation of physical reservoir robots and robotic devices is currently under investigation. The rationale is that traditional physical reservoir technologies are made from synthetic materials which degrade over time and can produce harmful ecological and health side effects. It would thus be useful to build physical reservoir technologies using self-renewing and biocompatible materials, of which the ideal candidates are living systems themselves ("organic reconfigurability"): the concept of organic reconfigurability means to exploit the intrinsic computational capacity of living systems.[29] This, in turns, implies advancements in the modelling of both the input and the readout mechanism obtained by emulating aspects of the living systems

[25] V.C. Müller and M. Hoffmann, "What Is Morphological Computation?", in *Artificial Life*, vol. 23/2017, pp. 1-24.

[26] K. Nakajima, H. Hauser and R. Pfeifer, "Exploiting Short-Term Memory in Soft Body Dynamics as a Computational Resource", in *Journal of the Royal Society Interface*, vol. 11/2014, 20140437.

[27] K. Nakajima, H. Hauser, T. Li and R. Pfeifer, "Information Processing via Physical Soft Body", in *Scientific Reports*, vol. 5/2015, 10487.

[28] V.C. Müller and M. Hoffmann, *What Is Morphological Computation*, cit., pp. 5-7.

[29] S. Kriegman, D. Blackiston, M. Levin and J. Bongard, "A Scalable Pipeline for Designing Reconfigurable Organisms", in *PNAS,* vol. 117/2020, pp. 1853-1859.

that are not described by the reservoir. I will refer to these kinds of mechanisms inspired by nature as "support-based",[30] so as to highlight the contrast with traditional mechanisms, which are abstractly modelled. In the following paragraph I will present and discuss two advanced cases of study of organic or living morphological computers, where artificially induced complex anatomies are obtained by virtue of the intrinsic computational capacity of cells to function in novel morphologies.

3. Two Advanced Cases of Study

For the first time ever, in 2018 the research group led by Prof. Connon at the Institute of Genetic Medicine of Newcastle University was successful in printing, by using an advanced 3D bio-printing technique, perfectly synthetic corneal prosthetic implants, which were suitable for translation into the clinic in patients affected by the loss of corneal function.[31] After the corneal microstructures were printed by utilizing bio-inks that comprised corneal stroma cells of a healthy donor together with collagen and alginate, a highly organized and functional corneal tissue was created using only the curved shape of the plastic template of the bio-printed cornea. This was possible by covering the plastic template with a very thin adhesive film of enzyme-sensitive Peptide amphiphiles (PA). The physicochemical environment that has been created, variable over time, induced the corneal keratocytes, specialized fibroblasts residing in the corneal stroma, to adhere to the template, migrate towards its center, proliferate, align and finally, autonomously deposit large amounts of collagen and alginate fibrils, according to a uniform self-assembled organization equivalent to the latex structure of the natural tissue (cf. **Figure 3**).

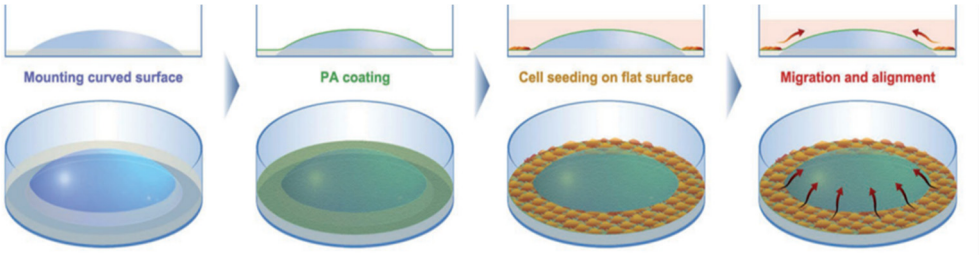

Figure 3: Adhesion and migration of human corneal stromal cells on the curved plastic templates. Cells seeded onto the flat surface at the periphery of the wells were allowed to adhere and then migrate up toward the center of the templates. Templates comprising planar surfaces only (different geometry) or curved surfaces left uncoated (different bioactivity) were used as negative controls. See: A. Isaacson, S. Swioklo and C.J. Connon, *3D Bioprinting*, cit., p. 192.

