RADICAL ENACTIVISM
AND SELF-KNOWLEDGE*

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RESUMO *Proponho um meio-termo entre um modelo perceptual de autoconhecimento, segundo o qual os objetos de autoconhecimento (as crenças, desejos, intenções e assim por diante) são acessadas mediante um tipo de mecanismo causal, e um modelo racionalista, segundo o qual o autoconhecimento é constituído pela agência racional. Por analogia ao papel que o exercício de habilidades sensório-motoras desempenham no conhecimento perceptual racionalmente fundado, autoconhecimento é entendido como um exercício de habilidades que são orientadas pela e orientam a ação. Essa imagem satisfaz a condição de acesso privilegiado que geralmente é associada ao autoconhecimento sem implicar uma lacuna intransponível entre autoconhecimento e conhecimento de outras mentes.*

Palavras-chave *Enactivismo radical, autoconhecimento, autocegueira, transparência.*

ABSTRACT *I propose a middle-ground between a perceptual model of self-knowledge, according to which the objects of self-awareness (one's beliefs, desires, intentions and so on) are accessed through some kind of causal mechanism, and a rationalist model, according to which self-knowledge is constituted by one's rational agency. Through an analogy with the role of the exercises of sensorimotor abilities in rationally grounded perceptual knowledge, self-knowledge is construed as an exercise of action-oriented and action-orienting*

abilities. This view satisfies the privileged access condition usually associated with self-knowledge without entailing an insurmountable gap between self-knowledge and knowledge of other minds.

Keywords *Radical enactivism, self-knowledge, self-blindness, transparency.*

1. Know-how and abilities

Radical enactivism about perceptual cognition is the view that our perceptual access is primarily constituted by our activities in our environments (Noë, 2004; Hutto & Myin, 2013). This view is *radical* because it eschews the ubiquity of representation in cognition – we do not need to posit representational vehicles and semantically articulated information in order to explain how we come to know our environment. Rather, perceptual cognition is explained through the dynamical engagement with the environment by the exercise of sensorimotor abilities (Hurley, 2001), that is, the activities of collecting sensory information from the environment and enabling it for further motor engagements in loop. So understood, perception is *action-oriented* and action-orienting. Thus "perception and action are of the same logical kind, and are mutual, reciprocal and symmetrically constraining" (Turvey *et al.,* 2008, p. 174). Moreover, given that the actions one can undertake are constrained by one's bodily dispositions, radical enactivism is within the research program on embodied cognition.

Embodied cognition enjoys good empirical support. The Haken-Kelso-Bunz model of social coordination (Haken *et al.,* 1985. For a broader application of this model, see Chemero, 2009, chapter 5) and Thelen's work on A-not-B errors (Thelen *et al.,* 2001) are some of its paradigms. However, I am not going to present the arguments for embodied views of cognition here. Instead, I am going to assume the correctness of radical enactivism about perceptual cognition and explore the possibility of developing a radically enactive approach to *self-knowledge,* that is, knowledge about one's own mental states.[1] Similar accounts have recently surfaced the literature about knowledge of other minds (as we will see below), so it stands to reason that we may come to know *our own minds* in an enactive way as well. Before offering a radically enactive account of self-knowledge, I want to highlight two key aspects of perceptual cognition

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1   It remains an open possibility to develop a radically enactive approach to the knowledge about *the self. I am not going to explore it here.*

in this framework, for this will be useful in situating the present account in the ongoing debate about self-knowledge.

