



Introduction: Ethical Dimensions of Enactive Cognition—Perspectives on Enactivism, Bioethics and Applied Ethics

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1 Enactive Ethics: From Bodily Interactions to Complex Forms of Intersubjectivity

Enactivism, a development in philosophy of mind and cognitive science, has been influential for several decades now. Different versions of enactivism have emerged since the 1990s, when it gained increasing attention through a number of significant publications, including Varela, Thompson and Rosch's seminal work *The Embodied Mind* (1991). Generally speaking, enactivists define cognition as a result of dynamic interactions between an embodied subject within their physical environment (Di Paolo et al. 2018; Bergmann and Wagner 2020). This conception of cognition as interactive was designed as an alternative to more traditional ideas of cognition that conceived of cognition as transformations (i.e. computations) of representational mental content.

The idea that our knowledge of the world—and how we perceive the world in general—is embodied and interactive relates to the biological idea of autopoiesis (Thompson 2007). Autopoiesis refers to processes through which a cell or an organism can maintain itself through adapting its properties to and interacting with its environment. Simply put, for enactivists we know the world because we behave in certain ways in and *with* our environment (e.g. looking around, touching things, communicating with others). Furthermore, enactivists understand knowledge not just as inherently physical and embodied, but also as fundamentally social, that is, that others intrinsically influence and shape how we know the world (e.g. we learn from other people and we cooperate to achieve goals) and conversely that our knowledge of the world feeds into our social interactions

(e.g. we care for other people and help them (De Jaegher and Di Paolo 2007; Gallagher 2017)).

Over the past years enactive theories have developed several concepts that are key to understanding social aspects of enactive cognition. For example, enactivists have introduced the notion of *social affordances*, which expresses how emotional expressions and actions of other people influence how we ourselves experience the world (e.g. we feel decreased effort when we perceive other persons performing a similar physical task: if they can do it, I can too) (Gallagher 2017). Another key concept that expresses social aspects of enactive cognition is *participatory sense-making* (De Jaegher and Di Paolo 2007; De Jaegher 2015; Di Paolo et al. 2018). This notion designates the human capacity to make sense of the world and ourselves through participation with others (e.g. through the use of language and cooperative networks). In general, enactive theories of cognition put forward the idea that social and physical interactions mutually intertwine in the sense that for human beings social and cultural meanings are not opposed to but build on physical interactions. In the case of human organisms, we are not just self-maintaining beings, but our self-maintenance depends on social interactions. Our physical interactions with the world have in that sense a potential to be value-laden.

From the outset, enactive cognition has thus been conceived as intrinsically normative and social. It is noteworthy, for example, that Varela (1999) has developed an enactive interpretation of the ethical principles of Confucianism, Taoism and Buddhism, arguing in favor of finding human value in harmonious interactions with our environment. More importantly, many of the `social concepts` have more recently been used to paint a more explicit and complete picture of ethics or morality (used as synonyms here) in that sense that enactivists recently started to investigate how human beings develop into beings capable of doing the right thing, caring for others and participating in democratic institutions (De Jaegher 2013, 2015; Di Paolo et al. 2018). One of the crucial notions that enactivists use to develop moral

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aspects of cognition is the notion of *ethical know-how* (e.g. Varela 1999; Di Paolo et al. 2018). Ethical know-how means that an essential part of our development as moral beings is gaining practical knowledge of how to interact with others in ethically valuable ways. Gaining this kind of practical knowledge is possible by interacting in different kind of participation networks. Theories have been developed that connect enactivism to moral psychology and the social sciences in general, explaining processes of human moral development through education, mindshaping and value endorsement (e.g. in the exchange of values and affections between parents and children) (Schmidt and Rakoczy (2018).

Furthermore, enactivism also stresses the crucial role of language, enculturation and interaction within larger participatory care networks, such as democratic institutions. For example, De Jaegher (2013) draws on the work of Carol Gilligan and her idea of democracy in the sense of a network of social values, norms and institutions that guard over equality in human relations. These social institutions “may be critically questioned and eventually changed” (De Jaegher 2013, p. 22). These institutions offer ways for human to participate in a society, and to strive for equality and justice.

