



Enactive Ethics: Difference Becoming Participation

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Abstract

Enactive cognitive science combines questions in epistemology, ontology, and ethics by conceiving of bodies as open-ended and mutually transforming through activity. While enaction is not a theory of ethics, it can contribute to its foundations. We present a schematization of enactive ideas that underlie traditional distinctions between Being, Knowing, and Doing. Ethics in this scheme begins in the relation between knowing and becoming. Critical of dichotomous thinking, we approach the questions of alterity and ethical reality. Alterity is relevant to the enactive approach, but not in the radical sense of transcendental arguments. We propose difference, instead, as a more generative concept. Following Simondon, we see norms and values manifest in webs of past and future acts together with their potentialities for becoming. We propose a transindividual concept of moral attunement that includes ethical know-how and consciousness raising. Through generative difference and attunement to configurations of becoming, enaction underpins an ethics of participation linking virtue ethics and ethics of care.

Keywords Participatory sense-making · Becoming · Moral attunement · Difference · Ethics of participation · Simondon · Engaging epistemology

1 Introduction

The relation between moral philosophy and moral psychology has been the subject of ongoing debate (e.g., Flanagan 1996; Goldman 1993; Machery 2010; Johnson 2014). The main divide separates opposing views concerning the naturalization of ethics and whether this is desirable or even possible. Moral philosophers argue that psychology, neuroscience, and cognitive science provide an understanding of *how* we engage in moral behaviour or arrive at moral judgments, but that this knowledge falls short of the task of ethics which

is to illuminate our ideas of good, justice, responsibility, and so on (Held 1996). Science is supposedly descriptive, while the task of ethics is fundamentally, if not exclusively, normative. As Bernard Williams (1985) remarks, the “objectivity” of science involves the convergence of perspectives about the world, while ethical questions often concern incommensurable perspectives and demand modes of reflection different from those used in science.

Some work linking ethics and cognitive science may be criticised on these terms but it seems that scientific knowledge can and does touch on ethically relevant questions such as how life and mind develop or how our capacities, emotions, and vulnerabilities change with age (e.g., Gazzaniga 2005). Defenders of ethical naturalism, such as Mark Johnson (2014), are well aware that science cannot dictate moral values. For starters, science and other sources of “factual” evidence, such as phenomenological and historical narratives, are fallible and always evolving. Science “is neither the first word nor the last word, but it is an extremely important voice (or chorus of voices) in our attempt to understand human moral experience, cognition, and judgment. You do not need to believe in absolute scientific truth (which is an illusion) in order to base arguments on scientific results” (ibid., 22).

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Such positions are hard to disagree with. But we must also recognize that ethical debates are first and foremost political struggles and secondarily discussions about knowledge. It is all too easy for scientific discourse to be weaponized against legitimate critical positions, to be used as a baton and treat anyone contesting it as, *ipso facto*, fact-averse or irrational.

So, what are we left with if we think that scientific work on human bodies and human minds can indeed enrich ethical debates? One reason moral philosophers and those engaged in political struggles sometimes distrust scientific discourse is precisely because it tends to offer a reductionistic and mechanistic perspective on human biology, human cognition, and human relations. Appeals to science are often appeals to immutable laws and objective facts, and can be used as ways of silencing dissent. Despite critiques of naive conceptions of objectivity (e.g., Daston and Galison 2007; Keller 1996; Harding 2015), science seeks generalizations and has difficulty dealing with historically changing human differences and idiosyncrasies, the very pre-conditions of struggle (though some psychologists call to abandon this universalist model, e.g., Molenaar 2004). Moreover, a discourse that is seemingly unmoved in its attachment to facticity and unaffected by critical voices, borders on arrogance. If this were all that scientific understanding of human beings had to offer, we would have to side with those that distrust its role in ethical debates. But we also find arrogance in the blanket rejection of naturalistic discourse as irrelevant for ethics. This attitude, willingly or not, promotes a dualistic view of humanity as untethered from the more-than-human world, embarrassingly dependent on nature for subsistence, but not in any fundamental way shaped or produced by it and, for these reasons, entitled to dominate it.

We think that the framing of these issues changes in view of the enactive approach to life and mind (Varela et al. 1991; Thompson 2007) and related perspectives on embodied and distributed cognition (e.g., Cash 2013). The enactive approach is often presented as part of recent developments in embodied cognitive science (Newen et al. 2018). And rightly so. The task enactivists set themselves, however, exceeds the explanation of *how* we cognize, act, or perceive. Enaction reworks assumptions that permeate dualistic (Cartesian) approaches to the mind; assumptions about being, becoming, relations, bodies, and practices. It recognizes that the “how” question requires us to address the “what” and the “who” questions about bodies and minds. Enactive theory develops concepts of autonomy, agency, sense-making, social interaction, and languaging that explain the constitutive and existential dimensions of human and non-human minds as the necessary ground for questions about “how” minds work. As a scientific endeavour, its development has been shaped by various critical traditions and interventions originating in all kinds of human practices. It is less easy to dismiss the

contributions of enactive cognitive science to the foundations of ethics.

Crucially for this context, the enactive approach proposes a nondualistic and nonreductionist naturalization of mental vocabulary, and this includes normative concepts: vital norms such as healthy and unhealthy states of the organism (see e.g., Canguilhem 1991; Goldstein 1995; Jonas 1966; Merleau-Ponty 1963; Thompson 2007), action- and perception-related norms, such as appropriateness, efficiency, as well as norms of aesthetics and style (e.g., Merleau-Ponty 2012; Di Paolo et al. 2017; Noë 2015), the normativity inherent in practices and activities that are intrinsically valuable (e.g., Brewer 2009; Di Paolo et al. 2010, 2017), and social norms concerning forms of engagement, participation, and language (e.g., Di Paolo et al. 2018). Johnson again: “the biggest obstacle to overcome in developing an ethical naturalism is finding a way to get normative force within the processes of our natural world, without predicating those norms as components of an independent, non-natural realm of values” (Johnson 2014, 20). In offering a naturalized vocabulary to capture embodied normativity, enaction may be said to approach this goal. But not quite. As we shall see, out of the theory itself emerges the inevitability of human becoming as open-ended, historical, and contextual. The “normative force” that could illuminate ethical debates is under-determined by human becoming in its concrete and changing historical realizations. Otherwise, human becoming would not be open-ended. This, we think, makes enaction a particularly interesting interlocutor in discussing the role of the sciences of mind in ethics. Human difference, the precondition of ethical struggle, is itself a consequence of the theory.

Without necessarily addressing all of these issues, several researchers have found affinities between enactive ideas and a variety of questions in ethics (Candiotta and De Jaegher 2021; Colombetti and Torrance 2009; Cuffari 2014; De Jaegher 2021; DeSouza 2013; Di Paolo et al. 2018; Dierckxsens 2020; Gallagher 2020; Loaiza 2019; Métails and Villalobos 2021; Thompson 2001; Urban 2014, 2015; van Grunsven 2018; Varela 1999; Varela et al. 1991; Werner and Kiełkiewicz-Werner 2021). Enaction is a particular kind of nonreductive naturalism, one that stresses the continuities but also the innovations that occur between natural processes, life, mind, language, and human communities; as much an approach to embodied minds as a rethinking of nature. Dichotomies become ambiguous in this approach, such as that between descriptive and the normative discourse (a distinction more normative than descriptive in its deployments). A lesson that reflectively emerges from enactive epistemology is that theorising of any kind, *a fortiori* theorising about human beings, is never purely descriptive. From the choice of technical language to decisions about perspective and relevance, awareness of implications, and

concern for potential uses, theorising is always an ethical engagement, situated in a community of embodied researchers and institutions. This is not to say that normative questions can be exhausted by any kind of theorising, enactive or otherwise.