The first point is about the construal of perceptual *knowledge*. If perception is a source of knowledge, and if the radical enactivist holds that perception is essentially a contentless process, then perceptual knowledge has to be identified, primarily at least, as a kind of *know-how*, and not as a kind of propositional knowledge (Rolla, 2017). Accordingly, there is a *prima facie* identity between exercises of sensorimotor abilities and displays of practical knowledge: it is intuitive to say that if one is able to Φ, one knows how to Φ, and if one knows how to Φ, one is able to do so. And the same seems to hold for the specific case of sensorimotor abilities. Unfortunately, matters are not as straightforward. As Carr puts it:

> There is nothing in the least paradoxical about describing an elderly and arthritic piano teacher or a temporarily incapacitated gymnast as knowing how to do whatever they cannot currently perform. […] An agent may perform a task of considerable complexity or sophistication without knowing how he does it. A novitiate trampolinist, for example, might at his first attempt succeed in performing a difficult somersault, which although for an expert would be an exercise of knowing how, is in his case, merely the result of luck or chance. Since the novice actually performed the feat one can hardly deny that he was able to do it (in the sense of possessing the physical power) but one should, I think, deny that he knew how to perform it (Carr, 1981, p. 53).

Carr's first point is that in some unusual circumstances, one can know how to Φ without being able to do so. That seems to entail that having an ability to Φ is not necessary in order to know how to Φ – especially because abilities are highly situated in environmental and bodily factors, whereas procedural knowledge could, in principle, be stored in one's memory regardless of such factors. But that argument is too swift. In particular, it does not compel us to say one *does not have the ability to Φ*. Maybe a more accurate description is that elderly and arthritic piano teacher is currently prevented from exercising her abilities, given some external constraints, but not that she lacks those abilities. Moreover, if her condition is permanent, so that she *cannot perform* a piano piece, we may say that she does not have the relevant abilities, but then the only way for her to manifest her know-how would be by invoking a very detailed description of how to play said piece. This is far from impossible indeed, and insofar as there is an overarching unity in our concept of knowledge, a transition from successful practical engagement to accurate description must be possible. But it is also widely unrealistic to suppose that our practical knowledge is always conveniently open to such detailed descriptions. The central ideal in the radical enactivist framework is that contentful perception is not the rule but the exception.

Now, Carr's second point does pose a more interesting problem. The idea that one is able to Φ without knowing how to Φ seems straightforward in the case of the inexperienced gymnast that performs a difficult routine at her first attempt. Although the example sounds a bit far-fetched, we can grant its plausibility. But then the situation is the following: in *hindsight* we might say that the amateur gymnast was able to Φ, but would we expect her to Φ again if she tries to do so in similar circumstances? If we answer affirmatively, then we must ascribe to her the ability to Φ, so that she safely achieves Φ in appropriate circumstances – in the sense that she could not easily fail to Φ. That, however, does not seem to fall short of *knowing how to Φ*. We may be tempted to say that she merely does not *know that* she knows how to Φ (maybe because she is a natural and never thought about it). If, on the other hand, we do not expect her to successfully perform in the future, her success in Φing at her first attempt was not the exercise of an ability, but sheer luck. She was able, in that particular circumstance, to accomplish Φ, but this is a very weak sense of 'being able' and there is very little credit in her performance. We would not ascribe her the *ability* to Φ in the future based solely in that observation. We cannot ascribe the possession of an ability to an individual solely by observing an isolated case of putative achievement, because cases like this may be positively affected by luck, whereas having an ability to Φ has a normative character: we expect a consistent behavior of someone who is able to Φ, namely, successfully Φing in similar circumstances.[2]

2. Radical enactivism and the emergence of rationality

The second key aspect of radical enactivism I want to discuss is the conception of rationality it implies. The traditional, widely accepted view about rationality holds that there is a distinction between practical and epistemic rationality. Whatever procedures are relevant for rational *actions*, they are distinct from the procedures relevant for rationally grounded *beliefs* (they can, of course, be similar or analogous but only incidentally). Importantly, this view also takes rationality to be closely related to reason. Specifically, being

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2   There is one last line of reasoning that suggests a close relation between knowing how and having the relevant ability. Claims of know-how carry what we may call *practical implicatures:* if you claim to know how to Φ you must be able to Φ – in the sense that your success in Φing must be creditable to you. Similarly, ascriptions of propositional knowledge usually carry the conversational implicatures that one is able to properly support the relevant claim, and that is the reason why epistemological internalism exerts such a powerful grip. Defeasible as this evidence may be – for pragmatic implicatures do not necessarily translate in accurate analyses –, it does hold true in everyday scenarios.

epistemically rational is usually construed as being able to perform logically sound inferences, to assess reasons in the face of new evidences, to extract the correct conclusions, to achieve true beliefs and avoid false ones. When it comes to practical rationality, practical reasons should motivate decisions and actions through deliberative processes. Therefore, rationality is traditionally taken to be a capacity to articulate *contentful* states, such as beliefs. Clearly, the traditional view suits perfectly a classical computational theory of cognition, according to which cognition is the manipulation of internal representations (Ramsey, 2007). In that framework, rationality may be taken to be just the application of the relevant rules in the manipulation of the relevant symbols.