[30] R. Pfeifer and F. Iida, "Embodied Artificial Intelligence: Trends and Challenges", in F. Iida, R. Pfeifer, L. Steels and Y. Kuniyoshi (Eds.), *Embodied Artificial Intelligence*, Springer, Berlin-Heidelberg, pp. 1-26.

[31] A. Isaacson, S. Swioklo and C.J. Connon, "3D Bioprinting of a Corneal Stroma Equivalent", in *Experimental Eye Research*, vol. 173/2018, pp. 188-193.

What I just briefly described is a strategy of generating complex patterns without external direction (i.e., self-assembly) in which the morphology of the cell body is used to perform the intrinsic computations required to calculate the control actions that corneal keratocytes perform, in particular, in autonomously depositing the extracellular matrix. Modelled as physical reservoirs, corneal keratocytes implement motor programs in their body morphology. The input and readout mechanisms are support-based, in the sense that they are specified by the time-varying physicochemical exchanges that corneal keratocytes establish with the curved shape of the plastic-coated PA template. The cell reservoirs, together with the input and readout mechanisms, are used as morphological computers to predict simple classifications: working as classifiers, they separate different physicochemical inputs, i.e., collagen and alginate fibrils from (the other) corneal keratocytes. It should be noted how researchers play an active role in the self-assembly process of the synthetic corneal stroma, although limited to predisposing the physicochemical conditions of the cellular environment and, above all, to setting the overarching goal of living morphological computers.

A more invasive design intervention is put into play in our second case of study, i.e., the xenobots recently realized by researchers of the University of Vermont, Tufts University and Harvard University.[32] They developed, indeed, a scalable pipeline for designing morphological computers able to perform four different behavioral goals: locomotion, object manipulation, object transport and collective behavior. This scalable pipeline is organized as a generators-and-filters architecture. The first generator is an evolutionary algorithm used to find the best performant designs starting from biological building blocks and a certain behavioral goal. Discrepancies between in silico and in vivo behavior are returned to the algorithm in the form of constraints on the kinds of designs that can evolve during subsequent design-manufacture cycles. The steps towards manufacture, and hence towards in vivo behavior, are provided by a robustness filter, which only allows passage of designs that sustain the desired behavior in the face of noise, and a transferability filter, which only allows passage of designs that are buildable and scalable. A second generator is the so-called realizability generator: the designs that successfully pass through the transferability filter are then built out of living tissues.

At this stage, pluripotent stem cells are first harvested from blastula stage *Xenopus laevis* embryos, dissociated, and pooled to achieve the desired number of cells. Following an incubation period, the aggregated tissue is then manually shaped by subtraction producing a morphological computer which is an organic or living approximation of the simulated design. Further, contractile tissues are layered into the organism through the harvesting and the embedding of *Xenopus* cardiac progenitor cells, an embryonically derived cell type which naturally develops into cardiomyocytes (heart muscle) and produces contractile waves at specific locations in the resultant shaped form

[32] S. Kriegman, D. Blackiston, M. Levin and J. Bongard, *A Scalable Pipeline*, cit.

(cf. **Figure 4**). The final product of this procedure is a more complex morphological computer, i.e., the xenobot as an organic or living approximation of the evolved design, which possesses the ability to self-locomote and explore an aqueous environment for a period of days or weeks (cf. **Figures 5-6**).