Enactive approaches to ethics have evolved into theories that share several aspects with theories of care ethics (e.g. Loaliza 2019; Urban 2014). Both enactive approaches to ethics and theories of care ethics focus on human vulnerability and affection, which invite to natural relations of caring for each other that translate into democratic institutions of care. Yet, recently parallels have also been drawn between enactive ethics and phenomenological and hermeneutical theories of ethics. In particular, researchers have drawn relation between enactivism and Levinas’ work (Dierckxsens 2020; Métais and Villalobos (2021); ; Ricoeur’s (Dierckxsens 2018, 2019) or Henry’s (De Jaegher 2015). Enactivism as a cognitive theory in general has found part of its inspiration in phenomenology, that is, in its emphasis on embodied and embodied lived existence being the source of human knowledge. It is therefore perhaps not surprising that enactivists develop ethical aspects of cognition based on a phenomenological conception of intersubjectivity, in which the dynamic of interactions between self and others leads into a normative relation or a call for ethical responsibility: other faces are not mere (phenomenal) objects but human beings and invite in that sense to an ethical response.

The papers collected in this special issue are written to further develop diverse aspects of human morality. On the one hand, they develop further the already existing foundation of enactive ethics, elaborating key concepts such as participatory sense-making and ethical know-how. They also navigate further into the relations between enactivism and neighboring ethical theories, such as care ethics, phenomenological and hermeneutical ethics, as well as relations with moral psychology and the social sciences. Yet, at the same

time, this special issue intends to bring enactivism closer to applied ethics, that is, several papers in this issue investigate how enactivism can respond to contemporary ethical issues, such as environmental ethics and health care. The papers collected here tackle ethical aspects of enactive cognition on three main levels:

1. Some of the articles develop further already existing aspects and concepts of relations between ethics and enactivism, for example, by developing further the notion of ethical know-how.
2. A second way in which the contributed papers develop ethical aspects of enactive cognition is by engaging into a dialogue with other, neighboring domains of enactivism, including moral psychology and hermeneutics.
3. Finally, this special issue features contributions that apply enactive theory to specific moral problems, such as health care, the environment and social media.

2 Further Developing Key Concepts

In their paper, “Enactive ethics: Difference becoming participation,” Ezequiel Di Paolo and Hanne De Jaegher make a case that enactivism can contribute to the foundations of ethical theory. They provide a schematization of enactive concepts in order to demonstrate how we develop ethical know-how in a process of becoming. This process includes attention to difference, attunement to moral values and norms, and consciousness raising. Di Paolo and De Jaegher conceive of the process of acquiring ethical know-how as a transindividual process of interactions with the environment and others, interactions through which we learn to perform ethical actions and that constitute ourselves as ethical selves.

“Making us autonomous: The enactive normativity of morality” tackles the problem of specifying the characteristics of normativity of an enactive approach to ethics. Cassandra Pescador and Laura Mojica develop an enactive-embodied account of moral normativity, which they understand as arising from interpersonal interactions that create the possibility of affecting, as well as harming, each other’s autonomy. Pescador and Mojica argue that the intrinsic risk, within social interactions, of harming people’s autonomy is what constitutes an ethical responsibility to protect this autonomy and this responsibility distinguishes moral normativity from other form of social normativity. The authors further define two necessary conditions for moral normativity in their enactive account: our embodied condition (and thus vulnerability) and our sociolinguistic nature (which exponentially expands our capacity to perform actions and make normative distinctions between them). Pescador and Mojica conclude by distinguishing between the moral character and

the moral content of a social interaction, which reflect in turn our shared normative nature and its situatedness.

In “The Is and Ought of Remembering,” Erik Myin and Ludger Van Dijk develop a radical enactive account of remembering, arguing that traditional theories that understand memory as the storing and retrieving of mental content are inadequate because they overlook crucial normative aspects of practices of remembering. The authors argue that memory is normative in that human beings have certain expectations toward each other about remembering. Myin and Van Dijk’s enactive account of memory defines remembering as an interaction with and response to sociocultural norms that prescribe the need to remember as something normatively valuable.

Janna Van Grunsven’s contribution, “Enactivism and the Paradox of Moral Perception,” draws on enactivism and the works of Iris Murdoch and David Hume to identify what she understands as a paradox of moral perception. This paradox is this: At the same time it is seemingly incredibly easy to perceive persons as moral (we often assume that persons are moral subjects without giving it much thought), and incredibly hard to perceive persons as moral (similarly we effortlessly doubt that people are moral subjects). Van Grunsven argues that enactivism offers useful resources to help understand this paradox, because of its emphasis on the embodied and embedded nature of (moral) perception.