The traditional view, however, does not fit radical enactivism very well, at least insofar as we assume that rationality is operative in perception. That is, if the way an organism acts and perceives its surroundings can be said to be rational and normatively constrained. If we deny that rationality is operative in perception, we face the problem of explaining how perception could carry epistemic power to higher cognitive processes, given that these two domains would not share a common level of interaction (McDowell, 1994). According to radical enactivism, our fundamental mode of *epistemic* access to our immediate environment consists in our *actions*, so a stark divide between practical and epistemic rationality is a nonstarter. Secondly, if perceptual cognition is not contentful, and if rationality goes "all the way down" to perception, rationality cannot be conceived exclusively as an articulation of reasons. Should we thus abandon the traditional view in its entirety? No, I submit, this is far too radical, especially because we can preserve some of the genuine insights pertaining to the traditional view. At its core it is the idea that rationality promotes success (epistemic and practical), and that is why it is so dear to us: it enables us to distinguish successful achievements from merely lucky guesses. In the traditional view, when it comes to epistemic rationality, this translates to the achievement of true, well-grounded beliefs (and the avoidance of false and unjustified beliefs). So, at the very least, rationality is an ability of certain agents to achieve specific goals. What we *must* reject is that the articulation of contentful states is all there is to rationality (Rolla, 2016). Successful engagement with the environment, even in the absence of reasons, is a rational endeavor if we shift the focus to a more inclusive view of rationality.

There remains the problem of explaining how rationality comes about in the framework of radical enactivism and embodied cognition more generally. First, as we have seen, we cannot take rationality to be the application of rules hardwired into the cognitive agents. To make matters worse, we simply cannot

find rationality *at the physical level* (and the same goes for other psychological states). The most plausible explanation for the ontology of rational processes and events is that rationality is an emergent quality of certain autonomous systems. Briefly, emergent qualities are causally effective qualities that occur at a level *l* of description of a given system S and cannot be reduced to qualities found in a level *l-1* of S. Importantly, emergent qualities exert downwards causation as well as same-level causation (Humphreys, 1997). That is why rationality operates at the higher levels of cognition, wherein contentful states (such as planning, deliberating and inferring) are articulated, but it also informs and guides behavior top-down, orienting more basic levels of cognition such as perception and action. However, as an emergent quality, rationality is neither reduced to, nor does it supervene upon, the physical and chemical levels. Importantly, autonomous systems are "a network of co-dependent, precarious processes able to sustain itself and define an identity as a self-determined system" (De Jaeger *et al*., 2010, p. 441). This qualification is required because we are inclined to ascribe rationality exclusively to *agents*, but not to merely reactive creatures (after all, snails can successfully interact with their environment, but it is counterintuitive to ascribe them some form of rationality however minimal it may be). Although not all autonomous systems are agents, the concept of agency implies autonomy, and for the time being this is enough[3]. The overall picture is briefly described by Hurley:

> Rationality might emerge from a complex system of decentralized, higher-order relations of inhibition, facilitation, and coordination among different horizontal layers, each of which is dynamic and environmentally situated (2001, p. 10).

The central ideas developed in these two sessions are: (i) that perceptual knowledge is primarily a practical engagement, which is intuitively construed as a kind of know-how displayed by the exercise of sensorimotor abilities, and (ii) that there is no stark divide between epistemic and practical rationality, and that rationality is not restricted to (although it does include) the articulation of contentful states, such as reasons. With these remarks in mind, we are able to develop the general lines of a radically enactive approach to self-knowledge.