While enactive ideas can be useful for ethics, it is not the case that enaction is a theory of ethics. To repeat, ethical questions cannot be exhausted theoretically; they concern the open and changing practices of human communities and are rooted in shifting, diverse, and contested territories about which abstract thought cannot be either complete or neutral. In this sense, enaction finds affinity in the writings of diverse philosophers such as John Dewey (1922), Charles Taylor (1982), Bernard Williams (1985), and Enrique Dussel (2016), philosophers who (in different ways) question the tasks of theorising in ethics given that it takes as its object historically situated, once-occurrent, concrete circumstances that exceed simple codification or standardization. Ethics, therefore, faces the conundrum of theorising (abstracting and universalising) about the concrete and the particular. This is a paradox enaction also faces, as discussed in the recent work on the diversity of linguistic becoming (Di Paolo et al. 2018). The challenge is not just intellectual, but ethical and political, as abstract universalisation has a tendency to be used rhetorically to admit only some groups to the status of full personhood and negate it to others by drawing dividing lines across race, gender, class, age, ability, nationality, and so on (examples are too numerous to mention, but see Mills 1997; Fricker 2007; Fanon 1986; Simplican 2015; Lugones 2003). As a science of life and mind that is re-enacted with the concrete, to use Francisco Varela's (1992) phrase, enaction is obliged to stand against universalising discourses that promote injustices and to criticise the assumptions of such discourses. It is in this wider sense, and not purely as a theory, that we dare to speak of an *enactive ethics*.

What sort of interventions may flow from enactive thinking into ethics if we accept the inherent difficulties of theorising about life and mind, as embodied, finite, and situated beings co-inhabiting a concrete world? Enactive ideas can be applied to specific discussions in ethics. They may also contribute elements towards a foundation of ethics, such as views on personhood, language, emotion, and action. Because enaction criticises dichotomous thinking, these contributions may provide water to the mill of those interested in questioning dichotomous thinking in ethics.

To properly assess enactive interventions, it is helpful to frame some key elements of enactive theory in relation to each other and to central ideas in philosophy. Our objective in this article is not to discuss or extend existing specific applications of enaction to ethics but to attempt to organize these and future contributions by offering a schematization that expresses how enactive concepts relate to classical distinctions between Being, Doing, and Knowing

in Western philosophy. We provide a sort of map (imperfect and value-laden as are all maps) that shows where and in what ways enactive thinking may invite or deeply relate to ethical thinking. We introduce this schematization to see what an enactive ethics might be, by looking at the issues of difference, becoming, and participation.

After a brief overview in the next section of enactive ideas that are relevant for ethics, we introduce this schematization. Then we move from abstraction towards increased concreteness and “test-drive” this scheme. Along this path, we critically examine the question of the radicality of alterity and find in the difference that inheres in linguistic bodies a more nuanced alternative. Following the work of Gilbert Simondon, we introduce a distinction between norms and values based on how webs and meshworks of acts in becoming define an ethical reality. This leads us to propose a concept of moral attunement, or ethical know-how, based on social consciousness raising and practice. We finally discuss how the enactive perspective on difference and becoming allows us to formulate an ethics of participation linking together virtue ethics and ethics of care.

2 The Ethical Relevance of Enactive Ideas

The enactive approach seeks to understand the constitution of agency and sense-making. What makes dynamical processes in the world into centres of activity and perspective, into sources of action and care? What must these processes be like to qualify as minded? These are questions about the ontology of living and cognitive beings. The answer to these questions arises from the same consideration: the central role of activity and the intertwinement between being, knowing, and doing. Acts, practices, engagements, ongoing changes in the relations with others and with the world, are not derivative from the nature of agency and sense-making, but they are co-defined with these terms (Di Paolo et al. 2017, 2018). Ontology and epistemology find their communicating vessels in *praxis*, in the activity of bringing forth worlds. Through this activity agents constitute themselves as such and enact a world of meaning.

Work on enaction is concerned with aspects of being (What is life? What are bodies?), aspects of knowing (What are the processes involved in sense-making?), and aspects of doing (practices, the status of actions, habits, social interactions, etc.). In the case of linguistic bodies, we also ask: How do we learn to innovate, criticise, and form judgments? How do we learn to ask questions, to transgress, and to teach each other? How do we struggle to institute ways of knowing that direct our doing and our being? We briefly mention some enactive ideas of ethical relevance:

- 1 **Bodies are open-ended processes of self-constitution.** Living bodies constitute themselves through autonomous (i.e., self-individuating) processes and under precarious conditions in different dimensions of embodiment (organic, sensorimotor, social). They are the result of ongoing and, in the human case, open-ended individuation in co-defining relations with their environments and other agents (Thompson 2007; Di Paolo et al 2017, 2018).
- 2 **Care and normativity are grounded in forms of life.** Embodied normativity emerges from processes of bodily constitution. Vital norms are defined by autonomous cycles of regulation in the dimensions of embodiment. The nature of mind is a relation of *care* about the implications of a current situation for being (one's own and that of others). Sense-making is the regulation of an agent's activity and relations to the world. It entails norms defined by the viability of organisms and their forms of life (Varela 1997, 1999; Thompson 2007; Di Paolo et al. 2017).
- 3 **Actions bring forth a world.** Bodily constitution (autonomy) and sense-making are coupled and codefined processes. The key term that brings these processes together is the activity of the agent, be it manifested as overt acts, intentions, emotions, thoughts, relations to others, speech, participation in a community, labour, struggles, etc. Embodied agents *enact* a world of significance, and this is an ongoing achievement done in conjunction with other agents. Acts, moreover, are processual, they respond to existing potentialities, trigger or block processes of individuation, and have rippling repercussions in a meshwork of other acts past and future (Varela et al. 1991; Thompson 2007; Di Paolo et al 2017, 2018).

Why do we say these enactive ideas are of ethical relevance? Part of the answer to this question will be elaborated in the following sections, but it should not be difficult to see that the enactive perspective is based on the open-ended and ongoing dimensions of bodily constitution (as opposed to the idea of finished individuals), on the character of caring inherent in all forms of sense-making (as opposed to its separate standing in other theories of action, cognition, and emotion), and on the world-making powers of our actions, particularly on how we participate, affect, and are affected by others. These ideas expressly address the relation between experience, action, norms, and values, the connections between which are not “optional” or made only a posteriori in enactive thinking.

From an enactive perspective, practices define a world and continuously shape the ongoing becoming of our bodies. In this becoming, we encounter an open transformation and regeneration of tensions, conflicts, and breakdowns. Human

becoming never ceases, but may be curtailed or allowed to flourish. Such possibilities imbue actions with value (as we discuss later) and human purposes with diversity (Donaldson 1992). Actions are not only normative in the sense of being framed by the viability of a form of life, they also have *value* in the sense of promoting or reducing the possibilities of further (individual and collective) becoming. Single acts ramify into the past and future in webs of relations, resignifying the former and enabling or curtailing the virtual possibilities of the latter (Di Paolo et al. 2017). Real acts are not easily split into abstract phases such as intention, perception, thought, emotion, and so on. These elements relate organically (Di Paolo 2015). In the case of social interaction, they involve others, who may have a say in their meaning, in how they are taken up, amplified, negated, etc. (De Jaegher and Di Paolo 2007). To the extent that we become aware of these relations, our agency is ethical. With linguistic agency, human acts become reflectively available as a form of knowing (from embodied know-how to ethical reasoning, to collective habits, codes, norms, etc.) and as a form of critical power (contesting, struggling, breaking habits and creating new modes of participating and relating) (Cuffari 2011; Di Paolo et al. 2018; Fourlas and Cuffari 2021).