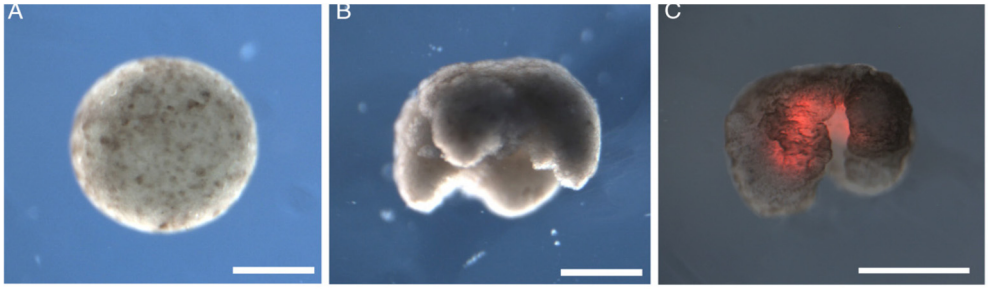

Figure 4: Manufacturing reconfigurable organisms. (A) Aggregation of pluripotent blastula cells harvested from *Xenopus laevis* embryos. (B) Shaping results in 3D representations of the evolved in silico designs. (C) Layering of cardiac progenitor cells results in contractile cardiomyocyte tissue at specific locations, visualized by red fluorescent lineage tracer. See: S. Kriegman, D. Blackiston, M. Levin and J. Bongard, *A Scalable Pipeline*, cit., p. 1857.

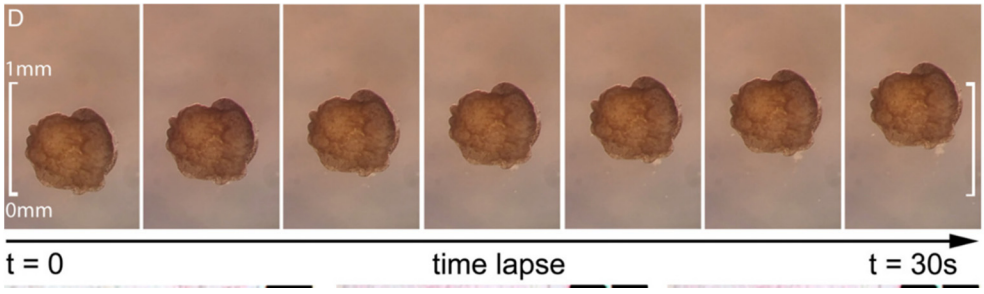

Figure 5: Emergent behavior by an individual xenobot. See: S. Kriegman, D. Blackiston, M. Levin and J. Bongard, *A Scalable Pipeline*, cit., p. 1857.

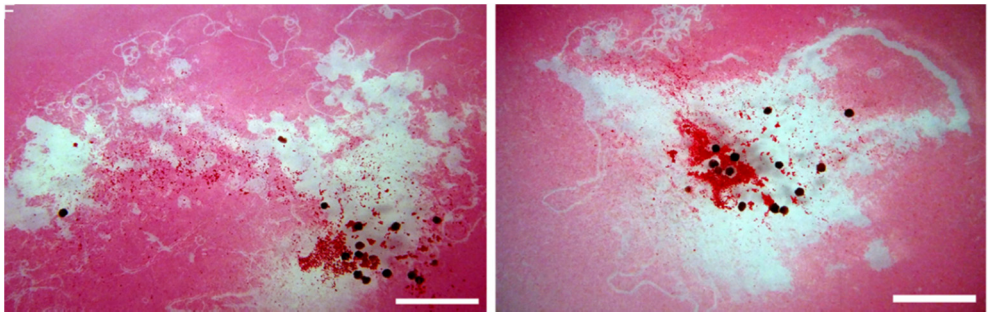

Figure 6: Emergent behavior by a group of xenobots. See: S. Kriegman, D. Blackiston, M. Levin and J. Bongard, *A Scalable Pipeline*, cit., p. 1857.