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3   Naturally, we just postpone the problem: what are the criteria for agency? I take for granted that there are such criteria, or that at least we can identify them through family resemblance, but I cannot engage in the task of presenting them here.

3. Shoemaker against the perceptual models

According to the radically enactive account, self-knowledge is similar to perceptual knowledge in some important ways. I will explore that by addressing the influential arguments presented by Sydney Shoemaker against construing self-knowledge by analogy or approximation to perceptual knowledge. His first argument consists in making it explicit that self-knowledge does not conform to the "stereotype of sense-perception underlying what I am calling the 'object perception model'" (1996, p. 204). He goes on to list the features commonly associated with perceptual knowledge, the most important of which, for our purposes, are that "sense perception provides one with awareness of facts […] by means of awareness of objects"; that "sense perception affords "identification information" about the objects of perception"; that "perception of objects standardly involves perception of their intrinsic, nonrelation properties"; that "objects of perception are potential objects of attention"; that "perceptual beliefs are causally produced by the objects or states of affair perceived"; and, finally that "objects and states of affairs […] exist independently of the perceiving of them" (1996, pp. 205-206).

We can concede Shoemaker's point that self-knowledge has none of these features (at least in normal cases), without entailing that self-knowledge is not, in some respects, analogous to perceptual knowledge. This is so because, as Shoemaker makes clear several times, he has the "act-object" account of perceptual knowledge in mind. Radical enactivism does not imply this ontology about the objects of perception. Importantly, the talk about 'objects of perception' is misleading, for what we have in mind are their intentional objects, and not discrete entities with well-determined qualities. By the same token, 'intentional contents' might suggest that knowledge has a representational structure, which is not the case for the radical enactivist. In what follows, I call the stuff that self-/perceptual knowledge is about its 'intentional constituents', so we can avoid the ambiguity of talking about *objects* and *contents.*

According to the radically enactive account, the intentional constituents of perceptual cognition are the *possibilities of action* elicited by the environment, *affordances* in Gibson's phrase, because our activities constitute our perceptual states: we first and foremost act in the environment by exercising our sensorimotor abilities, abilities that convey sensorial information through movement and motoric information through the senses. Therefore, we are not primarily aware of facts, nor objects. Of course, we *may* come to perceive stuff around us as discrete objects with such-and-such qualities, but this only happens after some further intellectual engagement. Importantly, the identification information we use in perceiving our environment is not

primarily contentful, that is, semantically articulated. The informational structures relevant for identification are the constancies and contingencies we discover through our actions (Noë, 2004; Gibson, 2015), for we track aspects of our environment through the exploration of these structures, not by representing objects in internal models.

As for the independent existence of intentional objects, the matter is a bit trickier. No radical enactivist would open-heartedly embrace epistemological idealism, but if our perceptual cognition is primarily about possibilities of action, and if the actions we are able to perform are bound to our bodily constitution and dispositions, then the intentional constituents of perception, to some extent, are dependent upon us. Consider the perception of books as *graspable* and *readable* by literate adults, and compare with how mice might perceive books, say, as *climbable*. This difference, however, does not entail that books themselves exist only in relation to us. Maybe another way of putting it is that we perceive books *as* readable, while mice perceive books *as* climbable, due to the difference abilities involved, but the books themselves exist independently of our actions. Thus, Shoemaker is not entirely wrong in his assessment, but there is a minimal (non-idealist) sense in which the intentional constituents of perception are dependent upon our bodily configuration.

To summarize my argument so far, Shoemaker misses the point by arguing that self-knowledge does not conform to the stereotype of perceptual knowledge. Radical enactivism is not committed to that stereotype either, so a proponent of such a view can still maintain that self-knowledge is analogous, in important ways, to perceptual knowledge.