Ongoing becoming in communities is constitutive of human personhood. As we elaborate later, values permeate our knowing of possibilities of becoming lost and gained. So ethical situations are in the nature of conflicts and tensions at all levels and stages of life. Since actions are never isolated and form webs, ethical questions are always situated and formally undecidable by general rules. They always imply a diversity of goods (Taylor 1982).

3 An Enactive Schematization

Following this quick enumeration of enactive ideas that have ethical relevance, we now focus on the fact that enaction invites a reassessment of philosophical distinctions that are traditionally treated as dichotomous (e.g., subject-object, self-other, body-mind) in terms of accounts of the conditions and perspective shifts involved in their co-arising. Explorations of enactive contributions to ethics pick up on these criticisms of reified dichotomies (e.g., Colombetti and Torrance 2009).

It is useful to schematize the relations between some enactive ideas and traditional philosophical distinctions, to place them in the same space. This exercise is a simplification, but it serves as an orientation tool, and this is its main purpose here.

Keeping in mind that the goal is to schematize, i.e., to conceive of relations between ideas in diagrammatic terms, we can look at Western philosophy through its three poles of concern: Being, Doing, and Knowing (Fig. 1). Since

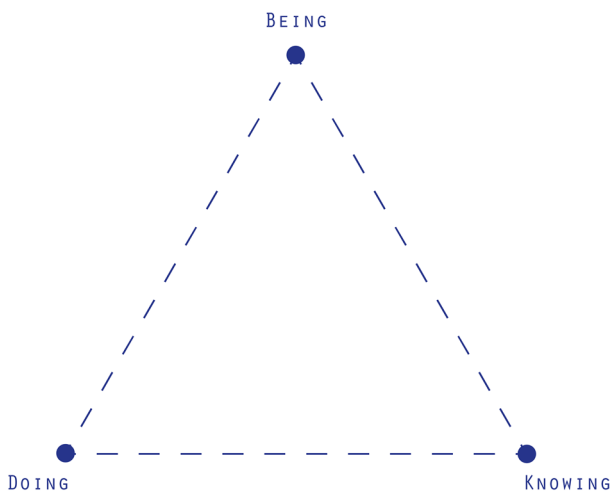


Fig. 1 The three main poles of enquiry characteristic of Western philosophy

Parmenides and later sharpened by Aristotle, these distinctions have functioned as coordinates of philosophical inquiry. Broadly speaking, concerns about Being include questions about ontology, cosmology, essence, and existence. Concerns about Knowing gather enquiries about epistemology, logic, theories of truth and judgment. And concerns about Doing underpin theories of action, politics, rhetoric, and economics. Other philosophical concerns transverse this tri-polar structure, as in the case of aesthetics, theology, metaphysics, critical philosophies, philosophy of praxis, philosophy of technology, and, as we shall discuss, ethics. But even in these cases, the threads corresponding to each pole can often be recognized with relative ease.

We encounter several criticisms of this structure in the history of Western philosophy, or at the very least, attempts to better understand the internal relations between the three poles. Philosophers critical of dualism such as Leibniz and Spinoza, and of its hold on society such as Nietzsche and Marx, as well as those who articulated re-foundational projects in philosophy, such as Whitehead, Dewey, Heidegger, and the later Merleau-Ponty, can all be said, *pace* their wide differences, to have tried to break free from this tri-polar scheme.

The enactive approach works along similar critical lines. Its concepts connect to the three poles by postulating and explicating their internal relations (Fig. 2). The sides of the triangle can be used to indicate liminal ideas that emerge in enactive thinking and do not map onto any of the three poles of Western philosophy. On examination, these ideas describe a state of affairs prior to the differentiation between the poles. In this sense, we suggest, they qualify as more primitive, claiming priority over the corresponding pair-wise distinctions. Let us see how this is the case while bearing in mind that the constraints of this article do not allow us to

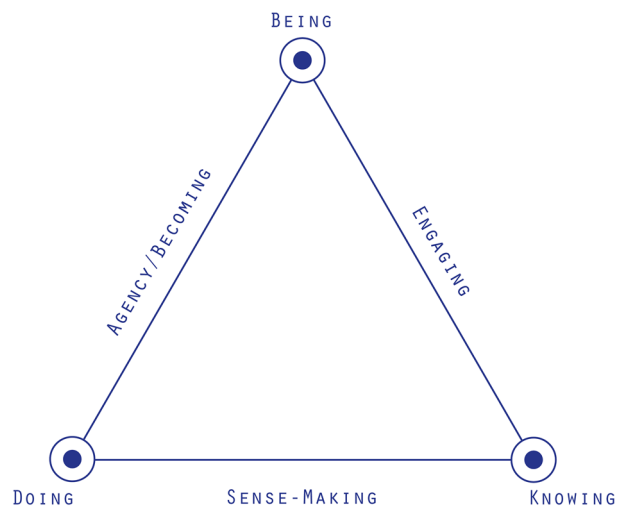


Fig. 2 Enactive ideas in relation to the three poles of Western philosophy depicted in Fig. 1

present a detailed elaboration of enactive ideas discussed at length elsewhere.

A central enactive idea is that agents bring forth a world through their actions (Varela et al., 1991). This claim upturns the traditional conceptions of the mind as a problem-solver that must process information and decide on the right response. The idea grew into more specific articulations culminating in the concept of *sense-making* (Di Paolo 2005; Thompson 2007). Sense-making is founded on the concepts of autonomy and adaptivity (Di Paolo 2005) and weaves together an organism’s activity in relation to its environment and the vital norms entailed in the viability of a form of life (its own autopoiesis, but also other forms of individuation, such as sensorimotor and social identities, Di Paolo et al. 2017). Sense-making is “the active adaptive engagement of an autonomous system with its environment in terms of the differential virtual implications for its ongoing form of life. [It is t]he basic, most general form of all cognitive and affective activity manifested experientially as a structure of caring” (Di Paolo et al. 2018, 332). Sense-making is, in a nutshell, *active non-indifference*. It is shared by all forms of mindedness. No distinctions exist at this core conceptual level between affectivity, intention, action, or cognition (Colombetti 2017; Di Paolo 2015). Whether we act or we perceive, whether we emote or we cognize, a structure of *caring* is at play in all forms of sense-making. Things matter to us in ways they don’t matter to machines or objects.

According to this view, to take distinctions such as that between Doing and Knowing as fundamental is to miss their internal connections, their common structure of care, as well as the history of their differentiation. Sense-making is conceptually as well as operationally prior to notions such as action and knowledge. This priority is always at play and

cannot be superseded. Various philosophical concepts, such as the Marxist notion of praxis (Kosík 1976; Sánchez Vázquez 1977), or the psychology of activity (Ilyenkov 2014; Leontev 1978) function against pervasive distinctions between knowledge and practice, or between consciousness and action, suggesting that when confronted with concrete collective experience, the distinction between Knowing and Doing often becomes unstable, a conclusion also sustained by work on embodied know-how (e.g. Dreyfus 2002).