3 Enactive Ethics and Its Neighbors

In their paper, “Enactive Ethics and Hermeneutics,” Geoffrey Dierckxsens and Lasse Bergmann examine an enactive approach to critical ethical learning in the sense of a developing a critical attitude toward existing, potentially violent, shared social values or norms. The authors make a case that we learn ethical norms in the first place through social affordances, participatory sense-making and developing ethical know-how: ethical learning is not in the first place a matter of studying abstract moral principles, but comes more naturally by taking cues from other people in our lives who set an example. Dierckxsens and Bergman point to a difficulty that results from this natural process of learning, namely how to explain our capacity to develop a critical attitude toward the different values and norms we naturally learn. The authors respond to this difficulty by bringing Ricoeur’s hermeneutics into dialogue with enactivism. They argue that dialogue and participation in democratic networks is crucial for ethical learning, but that ethical learning also implies developing a critical attitude toward larger participation networks and institutions that nourish inequality and maintain unethical values. Developing this kind of critical interpretative, and in that sense hermeneutical, attitude also requires a personal

engagement that resists participation insofar it is a personal narrative (embracing personal values and ideas).

Andrés Segovia-Cuéllar argues in “Revisiting the social origins of human morality” that there is still room in enactivist debates for further development of a clear distinction between moral normativity and other kinds of social normativity. More precisely, he makes a case that more work needs to be done on an enactive theory that explains which aspects of human social interactions are at work that make us moral beings, capable of evaluating actions as morally valuable, and not just as being in line with ruling social values (which are often *not* moral). Segovia-Cuéllar argues further that enactivism can be complemented by constructivist theories in moral psychology that offer empirical research on what aspects of human interactions play a crucial role in our moral development.

Fabrice Métails and Mario Villalobos bring enactive theory into dialogue with Emmanuel Levinas’ philosophy in their paper “Levinas’ otherness: An ethical dimension for enactive sociality.” They further develop social dimension of enactive cognition and argue that enactivism offers a suitable framework for defining intersubjectivity in terms of ontological interactions between selves and others (e.g. the exchange of goods, communication, care). They argue further, however, that ethical relations with other presupposes a sensibility toward otherness which is non-ontological: a sensibility that the world is not only shared, but that there are others in need that require an ethical response.

“Mindshaping, Enactivism, and Ideological Oppression” examines human cognitive capacities of learning through enculturation. In this paper, Michelle Maiese discusses Sally Haslanger’s “Cognition as a Social Skill” which points to one of the dangers of enculturation, namely that it may lead to processes of mindshaping and social coordination through which people unthinkingly and unwillingly participate in practices of social oppression. Maiese points out that, although Haslanger’s idea of ideological oppression fits well in an enactive framework, Haslanger’s account of ideological oppression does not shed much light on how individuals can resist this kind of oppression. Maiese then argues that the same process of mindshaping, in coordination with habit, allow us to make sense of the power of social influences and how they can both enable and undermine cognition and agency. Maiese therefore distinguishes between “(a) constructive and enabling forms of heteronomy” and “(b) overdetermining and pernicious modes that lead to atrophied moral cognition and a narrowing of the field of affordances” (from the abstract).

4 Enactivism as Applied Ethics

In their paper “Enacting ought: Ethics, Anti-racism, and Interactional possibilities,” George N. Fourias and Elena Cuffari apply an enactive framework to cases of political and interpersonal conflict in the US, racial conflict in particular. They argue that from their analysis it shows that ethics is a key aspect of enactivism. They first argue in favor of Colombetti and Torance’s suggestion (2009) that the notion of participatory sense-making implies the idea that we have reduced individual responsibility, which favors interactional values that are embodied and contextualized. This makes enactive cognition inherently intertwined with ethical meanings. Furthermore, Fourias and Cuffari make a case, drawing on Claudia Rankine’s *Just Us*, that participatory sense-making can open ways to mindful and open ended exploration of different perspectives and values, destabilizing individualist metaphysics.

Fredrik Svenaeus’ contribution to this special issue, “Health and Illness as Enacted Phenomena,” develops a phenomenologically inspired embodied and worldly-engaged approach to enactivism that zooms in on phenomena related to health and illness. Svenaeus discusses and scrutinizes several biomedical, ability-based and biopsychosocial health theories. He questions these theories on the basis of enactivism and phenomenology, which he employs to develop an understanding of health as being able to lead a good life. He further develops a notion of illness that is, as opposed to his conception of health, understood as the absence of the ability to lead a good life, as a result of experiencing existential unhomelike feelings, such as “bodily pains, nausea, extreme unmotivated tiredness, depression, chronic anxiety and delusion” (from the abstract).

Zsuzsanna Chappell develops an argument in her paper “The Enacted Ethics of Self-injury” that aims to demonstrate the significance of enactivism for applied ethics. More precisely, she argues that enactivism, and the idea of participatory sense-making, offers insight in ethical issues concerning the problem of self-injury, which are often overlooked in philosophy in general. Chappell investigates self-injury as a problematic behavior, which illustrates, according to her, how ethical practice should be understood as a response to contextualized embodied actions and (failed) participatory interactions with others, rather than as rooted only in individual rationality and responsibility.