Shoemaker's other argument (1996, pp. 25-49) is much more interesting, because it boils down to how we should construe the relation between self-knowledge and rationality. The argument is directed against what Shoemaker calls the *broad perceptual model*, which underlies Armstrong's view of self-knowledge (1968). That view has two tenets: we access our mental states through some kind of causal mechanism (whereas this does not necessarily conform to the stereotype mentioned above), and those states exist independently of the possibility of our access to them. Shoemaker's initial claim is that if self-knowledge is anything like perceptual knowledge, then it is possible to conceive of someone who is *self-blind*. A self-blind person is someone who "has the conception of the various mental states, and can entertain the thought that it has this or that belief, desire, intention, etc., but which is unable to become aware of the truth of such a thought except in a third-person way" (1996, p. 31). In other words, the self-blind individual (let us follow Shoemaker and call him George) cannot perceive introspectively his

own mental states, like the blind cannot perceive visually their environment. What is more, Shoemaker considers that George is in no way different from regular people when it comes to his rationality.

> [As] I have defined self-blindness, it is supposed to be like ordinary blindness in not entailing any *cognitive* deficiency. The person who lacks sight can in principle be equal in intelligence and rationality and conceptual capacity to any sighted person. Likewise, the person who lacks access by inner sense to some kind of mental state, and so is self-blind with respect to that kind of mental state, can in principle be equal in intelligence, rationality and conceptual capacity to someone who is not self-blind (1996, p. 236).

The argument, then, takes the form of a *reductio*: (a) if self-knowledge is analogous to perceptual knowledge, because its intentional objects exist independently of our access to them, it implies the possibility of someone being self-blind. However, (b) given that it is impossible to conceive of someone who is both self-blind and perfectly rational, it follows that (c) self-knowledge cannot be analogous to perceptual knowledge. This amounts to saying that the broad perceptual model is conceptually mistaken.

In support for (b), Shoemaker focuses his discussion on Moore's paradox. Supposing that George is self-blind, it seems he might be prone to utter paradoxical sentences, such as 'it is raining, but I do not believe that it is'. That seems to be the case because the total objective evidence available to George – what is said in the weather forecast, the fact that people are coming inside wearing wet raincoats, or merely his being in England – supports the proposition that it is raining. However, when observing his own behavior in order to discover "in the third-person way" whether he believes that it is raining, George finds himself wearing shorts and sunglasses, not carrying an umbrella, etc. Nonetheless, if George is *just as rational* as a normal person, he may be perfectly capable of recognizing the self-defeating character of Moore-paradoxical sentences and avoid them altogether. Therefore, "it would appear that there would be nothing in his behavior, verbal or otherwise, that would give away the fact that he lacks self-acquaintance" (p. 36). George would behave exactly like someone who does have self-knowledge. Now, if "everything is as *if* a creature has knowledge of its beliefs and desires, then it *does* have knowledge of them" (p. 34). Therefore, George has self-knowledge, which contradicts the initial assumption. It follows that (b): it is impossible to conceive of someone who is both self-blind *and* perfectly rational.

It is easy to see what the problem with Shoemaker's argument is[4]. By saying that self-blindness does not entail a "cognitive deficiency", Shoemaker is implicitly accepting the traditional view of rationality, according to which rationality occurs at a high level of cognition, say, as the manipulation of representational content in forming beliefs and assessing evidences, thus functioning independently of its perceptual inputs. As we have seen, that is exactly what the radical enactivist rejects! Moreover, that is precisely the problematic assumption underlying Shoemaker's argument. Therefore, the case from self-blindness fails to prove that the broad perceptual model of self-knowledge is conceptually inadequate, as Shoemaker originally intended. The argument should be viewed instead as a reason to reject that rationality works at a level of cognition which is independent of perceptual cognition.[5]

4. The transparency account

Even if Shoemaker's main argument does not succeed, there are ways to vindicate his fundamental intuition, namely: that there is a constitutive relation between self-knowledge and its intentional constituents. This idea is explored by Richard Moran in his brilliant book, "Authority and Estrangement" (2001).