Sense-making grounds the enactive conception of life as a form of agency. By enacting a world, agents enact themselves. They sustain themselves against the precarious conditions of their self-constitution. This occurs at all levels, from basic cellular metabolism to communities, but it is seen perhaps most clearly in the case of sensorimotor agency (Di Paolo et al. 2017). A minimal agent fulfils three basic requirements: 1) it is self-individuating (a locus of activity and a perspective on the world), 2) it relates asymmetrically to its environment (it is not only coupled to processes in the world, but can also modulate this coupling, changing its relation to the world), and 3) it follows norms (its engagements are not only modulatory, but *regulatory*, constrained by requirements dictated by vital norms as well as norms incorporated from other sources). A sensorimotor agent is a specific kind of agent whose individuation and normativity are realised at the level of the organization of sensorimotor schemes. It attempts to maintain a *sensorimotor way of life*, with certain capacities and sensitivities, with idiosyncrasies, habits, and styles. A sensorimotor agent is itself a pattern of organization of sensorimotor schemes which is both manifested in, as well as constituted by, its own acts. Not only do acts help an agent regulate its coupling with the environment but acts in their materiality trigger consequences in the agent's structure such that its agency remains viable. (The clearest example of this relation is that of self-sustaining habits.) Being and Doing in this conception of agency are not so much entwined as undifferentiated. By enacting a world, an agent is in continuous becoming. This becoming may appear limited in agents that sustain species-specific forms of life, but it is there. Lifeforms do not simply endure, but constantly postpone a decay in progress. In more complex forms of life, especially in human beings, becoming is collective and open-ended; the historical result of transformations and contradictions resulting in an ever-shifting individuality (Di Paolo 2020). Again, this fundamental priority of agency-in-becoming over the poles of Being and Doing is not only historical, but present, as noted in studies of human bodies as achievements, the result as well as the source of actions and decisions (e.g., Mol and Law 2004).

Enactive researchers have begun to pay closer attention to human minds. Particularly relevant here is the proposal to account for linguistic agency (Di Paolo et al. 2018) and, in continuation with this work, De Jaegher's conception of

knowing as an active and mutually transformative engagement between knower(s) and known(s) (De Jaegher 2019, 2021). Using articulations of enactive theory, this notion of knowing as *engaging* brings together diverse criticisms of prevalent conceptions of knowledge, from Black feminist critiques of science, to self-advocacy groups rejecting oppressive norms of objectivity and normality, to decolonizing and indigenous epistemologies. Knowing always entails a relation of engagement that generalizes the logic of participatory sense-making (De Jaegher and Di Paolo 2007) in that in order to sustain an encounter between knower and known they must deal with a paradoxical condition. Both knower and known must *be* themselves as well as ready to *be changed* by knowing. At its fundamental, engaged knowing requires a particular attitude to flourish, the attitude of letting-be; otherwise, it degrades. Limited knowing can either take the form of overdetermination, i.e., a knower who attempts to force the known into an obstinate epistemic frame, or it can take the form of underdetermination, i.e., disengagement, a “respect” for the known that forgoes any serious relation with it, letting-be degrading into letting-go. Both are fundamentally attitudes of *not-caring*, situations in which participation is thwarted, leading to epistemic injustices (Fricker 2007). Both can also be resisted or contested, making knowing an open arena for struggle. Engaged/engaging epistemology is both descriptive and prescriptive; it tells us what lies at the basis of a knowing relation, and it tells us also that there are better and worse ways of knowing. If a knowing relation is to flourish it should not be dominated by either end of the relation, which means inevitably that to engage in knowing is to engage in a mutual transformation, a co-becoming of knower and known. (When this is made impossible, e.g., by some party refusing engagement, or undesirable, because engagement will perpetuate dangerous patterns, one needs to assess whether or not to continue trying to engage.) Taken then as a fundamental relation between Knowing and Being, epistemic engaging precedes them both because neither can claim priority over the transformative process of concrete knower-known engagement. Who we are is inseparable from how we know each other.

Systematizing the enactive approach in this way should not be taken as complete. Many key ideas (e.g., autonomy, individuation, precariousness, social interaction) transverse the concepts of sense-making, agency/becoming, and epistemic engaging. Moreover, we do not claim any strong independence between the sides of the triangle in Fig. 2. These concepts enter into relations with one another. We indicate this by “softening” the triangle and suggesting dynamic flow between the sides as in Fig. 3 (the direction of the arrows is arbitrary). The three poles become virtual referents and the flow of enactive ideas never quite stops at any of them. These poles, however, exert a modulatory effect on enactive

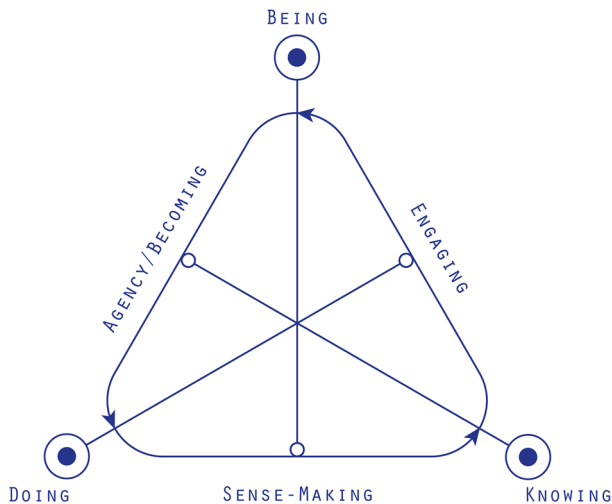


Fig. 3 Depiction of the dynamic relation between enactive ideas, the virtual character of the three poles and their modulatory influences (arrows with white circles)

concepts, each pole on the “opposing” core enactive idea (indicated by the lines crossing from vertex to side).

Going with the concept of sense-making is the ongoing individuation of a sense-maker, its precarious material becoming and the vital norms entailed by its organization. Sense-making only makes sense when framed by the Being of living and minded forms and of their worlds, i.e., forms of bodily individuation, as these are the grounds for vital norms.

Epistemic engaging describes existential transformations between knowers and knowns. But every concept of engagement implies a Doing, i.e., concrete, once-occurring acts, (co-)authored by knower, known, and others, often in patterns of social interaction.

Finally, we come to the central concern of ethics as the branch of philosophy interested in establishing, defending, and promoting concepts and principles to distinguish between right and wrong behaviour and to offer answers to questions such as how one should live, what Williams (1985) refers to as Socrates’ question.¹ Even beyond philosophy, ethics is the human capacity to think critically about these questions. We find ethics, in our diagram, in the relation between Knowing and agency/becoming. How do we know

¹ “Socrates said: what we are talking about is how one should live. Or so Plato reports him, in one of the first books written about this subject. Plato thought that philosophy could answer the question. Like Socrates, he hoped that one could direct one’s life, if necessary redirect it, through an understanding that was distinctively philosophical—that is to say, general and abstract, rationally reflective, and concerned with what can be known through different kinds of inquiry.” (Williams 1985, 1).

what counts as good in terms of how we value the different possibilities of becoming triggered by our acts? This specifically human relation is, for some philosophers, defining of the human condition. Take Heidegger (1962), who unravels the structures of Dasein precisely as the being for whom being is an issue, in other words, the kind of being defined by internal relations between concerned knowing and becoming.