4. Conclusion

To conclude this article, I would like to summarize the results obtained in order to attempt an answer to our title question: what progress has been made in understanding the embodiment of computing systems? First of all, in briefly reconstructing the evolution internal to EAI, attention was drawn to emerging frameworks for this research field, particularly to frameworks based on UC such as the one inspired by MC. MC discloses a new, closer connection between embodiment and computation in virtue of a functional interpretation of the body morphology. An overview of the state-of-the-art in MC was provided with the prospect of presenting two advanced cases of study in the context of the emerging generation of living morphological computers grounded on the concept of organic reconfigurability. After having had a closer look at their current design and manufacture, I would speculate that some relevant progress has been made in the direction of understanding the embodiment of computing systems. In particular, complex anatomies may be artificially induced by exploiting the intrinsic computational capacity of cellular morphologies, which benefit of guided cellular self-assembly and/or emergence processes.

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TEACHING PHILOSOPHY AND ENACTIVISM

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ABSTRACT. The paper presents a concise history of enactivism in education, especially in mathematics education. Cases described by Davis's, Proulx and Simmt's work showcase the idea that enactivism is a viable alternative to constructivism or to classical views both in terms of practical teaching and theoretical models related to the process of learning. The idea that the student should solve a fixed problem, discover the universally correct solution, and eventually store that correct solution to find many other universally correct solutions to other fixed problems reduces the student to a very simple mechanism aimed at informational efficiency. This problem is met by the enactivistic tradition that began with Varela and Maturana's work, now updated to the aforementioned researchers. Contra the classical perspective, enactivism proposes the idea that the student collaboratively produces the problem, being able to see multiple solutions, and eventually becoming a performer of knowledge. The article takes these ideas developed in mathematics education and finds their use in philosophical education. The article especially focuses on the student's problem of being unable to link a new philosophical text discussed in class with their intuition. The last part of the article offers a lesson design example. The philosophical design focuses on making the students explore their own thinking regarding the topic about to be discussed by using a philosophy text before introducing the text.

Keywords: enactivism, phenomenology, philosophy of education, classroom design

Enactivism is a well-known theory in the cognitive sciences, built from concepts and ideas from Husserlian phenomenology. As a way of conceiving the knowing subject, enactivism is flexible enough to be an interdisciplinary endeavor. Enactivism is nowadays present in the scientific discourse of engineers, biologists, physicians, or teachers. The philosophical core of enactivism allows it to be ported into computer science research (Villalobos, Dewhurst 2018; de Carvalho, Kogler 2021), philosophical aspects of biology (Maturana, Varela 1987), or developing a new perspective on the educational process in various contexts (Davis, 1995; Begg 2013). This article discusses the input enactivism can have on the latter perspective: on the educational process, and in particular, on the philosophical educational process. We must mention that this lane of research is exciting because enactivism in education is not transformational only for the student but for the teacher as well (Brown, Coles 2011; Maiese 2017). Implicitly, there are two potential phenomenologies to be developed: the student's and the teacher's experience, as both designer and facilitator of such classes.

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1. Enactivism and education so far

Enactivism became involved in perspectives on education a couple of decades ago in the context of mathematical education. The main issue that was signaled was the limited understanding of mathematical concepts by students (Davis 1995). Davis, in particular, portrays the development of Jake, an underachieving seventh-grade student whose mathematical thinking develops, surpassing expectations throughout enactivism-minded mathematical classes. Instead of having students solve different exercises on their own, the enactivist classroom favors collaborative work involving the meaning mathematical concepts can have. The main difference between a regular classroom and such a classroom consists of changing the teacher's stance on truth. For instance, the class described by Davis on fractions does not have students add or multiply fractions. Instead, it asks students, "What can you say about 2/6?" (Davis 1995). Both underachieving and overachieving students react positively to this, in the sense of exploring the concept of fraction. In philosophical terms, we understand that, instead of making students use instruments they do not comprehend in their abstract essence, instead of making them use concepts without having intuitions of them, students are tasked with producing their intuitions regarding a concept that is initially alien to them. By doing this, we understand that overachieving students can use the given concept outside its original context, possibly in an interdisciplinary context. To keep the example, an in-depth knowledge of fractions, which relies on a so-called "reinventing the wheel" type of experience, facilitates the student's capacity to use the concept of fraction in any other intellectual or practical endeavor the future adult will take, be it a study on mereology or having an eye for mixing paint when redecorating.