In “Autism as gradual sensorimotor difference: From enactivism to ethical inclusion” Thomas Van Es and Jo Bervoets develop an enactive approach to autism. In there account they explain how the social differences that are stereotypically associated with autistic behavior arise from sensorimotor atypicalities. The authors offer an enactive state space description of autistic behavior that highlights the fact

that sensorimotor variations influence social interactions and thus also enculturation and habituation. Van Es and Bervoets conclude that, if there is an ethical call to include autistic behavior more into the public sphere, enactivism offers a practical way of doing so, namely by emphasizing the need of being more attentive to sensorimotor specifics of autism.

Konrad Werner and Magdalena Kiełkiewicz-Werner offer an enactive approach to environmental ethics in their contribution “From shared enaction to intrinsic value.” The author thus aim to bridge the gap between two contemporary developments that both promise to radically rethink the relation between humans and their environment, but so far have rarely been brought together. In their piece, the authors investigate one of the backbone concepts of environmental ethics: intrinsic value. Using enactive theory they argue that intrinsic value does not boil down to values that are independent of humans. Deploying several enactive concepts, including autonomy, enaction, participation and loving as knowing, the authors holds that intrinsic value results from human interactions with their environment that affect both ourselves and our environment.

In “Enactive principles for an ethics of social media user interactions,” Lavinia Marin investigates how we can ethically design online environments in the sense of minimizing the harm its users do to each other (in particular unintentional types of harm). Marin argues that this kind of harm is enforced by the particular nature of online environments. These are disembodied, asynchronous and have ambiguous audiences. Marin applies an enactive framework to her investigation of digital platforms and makes a case that, despite their disembodied and challenging nature, online platforms are nonetheless environments in which (or behind which) embodied human beings interact. Therefore, enactivism with its emphasis on studying aspects of embodied interactions with environments offers tools to define ethical principles that may enhance moral sensitivity among the users of online environments when they interact between each other. These principles are: looking for the face of the other (behind digital interactions), the handshake principle (an interaction is complete if your response is acknowledged by the initiator), being aware of the shared vulnerability of the symbolic space (the digital platform).

References

- Bergmann LT, Wagner J (2020) When push comes to shove—the moral fiction of reason-based situational control and the embodied nature of judgment. *Front Psychol* 11:1–3
- De Jaegher H (2013) Rigid and fluid interactions with institutions. *Cogn Syst Res* 25:19–25

- De Jaegher H (2015) How we affect each other: Michel Henry's "pathos-with" and the enactive approach to intersubjectivity. *J Conscious Stud* 21(1–2):112–132
- De Jaegher H, Di Paolo E (2007) Participatory sense-making: an enactive approach to social cognition. *Phenomenol Cogn Sci* 6(4):485–507
- Dierckxsens G (2018) Imagination narrativity and embodied cognition: exploring the possibilities of Paul Ricœur's hermeneutical phenomenology for enactivism. *Unisinos* 19(1):41–49
- Dierckxsens G (2019) Making sense of (moral) things: fallible man in relation to enactivism. In: Davidson S (ed) *A companion to fallible man*. Lexington Books, London, pp 101–124
- Dierckxsens G (2020) Enactive cognition and the other: enactivism and Levinas meet halfway. *J French Francophone PhilosXXVIII* 1:100–120
- Di Paolo EA, Cuffari EC, De Jaegher H (2018) *Linguistic bodies: on the continuity between life and language*. The MIT Press, Cambridge
- Gallagher S (2017) *Enactivist interventions: rethinking the mind*. Oxford University Press, Oxford
- Loaiza JM (2019) From enactive concern to care in social life: towards an enactive anthropology of caring. *Adapt Behav* 27(1):17–30
- Métais F, Villalobos M (2021) Embodied ethics: Levinas' gift for enactivism. *Phenomenol Cogn Sci* 20:169–190
- Schmidt MFH, Rakoczy H (2018) Developing an understanding of normativity. In: Newen A, de Bruin L, Gallagher S (eds) *Oxford handbook of cognition: embodied, embedded, enactive and extended*. Oxford University Press, Oxford
- Urban P (2014) Toward an expansion of an enactive ethics with the help of care ethics. *Front Psychol*. <https://doi.org/10.3389/fpsyg.2014.01354>
- Thompson E (2007) *Mind in life: biology, phenomenology, and the sciences of mind*. Harvard University Press, Cambridge
- Varela FJ, Thompson E, Rosch E (1991) *The embodied mind: cognitive science and human experience*. The MIT Press, Cambridge, MA
- Varela FJ (1999) *Ethical know-how: action, wisdom, and cognition*. Stanford University Press, Stanford

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