Through this latter modulation, in particular, the schematization provides a perspective of where to look for the contributions of the enactive approach to the foundation of ethics.

4 From Radical Alterity to Generative Difference

The schematization of enactive ideas shows we can abandon dichotomous thinking without losing the possibility of establishing distinctions. Distinctions as such are necessary but they are not self-standing; they are, on the contrary, conditioned by their place in a web of concepts and practices. We expect enactive contributions to the foundations of ethics and to ethical debates to take the shape of questioning hard distinctions that populate such discussions. Like many others, distinctions between “fact” and “value” and between “self” and “other” become subject to an understanding of the conceptual and processual interrelation between such terms. The same can be said of the notions that emerge from classical theories of action and have traditionally informed work on ethics. From an enactive perspective, there is no clear-cut, universalisable distinction between the intention and execution of an act, for instance. An act can be co-authored in participation, its meaning and intention shaped concurrently with it and even concretized retroactively. The consequences of an act are not closed to resignification. Acts resonate into both past and future by altering a series of relations between preceding and succeeding configurations.

In this and the following sections, we examine two cases of such critical breakdown of distinctions that inform ethical theories. The first concerns the role played by alterity in ethical thinking. In the second, we study the concrete relations that make up, moment to moment and in each place, an ethical reality and that resist easy characterization into facts and values.

Ethics begins, according to Levinas (1979), when we are face to face with the other. Dierckxsens (2020) and Métais and Villalobos (2021) propose that enaction can benefit from adopting Levinas’ message that the ground and origin of ethics lies in alterity (see also Gallagher 2020). For Métais and Villalobos, Levinas clarifies the nature of ethics in ways that complement enaction, while also offering some challenges concerning how to look at

the relations between the life and death of self and other. For Dierckxsens, “Levinas corrects something enactivism misses as a theory, namely, a reference to otherness. And in turn, enactivism corrects something which Levinas’ thought insufficiently highlights, namely, the dimension of social justice we find in dwelling in the natural environment” (Dierckxsens 2020, 116).

The Levinasian perspective is a critique from within phenomenology. Levinas insists on contrasting the exteriority of experiencing the other as absolute compared with the exteriority of objects of experience as constituted in subjectivity which is relative to the subject. Others escape such constitutive attempts at being fully grasped; they impact our experience as the paradoxical presence of an absence that resists possession and can take on an epiphanous character. In challenging the primacy of the constitutive powers of subjectivity, the encounter with the other is, for Levinas, inherently ethical.

If as a sense-maker, I bring forth a world through my enactments, then in facing the other I am confronted with a profound difference. I am confronted with someone else’s world, irreducible to mine. Such would be an enactive reading of radical alterity as articulated by Levinas. But is alterity so radical in our account? And is sense-making the activity of only one subject? Here we are aware that our argument departs from the purely phenomenological realm and the transcendental claim that Levinas makes, but we think this is required to clarify the role of alterity and difference in an ethics that moves beyond but still attends to the perspective from lived experience.

Human sense-makers are co-constituted in participation (Di Paolo et al. 2018). So is their activity, even when directed towards objects in the world (Di Paolo 2016). Humans inevitably and constantly assimilate and accommodate alterity. Knud Løgstrup (1997) similarly recognizes that we play important roles in shaping the worlds of others, that we participate in them, and therefore share mutual responsibilities and obligations. We typically encounter others with a “natural trust” like the trust our bodies have in the world. We tend to trust others with an attitude of surrendering, without which truly social acts would be impossible. The ethical demand is a demand silently placed by this trust, a demand to participate well, to know how to coexist, how to speak, when to create distance. Alterity does not need to be radical in order for the encounter with the other to generate this ethical demand. Radicalising the other without due attention to concrete context and reciprocity and without giving central role to co-constitutive participation risks absolutising alterity, whereas both intercorporeally and in the constitution of linguistic bodies, self and others interpenetrate (Di Paolo et al. 2018). Self and other (or rather “selfing” and “othering”) are ongoing material processes and not metaphysical boundaries that precede these activities. In affirming this,

enaction moves beyond the bounds of phenomenology without losing a connection to it.

Alterity too is precarious: the other may be a stranger, but less so when we begin relating; those we know well may become strangers; we are often strangers to ourselves. Others participate in our own constitution, particularly through the incorporation of person-constituting acts, such as linguistic utterances, and the incarnation of other linguistic agencies. Others, we ourselves, and our relations are conditioned by processes of making, doing, and becoming together. You and I change, in interaction with each other. Thus, like selves, otherness itself is dynamic and conditioned.

Taking alterity as radical makes sense in contrast to accounts of constitutive subjectivity according to which objects are the endpoint of conscious activity. But as much as alterity is fragile, so are the supposed powers of subjective constitution it is contrasted with. Scientific evidence and further phenomenological analysis (Gallagher 2008) indicate that we cannot fully constitute an object as external without first having learned to relate to others in the second person, and moreover having learned to confront and assimilate the non-egoic perspectives of others into our own subjectivity (Di Paolo 2016). In questioning the radicality of alterity, it is fair to question also the radicality of the opposing term from which it is distinguished. For enaction, otherness already resides in subjectivity, as much as we participate in otherness through engagements. The opposition is real but relative, not radical.

Even if the terms of the relation between self and other are different from the Levinasian account, the point of arrival is not so dissimilar because both perspectives point to the ethical nature of encountering the other as an actual other, unfiltered through the screen of subjective intentionality (hence the ethical weakness of calls for cultivating empathy as a basis for better relating to others; empathy, like charity, is overdetermining if not downright offensive when flowing from those complicit in oppression to those who are oppressed). In enactive terms, engaging others is ethical precisely because in such encounters mutually constitutive powers are at play that are irreducible to subjective intentionality. Do we accept them or resist them? Do we care?

The endpoint of radical alterity we must avoid is a completely underdetermined form of knowing. Kym Maclaren’s (2018) idea of ontological intimacy shows us this. Maclaren proposes that we are intersubjective at the core and from the beginning, and that we always transgress each other in our encounters. In such a view, we can never *fully* know one another—because we are always becoming—but, on the other hand, there is also no absolute alterity. If we always transgress each other, co-become in our engagements, then no aspect of alterity is *principally* hidden, even if, conditionally, some aspects will remain outside our grasp due to the principled (but shifting) incompleteness of knowing. It can

always be that we transgress each other in ways that engender new sense-making. Alterity is continually becoming and ever-changing. While we can never fully know each other, these unknowns are not essential, only conditional.

In the context of the schematization, another way of looking at how enaction conceives of alterity is to state again that from this perspective nothing inhabits any of the vertices of the triangle. From the foregoing, alterity belongs to processes of becoming together and their modulation by processes of knowing. This is precisely the arrow in the diagram where we have suggested lies the core of ethics (from Knowing to agency/becoming). So we agree that the topic of alterity is central to ethics, as long as we avoid pushing this location towards any of the static virtual vertices, such as that of Being.

On the enactive perspective, we may emphasise *difference* rather than alterity as generative of ethical concern and situations. Differences between self and other, between us and them, as well as differences within the self, in the other, among ourselves, and among those outside are always conditioned, never absolute, and generative of actual and potential tension.