The alternative Davis describes is deepened by Proulx and Simmt (2013). Their context includes a comparison between constructivism and enactivism. Even though constructivism and enactivism have partially different objectives and agendas for the learning student (Simionescu-Panait 2020), they maintain a visible competition. Proulx and Simmt's insight showcases three ideas on which constructivism and enactivism diverge. Under the enactivist lens, the student is no longer a subject that is given a fixed problem needing a solution, nor is the student given a chance to discover the correct solution in order to prove that they can efficiently solve that problem. Proulx and Simmt (2013) illustrate this idea with an example regarding two pairs of people dealing with a mathematical task. A father-daughter team and a mother-daughter team are given a box of dominoes and tasked with figuring out how many arrangements of domino pieces they can have if those arrangements are two units wide. Proulx and Simmt (2013; also Simmt 2000) observe that the two teams formulate the problem in two different manners. The mother-daughter team draws the possible combinations and, thus, uses a graphical, somewhat geometrical method of inventorying the possibilities. On the other hand, the father-daughter team uses an arithmetical method of keeping track, including a table detailing the combinations depending on the number of domino pieces used for the arrangement. We see that these two teams formulate different problems for their task: what are the appropriate drawings vs. what numbers should the table contain. Therefore,

their interpretations are different. The two teams become knowledgeable in different ways. We think that the efficiency constructivism focuses on is not an essential point for enactivistic teaching because efficiency and exploration often oppose each other. On the contrary, enactivistic teaching takes its students to be problem-producing, interpretation-redefining subjects that are not "storing" but performing knowledge.

Introducing enactivism to mathematics education is inspiring for the intention of introducing enactivism to other educational fields. Various efforts were made, such as research on enactivistic music teaching (van der Schyff 2015) or on technological instructional design (Li, Clark, Winchester 2010). We acknowledge the rising character of enactivism and its potential to be a game-changer in many pedagogical areas. This brings us to our current topic, which is philosophical education.

2. Enactivism in philosophical education

We assume that teaching philosophy is not unlike teaching mathematics. Just like students have difficulties with grasping abstract mathematical concepts while trying to instrumentalize them and solve various mathematical problems, so do philosophy students have difficulties with grasping philosophical concepts while trying to use them to enhance their thinking and self-reflection. A distance between the student and the concept is created, often by explaining the concept in a very abstract way in order to preserve its original meaning. Understanding a philosophical text usually revolves around the idea that the text shelters some fixed meaning. This meaning must be accessed by the student in an appropriate manner. Just like a good mathematics student correctly solves an exercise, so does a good philosophy student reproduce the correct interpretation of a philosophical text. Therefore, just like a good mathematics student does not necessarily understand the fundamental mathematical concepts at play beyond their immediate instrumentalization for solving various tasks, so does a good philosophy student not necessarily link various philosophical ideas to their questions and reflections. The position that welcomes enactivism in the case of teaching philosophy is this: the philosophy being taught is often divorced from the subject who is being taught philosophy as if the student's mind were just an owner of various philosophical ideas and not a performer of various ways of thinking, interpreting and questioning.

The work done in mathematics enactivist teaching gives us a first idea about how should the philosophical enactivist class be designed. This idea refers to the postponing of truth in the classroom. Philosophical classrooms usually use a philosophical fragment from an important philosopher. Then, the teacher explains notions one by one so that the text might make sense to students who otherwise only partially understand the text and its implications. The disconnection between the student's thinking and the philosophical idea occurs because it appears to the student that the idea is *already thought-out*. The only thing the student needs to do is to reproduce the thinking pattern in order to arrive at a similar thought-out idea. Therefore, the enactivistic thing to do here—in order to let the student formulate the problem in his or her terms, then struggle with

interpreting some answers, and then reflect on his or her own thinking process—is to postpone this moment where an already thought-out idea is presented to the student. By this postponing, we mean that we prioritize the student's effort to make sense out of words and phrases on their own yet in a collaborative fashion. Implicitly, we postpone the moment of revealing a philosophical fragment's standard interpretation.