We can see this by considering the perversions of letting-be in engaging knowing. These turn around relativism and tolerance. In a Western liberal account, it seems like a good thing to give different viewpoints and practices opportunity and space to exist. But abstract justifications for this (difference as a good in itself) can degrade into relativism, where co-existence is predicated on assuming that mutually transformative engagement is unjustifiable. In the extreme, relativism leads to non-engagement, and this is problematic. It can lead to the kind of tolerance that distorts into a disengaged letting-go. This eliminates responsibility and shuts off the influence of others on my own (society's) becoming. To stop relating is to stop caring, and to stop caring is to stop relating.

The flipside to this problem happens when we resort to an overarching feeling of we-ness and community. This splits alterity up into the familiar otherness of my fellows and the foreign otherness of strangers, where co-becoming is possible within the first group but not with the second. This attitude hides obvious dangers and can lead to its own, less tolerating kind of relativism. We-ness is never complete by itself. It is dialectically co-defined with otherness; *there is no us without them*. The dangerous falsehood entailed in unself-critical, overarching we-ness is that since co-becoming is constitutive of being human, we will equate humanity with our group only, whether we recognize this or not. If concrete knowing engagement is curtailed, others can only become humans for us in the abstract.

The perspective we are defending is suspicious of those who promote all-embracing forms of emotional regulation, mindful awareness, empathy, abstract togetherness,

calls to civility, and all the rest of it. However well-intentioned, these discourses attempt to obliterate differences and negate irreducible conflicts (Ortega 2006). Togetherness can sometimes be intolerable; some forms of empathy obscene. Engaged knowing is different from empathising; it is almost its opposite in that empathy is rooted in the individual knower as her own attitude, choice, and responsibility. Participation does not mean accepting or condoning what we attempt to know, it means our knowing will be better if we maintain an open attitude of letting-be, which is often difficult and risky. A consequence we must learn to accept if we fully understand open-ended human becoming in its concrete materiality is that there is always an enemy, only that this enemy can take root as much in others as in ourselves. There is always something to struggle against, and that may be actual others or patterns of knowing and doing of our own, such as disavowed racism, sexism, classism, or self-destructive attitudes.

This is why we should be cautious about the liberal attention given to the second person plural in research on we-ness, joint action, shared intentionality, or so-called pro-sociality. This supposed basic, prior “social orientation” is sometimes postulated as appearing in early development and fundamentally orienting infants to the social world (Trevarthen and Aitken 2001). Such claims can turn into one form of the distorted “we”. In terms of the enactive schematization we have given, pro-sociality as a concept attempts to act as an ultimate ground, a fixed vertex. In defending pro-sociality as an inborn attribute of human individuals, this higher level concept foregoes an underlying tension: that between an individual and a social order. In enaction, what comes first is an existential dialectic between individual and social orders: the primordial tension of participatory sense-making (Cuffari et al. 2015). Difference, ongoing becoming, and their dynamics are inherent in this. We must resist any reification of the subject, whether individual or collective, whether self, other, us or them, without losing sight of the co-dependent arising and effective, but conditioned, reality of these terms. This happens when the “we” turns into an ideal, one that strives—consciously or unconsciously—to erase difference, either by assimilating everyone into the collective or by eliminating those who do not fit.

Difference is part of the human condition; we can never resolve or dissolve it (nor should we want to). Studies show, for example, that racism is not solved by superficial kinds of tolerance (which can, in fact, provoke the opposite: e.g., resentment), but by engagement, which is always risky (see e.g., Blommaert and Verschuere 2002). Between the extremes of radical alterity and exhaustively knowing one another, Audre Lorde (1984), Luce Irigaray (1984), and others (e.g. Grosz 2011) make the point that the fertile ground for interactions and for ongoingly becoming in our knowing each other is *difference*. Difference is “a marker of the

human condition rather than ... a problem to be solved” (Giligan 1993, xix)—“a fund of necessary polarities between which our creativity can spark like a dialectic” (Lorde 1984, 112). Difference, not as good in itself, nor as something to be avoided, downplayed, or eliminated, but as potentially generative of relating and transformation. The art is not to strive for a sameness and stasis that can hide in the collective, i.e., to “merely tolerate” difference (Lorde, *ibid.*), but to let each other be and become in and through the unerasable fact of difference. Not to let each other go—and not to eliminate difference, but to work with it as the life force that it is.

5 Ethical Reality as Configurations of Knowing and Becoming

Notions of becoming have been lurking in the enactive approach from the start. Francisco Varela reflects on how his ideas began to turn in the 1980s from abstract principles of biological autonomy, to a conception of agent-environment co-definition through a history of mutual transformations (Varela 1994/2011). The concept of adaptivity brings together systems thinking with aspects of temporality, including historicity (Di Paolo 2005). More recently, ideas of becoming play increasingly central roles in theorising about language and human knowing (Di Paolo et al. 2018; Di Paolo 2020; De Jaegher 2019). Enactive theory takes seriously both the ever-changing and entangled nature of events and the lived experience of those involved in them. Human beings are concrete bodies, who interact with each other in intricate ways, have histories together, and individualise out of and with their environments. Bodies maintain, reshape, and shed meaningful ways of interacting, on the basis of what matters to them as they grow, as they metabolise and incorporate, as they meet and interact with others, whom they transgress and are transgressed by.

It is fitting that these developments go together with an interest in the complementarities between enaction and Gilbert Simondon’s philosophy of individuation. Resonances between the two schools have begun to be identified (e.g., Dereclenne 2019; Di Paolo 2020; Thompson 2011) and it is still early days.

One such resonance concerns Simondon’s reflections on the ethical relevance of his philosophy of individuation (Simondon 2020; Landes 2014). A given situation can involve all kinds of individuation processes (physical, organic, psychic, collective) and in all cases a concrete relation holds between already individuated patterns and the existing field of potentialities for further individuation, what Simondon calls the pre-individual.² This allows Simondon

to introduce a distinction between norms and values: “norms could be conceived as expressing a definite individuation and consequently as having a structural and functional meaning on the level of individuated beings. On the contrary, values can be conceived as linked to the very birth of norms, which expresses the fact that norms emerge with an individuation and last as long as this individuation exists as an actual state” (Simondon 2020, 376). Accordingly, norms concern the logic of current metastable patterns of individuation, as in the maintenance of bodies and milieu (involving both individual and pre-individual phases). Bodies act and their acts form networks of possibilities of becoming. A concrete situation can move from a current metastable configuration to a new metastable configuration, affecting the individuation of the bodies involved. In addition to the norms of a metastable situation, acts also have value corresponding to potential transitions from a current metastable state to future ones. “The value of an act is not its universalizable nature according to the norms that it implies, but the effective reality of its integration in a network of acts that becoming is. This in fact concerns a network and not a chain of acts; the chain of acts is an abstract simplification of the network; ethical reality is indeed structured in a network because there is a resonance of acts with respect to one another, not by way of their implicit and explicit norms, but directly in the system that they form” (Simondon 2020, 377–78).

Ethical reality, the facticity of values and the value of facts, is always concrete for Simondon. Individuating systems in relation open the possibility of new metastable states to which they can transit. These transitions are not in themselves normative because they are open; they follow no “algorithm”. But they have or express values, the relation between current and potential states. Ethics for Simondon is the exigency according to which a meaningful relation exists between norms and values, between current and new potential metastable situations. The value of an act is not something that expresses a good in itself, it is not transposable across different situations. It is instead its participation in a meshwork of other acts, which jointly define the direction (*sense*) of becoming. Thus, an act is moral according to the measure that it embodies a power of becoming together with other acts (including, *a fortiori*, the acts of others). A

Footnote 2 (continued)

tialities of the medium find a new structure with lower energy levels. The propagation of this process of individuation that occurs at the surface of the crystal is called transduction. The crystallized phase is the formed individual, and the remainder of potentialities in the associated milieu (the solution) is the pre-individual. For organic individuation, the process is ongoing, involving a renewal of pre-individual potentialities, unlike crystallization which eventually runs down when the potentialities are used.

² Simondon’s canonical example of physical individuation is the formation of crystals in a super-saturated liquid solution. A seed or imperfection triggers a process of crystallization whereby the poten-

non-moral act is lost in itself, closed to becoming in relation; a loss of becoming. An immoral act, which Simondon doubts whether it can be classified as an act at all, is one that destroys the significations of other acts, past and future, and introduces a confusion preventing other acts from assembling into webs of meaning (ibid., 378–379).³

Simondon expresses these brief reflections conceiving of acts as they fit in his philosophy of individuation, i.e., primarily as triggering events that initiate transformations in body and milieu, and release pre-individual potentialities. Values are expressed in other aspects of action too, such as general attitude, mood, and style. These modal aspects affect the way an act resonates within a current ethical situation. A helpful remark can repair the confidence of a friend who is feeling insecure, while the same remark uttered sarcastically can have the opposite effect. These aspects transcend single acts; one may feel generally despondent, or courageous, or ironic, or hopeful in a given situation. In case we may read Simondon superficially and think he is merely stating that acts are moral or not according to their consequences, we should note that, following his logic, the effect of acts and their associated attitudes is not only in triggering transformations, but also in the cumulative “charging up” of pre-individual potentialities. A meeting of low-spirited people has different (usually narrower) potentialities for becoming than a meeting with enthusiastic participants. In this sense, moods, attitudes, and styles contribute to the atmosphere of an ethical situation. Atmospheres (Griffero 2017) relate closely to the pre-individual. Ethical situations present themselves in various degrees of concretization, from acts and events to what we may call ethical atmospheres, involving not just acts but more pathic aspects of agency.

We can understand in these terms the value of diffuse forms of agency and not just of single acts. In bringing forth a conjunction of forms of knowing with the metastable meshwork of acts that constitute ethical reality, the operative

nature of hope and commitment is revealed. In conditions of devastation, we may ask, what use is hope? Hope is to be contrasted with mere optimism by a commitment “to a goodness that transcends understanding” (Lear 2006, 95). Hope works through paths that are not intelligible nor are they simply expected to materialize into already knowable outcomes. It works, rather, like a moral sense that is able to apprehend the signs in reality from which to nourish itself. “Her determination gives me hope.” Hope, courage, and commitment (see also Badiou 2001) effectively transform pre-individual reality, charging and even saturating potentialities that may remain as yet unrealized but still affect the moral sense with which we participate, and hence the way we act. Something similar occurs in acts of participation that elicit transindividual processes of consciousness raising (Freire 1998). By developing what Marxist and feminist philosophers describe as a standpoint (Lukács 1971; Harsock 1983) members of a group together become aware of overarching realities that remain otherwise concealed from immediate individual experience, e.g., realities about systematic oppression. The process itself is not merely epistemic, but is itself a change in the pre-individual potentialities of ethical situations and gives birth to new practices. It literally brings forth a new reality.

Looking at the schematization in Fig. 3, ethical situations exist in the relation between knowing and different configurations of agency and becoming. By adding the Simondonian perspective to this picture, this relation becomes more subtly differentiated through the notion of transitions between metastable situations and the distinction between norms and values. This is how we relate Simondon’s account with the central concern of ethics: to act ethically must involve forms of knowing (incorporated in practices of behaviour, emotion, and reflection) about values in configurations of becoming, i.e., about the good expressed not in the maintenance of a current configuration but in its future (and inevitable) transformation. Landes (2014) explores the simultaneous resonances of Simondon’s ethics with the ethics of virtue and the ethics of care. A “virtuous person would need to cultivate a practical wisdom (*phronēsis*) in order to negotiate values and norms in a productive and responsible way, a non-virtuous person withdraws from relations and becoming, and a vicious person attempts to freeze becoming or to block alternatives within the metastable set of possibilities” (Landes 2014, 160).

An ethical know-how (Varela 1999) demands practical skills beyond, though not excluding, the skills of moral deliberation. A cultivated *moral attunement* is required to apprehend values as concrete metastable situations instantiate and change. Moral attunement is not passive in its apprehension of ethical reality, but can itself transform it, through acts, attitudes, consciousness raising, and so on. Moral attunement calls for the participation of whole bodies in

³ We are thankful to an anonymous reviewer for raising the interesting question of whether Simondon’s account of the difference between norms and values would be applicable to the lives and actions of non-human animals. This question deserves further investigation. On the face of it, Simondon’s description of ethical reality would only require actors that engage in collective forms of individuations, and these need not only be human beings (we can think in particular of species where social life is manifested in networks of affect, mutual action, and different kinds of bonds). It can be argued (but it is not clear Simondon adopts this perspective explicitly) that what makes our acts ethical is also the extent to which they are imbued with knowledge or awareness of their value. This, in the human case, is already an attribute of human acts (the extent to which we know or should know about their consequences). Arguably, most (if not all; this is debatable) acts of non-human animals are not like this, so they would not (typically, particularly in their natural settings) be ethical agents (which is a different question from whether they are objects of human ethical concern).

ways that cannot be wholly achieved by acts of deliberation since these acts by definition must abstract and universalise the concrete ethical reality from which they emerge. Moral attunement cannot be exhausted by reflection and rationality and ultimately demands immersion and participation. Transition to a new metastability is open-ended, and while deliberation on past or imagined experiences is undoubtedly useful, it is incomplete. The unrealised pre-individual potentialities currently existing affect whole bodies more directly. They affect not only bodies in their vulnerability, but their mutual relations as well, which operate as “value-sensing webs” disclosing and giving rise to ethical relevance in their timing, intensity, rhythms, and resonances. Thus conceived, moral attunement is a transindividual and often socially enacted skill, as in the already mentioned case of developing a standpoint. The cultivation of ethical know-how and, consequently, of virtue always involves participatory engagements. We can thus speak of an ethics of critical participation (Di Paolo et al. 2018).

Conceiving of virtues in participatory terms brings us back to the discussion in the previous section and reaffirms a connection between virtue ethics and ethics of care. To care ethically is to be morally attuned to *differences* in becoming and to act in ways that cultivate, nurture, protect, and/or repair configurations of becoming according to values. Caring for the sick and vulnerable is to help them revert a narrowing in their world. Caring for growth is to promote the value of openness and expansion in possibilities of becoming. Caring for the oppressed is to act so as to destroy patterns of blocking and neglect towards actors whose becoming is systematically thwarted. And so forth.

In an example of how caring is predicated on changing configurations of becoming and involves being in tune with the multiple ways in which acts and attitudes resonate within an ethical reality and promote or negate certain virtues, Nel Noddings remarks that “the maintenance and enhancement of caring [is] the primary aim of education” (Noddings 2013, 174) and therefore one must draw attention precisely to the quality and relations of educational acts, and not merely their instructional content. “We cannot separate means and ends in education, because the desired result is part of the process, and the process carries with it the notion of persons undergoing it becoming somehow ‘better.’ If what we do instructionally achieves the instructional end—A learns X—we have succeeded instructionally but, if A hates X and his teacher as a result, we have failed educationally. A is not ‘better’ as a result of our and his efforts” (ibid.).