We offer an example for such a classroom. Imagine you teach a class on Aristotle, book II from the Nicomachean Ethics. The standard route is to explain the main notions and the context: to tell a story of how some concepts work together in the Aristotelian framework. In a way, the teacher reanimates as best as he or she can the thinker's thought process. Postponing this story leaves us with a blank space for the student to think before encountering the other's thinking process, in this case, Aristotle's. This blank space is used precisely for a more enactivistic collaborative activity: letting the student define the problem, collaboratively observe and discuss the differences in formulating the problem, and then interpreting the problem. In our case, we do not introduce Aristotle right away. Instead, we introduce the concepts, and we discuss them without knowing Aristotle's take on them. For example, we start the classroom by asking about the similarities and differences between emotion and disposition. Our main concepts, emotion and disposition, can be understood by students without invoking a particular philosophy. Common day examples kickstart a discussion facilitated by the teacher. Some students understand the problem regarding emotion and disposition in terms of action: what roles do emotions and dispositions play for acting? Other students understand the problem in terms of thinking: do emotions contribute or hinder the disposition to think? The ambiguous nature of the task lets the students test their thinking on the spot. The cloud-based written support helps everyone have a clear picture of the main ideas being formulated. Interpretations coming from the classroom fill-up the blank document and help the teacher steer the discussion.

Despite setting up a ground of interpretation, the teacher does not have to proceed directly to revealing the class' main philosophical perspective: here, Aristotle's ethics. Instead, the teacher can further enhance the students' autonomous exploration by asking the students to question their colleague's perspectives. The point in this is to avoid the situation where students are convinced by a certain perspective and cease to think further because of having the impression that they found the right answer. By asking questions, students unlock their thinking and avoid falling to a convenient conclusion.

It makes sense from the enactivistic perspective to reveal the class' main philosophical perspective during the class' second half after students practiced the three main ideas of enactivism: defining problems, exploring interpretations, and being knowledgeable in a dynamic and collaborative way. In our example, Aristotle's perspective that virtue is a disposition and happiness is rather virtuous activity than emotion (*NE 1103b-1104a*) makes more sense for these students after discussing with them in their own terms about the basic concepts at play in Aristotle's perspective. Phenomenologically speaking, when a teacher presents the students with a strange concept out of the blue, the student's consciousness forms an

object retained as an "alien," "complicated," "abstract" object. The problem is that such an object is hard to reform. We have observed students retaining a strong impression from their first classes on philosophers like Aristotle, Kant, or Hegel. For them, these philosophies were "heavy," "full of entanglements," "very hard to understand and appropriate." For sure, these are no easy authors. However, students that remain with this strong impression will be affected by what Francis Bacon famously calls the idol of theatre (*NO 1:XLIV*). Thus enactivism anticipates and mitigates the student's possible reflective flattening. The student will be stuck, even haunted by the overwhelming nature of a heavy to understand philosophical perspective. By establishing a firm ground on common sense on which to deploy an established philosophical perspective, the student's encounter with that perspective will occur on an almost equal footing, which will allow the student to critically think about that perspective instead of struggling to produce a flawless interpretation.

3. Conclusion

We practiced the described classroom design to very good results in terms of having students become inchoate thinkers. Students attending such classes often confess having the impression of having thought about something they never thought about in a pleasant way. Most say that they found it hard in the beginning but enjoyed the process despite having difficulties, mainly because it gave them a sense of doing something with their own minds. Such feedback calls for further research that will involve the monitoring of these classrooms' effects on the student's long-term thinking. The main thing enactivistic philosophy classrooms want to cultivate, at least from our perspective, is the student's acquired taste for thinking. In other words, the underlying role of these classes is to have students enjoy thinking. Listening to evidence from enactivism and phenomenology is crucial for developing designs that take the student-teacher intersubjective experience seriously in order to make thinking enjoyable despite being difficult and requiring dedication and creativity.

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