While remaining distinct, ideas of caring, cultivating virtue, and developing the skills of critical moral attunement in and through participation across difference are internally linked in the enactive approach, each concept inhabiting different regions of our schematization and directing our attention to the next.

6 Discussion

Given our insistence on the concrete nature of ethical reality, it is fair to ask: what do all of these ideas mean for struggles on the ground? Our hope is that gaining practice with the complexities of non-dichotomous thinking prepares us to face ethical problems more fluidly and to recognize and dismantle the blocking effects of hard epistemic distinctions. Demonstrating this in specific cases exceeds the scope of this paper, nor can it be properly done without the participation of those already working on concrete problems. Here we simply mention a few cases and signal the contributions enactive ideas could make.

Our view of difference as a generative reality is already informed by ethical and political questions. These questions concern the problems of interacting across differences and across the power inequalities that accompany them. We find these problems in scientific approaches to health and mental health, in the call for decolonial epistemologies, in discussions of gender and the lived experiences of trans and genderquestioning people. In these varied realms, the issue is to ask what the conditions and realities are, here and now, of people knowing, being, and doing together. How can these activities be let-be, that is: engaged with, but without reaching the points of under- or overdetermination? What discourses are blocking participation? We need to start from the knowledge that we are all different bodies. This includes the ones doing the knowing. *They* must also be aware that what they see as differences may not be the same as the differences others see.

The strongest appeal to this is perhaps made by people often considered as “on the other side” of our knowing, for instance autistic people (e.g., Milton 2012). Medicine and psychology, the two fields that have taken it upon themselves to “deal with” autism, have often foregone proper engagement with autistic people. Autistic people have been made into objects of research. However, through consciousness raising, autistic people are asserting themselves into the conversation, into being seen and heard. This growing wave of self-advocacy compels us all to recognize more and different participants, to listen to people previously not heard, and for the conversation to be led by those who are experts from experience. This is precisely an ethical demand for new forms of moral attunement to drive major shifts in scientific discourse, in the design, execution, and interpretation of research, and in deciding where responsibilities and accountability lie. It requires learning (anew) to trust the processes of participation, of engagement, and one’s own capacities through this transformation (De Jaegher et al. 2017; De Jaegher 2021). Some parents know this: they engage and

participate sensitively (see for instance the study of dialogue between a mother and autistic child in Sterponi and Fasulo 2010), and some researchers confront the dilemmas of ethical participation head-on (e.g., Spiel et al. 2020). This shift is necessary, in a knowledge landscape where (still dominant) deficit-based approaches to autism do not take the lived experience of autistic people into account (Bervoets and Hens 2020), and where autism research is often uncritically unaware of various intersectionalities (Brown et al. 2017). The lesson is that participation is a minefield and yet it needs to be done, and done care-fully.

The schematization of enactive ideas offers ways of potentiating interventions in struggles where changing conceptions of human bodies are at stake. From concerns about CRISPR gene editing to disputes over the medicalization of different ways of becoming, from attitudes towards “disability” to struggles against political domestication by narcotizing media, from pervasive demands on attention and infinite distraction to alienating mind-numbing labour, ethical struggles continue to be informed on all sides by reductionist, mechanistic, and dichotomous conceptions of human bodies. Arguments surrounding controversial issues such as abortion or the struggle for recognition of transgender people continuously devolve ground to polar forms of biologism and neurocentrism. In sharp contrast, bodies in the enactive approach inhabit the whole of the dynamic triangle of our schematization. It is in the complex entwinement of their organic, sensorimotor, and social dimensions that answers to questions about the truth and authenticity of agency and existence must be sought. Enactive ethics provides resources for articulating these questions in specific problem areas and some studies are starting to do precisely this (e.g., the analysis of agency in the mother-fetus relation during pregnancy by Martínez Quintero and De Jaegher 2020, or of love and desire by Candiotta and De Jaegher 2021).

The enactive conception of value and moral attunement is inherently non-individualistic. Ethical reality always involves communities of bodies. It also foregrounds how communities relate with the more-than-human world. Marxist, feminist, decolonial, and indigenous critiques of conceptions of nature constantly remind us of the internal relations between humans and the rest of the planet (Haraway 2016; Kimmerer 2013; Merchant 1980; Shiva 1989; Soper 1995). Even well-meaning discourses about global emergencies tend to obviate such entwinements and search instead for technical solutions that perpetuate the attitudes that created the problems in the first place. Jason Moore (2015) describes the relation between humanity and nature as one of “double internality,” whereby each end of the relation makes the other. The concepts of individuation and becoming we defend support such statements. Humanity is shorthand for humanity-partly-produced-by-nature and Nature shorthand for nature-humans-participate-in. Networks of biological

processes interlace with regional practices in what Haraway (2016) calls sympoietic (“making-with”) webs (see also Kohn 2013). Such networks can go global and involve multiple cultures, values, economic and political systems, migration laws, labour regulations, and ecosystems, as shown in Tsing’s (2015) study of the tracking, commercialization, and consumption of matsutake mushrooms. Our schematization helps approach these inordinately complex webs of life and mind and the political tensions that inevitably arise in them. Conceiving of knowing through engaged letting-be and of values as changing configurations of becoming resonates with Haraway’s call to “stay with the trouble” and form alliances across species (“making kin”), reshaping our community of shared destiny and redrawing boundaries in codependency with the more-than-human world.

7 Conclusion

We have placed enactive ideas in relation to the philosophical poles of knowing, being, and doing. This has allowed us to look in detail at central questions for ethics such as contrasting the generative powers of alterity and difference and establishing the reality of ethical values defined as the relation between forms of knowing and changing configurations of becoming. In recognizing the situatedness and openness of concrete ethical situations, we have proposed the concept of moral attunement as a transindividual form of situated knowing, socially constituted and often socially enacted. We have also indicated, but not worked out, initial reflections on how to take this conceptual work to the land and the streets, a task that will require engaging those already at work on, and with lived experience of, such specific issues.

We are aware that much of what we have said points in directions others have already indicated, particularly as regards our views of participation and openness to change. Reflecting on our relations with nature, Robin Wall Kimmerer acknowledges calls to “leave nature alone” motivated by recognising the damage we inflict on the more-than-human world. Speaking as a biologist and as a member of the Citizen Potawatomi First Nation, she acknowledges that “[t]here are places where that’s absolutely true and our people respected that.” “But,” she adds, “we were also given the responsibility to care for land. What people forget is that that means participating—that the natural world relies on us to do good things. You don’t show your love and care by putting what you love behind a fence. You have to be involved. You have to contribute to the well-being of the world” (Kimmerer 2013, 363). Kimmerer’s words express one of our messages: participation is necessary, even if sometimes you temporarily need to withdraw because of the damage you are doing. Another of our messages is also well expressed when Kimmerer quotes Joanna Macy, saying “action on behalf of

life transforms. Because the relationship between self and the world is reciprocal, it is not a question of first getting enlightened or saved and *then* acting. As we work to heal the earth, the earth heals us” (ibid. 340). In other words, knowing occurs in acting, and when we participate, we are transformed ourselves. This, then, is an ethic of participation: to know how, in acting and becoming together, we transform and are transformed.

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