One way to develop the idea of a constitutive view of self-knowledge is to follow Taylor (1985) in claiming that a description of oneself is sufficient to change one's internal states, which is why there is a fundamental asymmetry between knowing oneself and knowing other minds. However, as Moran rightly observes, that view yields counterintuitive results: if Taylor is right, there is a substantial amount of voluntarism and arbitrariness inherent to self-knowledge. Thus, we should be careful not to slide into strong constitutionalism. In order to avoid the self-fulfilling character of self-interpretation without disposing of the insight that self-knowledge is constitutive of its objects, Moran emphasizes the distinction between the *theoretical* and the *deliberative* dimensions of self-knowledge. We do sometimes adopt an observational stance towards ourselves and describe our mental states as if they were objects of a theoretical knowledge, thus suggesting an analogy between self-knowledge and perception (where perceptual knowledge is understood in terms of Shoemaker's object-perception

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4 In a different assessment, Kind (2003) argues that Shoemaker's argument only succeeds if we suppose that self-knowledge is identified with self-acquaintance, so that his conclusion does not follow.

5 That is not to say that those who lack certain perceptual capacities, such as actually blind people, are not rational. For rationality is a quality malleable enough to compensate for specific deficiencies. This allows for successful interactions with the environment through abilities not usually exercised and through the aid of certain mechanisms, such as the walking stick in the case of the blind.

model). In this view, we come to discover what we are thinking about as if our thoughts were previously unknown objects. That, however, is not the correct way to explain the distinctiveness of self-knowledge, for self-knowledge has a *practical* dimension, the deliberative one, which is not purely theoretical or epistemic. Discussing the case of knowing one's own intentions, Moran comments that knowing what one will do is "not an expectation, based on evidence, but an intention, based on a decision" (2001, p. 56). Thus:

> [A] practical or deliberative question is answered by a decision or commitment of some sort, and it is not a response to ignorance of some antecedent fact about oneself […] "Deliberative" reflection as intended here is of the same family of thought as practical reflection, which does not conclude with a normative judgement *about* what would be best to do, but with the formation of an actual intention *to do* something' (pp. 58-59).

For Moran, to answer a deliberative question about what I am thinking is a process whose outcome is a practical commitment, and that provides the link with rationality which is constitutive of self-knowledge. The reason for this is that the resulting judgement conforms to the *Transparency Condition* famously presented by Evans:

> [I]n making a self-ascription of belief, one's eyes are, so to speak, or occasionally literally, directed outward–upon the world. If someone asks me "Do you think there is going to be a third world war?," I must attend, in answering him, to precisely the same outward phenomena as I would attend to if I were answering the question "Will there be a third world war? (1982, p. 225).

As Moran notices, to say that *my belief that p* is transparent to *p* is not to say that the former reduces to the latter, nor that they inevitably have the same phenomenology. Rather, the transparency condition affirms that "a first-person present-tense question about one's belief is answered by reference to (or consideration of) the same reasons that would justify an answer to the corresponding question about the world" (2001, p. 62).[6] Following Byrne's (2005) idea of a transparency rule, Gertler (2010) suggests we construe that idea as a *transparency method*, namely: *If* p, *believe that you believe that* p. However, as noted by Silva Filho (2013), nowhere in Moran's work the transparency claim is described as a *method* or *procedure* to be followed. Thus we should take the notion of transparency *method* with a grain of salt, for it suggests that in order

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6   In this sense, thus, transparency is not to be confused with luminosity (or self-intimation), the notion that one's mental states are given to the individual, that is, one could not fail to form knowledgeable judgements about their presence.

to acquire self-knowledge, we must conscientiously follow a specific procedure. This is too strong, for commits the transparency account with a stringent form intellectualism (however, as we shall see, there is some truth to that criticism). A more modest construal says that our deliberation must *conform* to that rule, as we mentioned above. The central idea is that by being sensitive to the reasons for accepting *p* (and assuming those reasons are supportive of *p*), I come to believe that *p*: my self-knowledge is constituted in the act of engaging in a rational process, which is, on Moran's original idea, understood as sensitivity to reasons. Moreover, the self-knowledge about presently occurring beliefs acquired through this process provides me with a commitment to *p*, which I express through an *avowal* rather than through a description or self-ascription of my own thoughts.[7] Importantly, the transparency condition satisfies a desideratum of any non-behaviorist account of self-knowledge, namely, its *immediacy* – for self-knowledge is the result of avowing our beliefs, and not of inferring their presence through observation. Another important consequence of this view is that it explains why the theoretical stance and the inner-sense mechanism that stance posits cannot be the fundamental source of self-knowledge, for beliefs acquired through a *quasi*-perceptual process cannot be avowed:

> A belief that cannot be avowed is thus cognitively isolated, unavailable to the normal processes of review and revision that constitute the rational health of belief and other attitudes. Thus, we could explain why it is that the capacity not just for awareness of one's beliefs, but specifically awareness through avowal, is both the normal condition and part of the rational well-being of the person (Moran, 2001, p. 108).

5. Know-how and self-knowledge

Moran's account captures an important insight about self-knowledge, *viz.*, that it cannot be a purely theoretical stance towards one's thoughts, because there is a practical dimension which is essential to knowing oneself. Hence Moran's claim that self-knowledge, "is not purely a theoretical or epistemic matter" (p. 56). On the other hand, however, the emphasis put on deliberative processes and on the articulation of reasons in forming beliefs gives rise to a plausible line of criticism, that is, that Moran's account assumes a strong form of intellectualism (Gertler, 2010), and that it confuses beliefs and judgements

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7   The scope of deliberative self-knowledge is initially restricted to present-tense beliefs, but Moran later tries to expand the view to include the occurrence of all judgement-sensitive attitudes, such as certain desires (2001, pp. 115-120).

(Cassam, 2010). Gertler argues that since deliberation is a diachronic process, the end-result is the formation of a belief or judgement that was not there when the deliberation initially took place. The answer to whether I believe that *p* at *t* by following the transparency method may result in the formation of a judgement that *p* at *t+1*, but this does not answer whether I *believed* that *p* when the question arose (at *t*). Similarly, Cassam points out that judging that *p* after considering the reasons for accepting *p* does not guarantee that I believe that *p*, and could only do so on the basis of some further evidence, say, that judgements normally imply beliefs. This would imply that self-knowledge is not epistemically immediate, for it would require an inferential structure. The alternative is to claim that beliefs simply are judgements, which is, again, an intellectualist move.

Charges of excessive intellectualism point in the right direction, and it is easy to see why. Moran implicitly subscribes to the idea that rationality consists in the articulation of certain contents (one's reasons for believing that *p* – or, at the very least, the sensitivity to those reasons), which is manifested in the deliberative process that gives rise to a judgement. The radical enactivist is entitled to reject that rationality is *necessarily* an articulation of, or sensitivity to, contentful states. But to follow the radically enactive line suggests that self-knowledge is a display of an ability or set of abilities, a form of *know-how*. Thus, we can agree that self-knowledge has a practical dimension, as Moran rightly notices. But it does not follow that self-knowledge does not have an epistemic dimension as well as a practical one, at least insofar as we do not equate that epistemic dimension with a descriptive or observational stance that characterizes propositional knowledge.

By combining a radical enactivist view with a constitutive/transparent account of self-knowledge, we are able to preserve Moran's insight that there is an outward direction of self-knowledge without entailing some form of excessive intellectualism. For self-knowledge is explained, in this combined account, through the fact that mental states present themselves as *action-orienting*. By taking the presence of a mental state to be action-orienting, and taking the access to a mental state as *knowing how* to engage in the relevant actions, we also preserve the idea that self-knowledge has a fundamental practical dimension which is not necessarily the outcome of a deliberative process. The rationality which is constitutive of self-knowledge thus promotes a successful engagement with one's own beliefs, inclinations, desires (and so on) through one's actions, and not exclusively through deliberation. Importantly, as critics have pointed out, deliberative processes do form well-grounded judgements, and we may concede that those judgements qualify for self-knowledge, but only because they exhibit a very specific kind of ability, namely, knowing how to reason.

Thus, the link between self-knowledge and rationality lies first and foremost in the possibilities of practical engagement that are open to a person who knows how to access her own mind. To say that self-knowledge is action-oriented is to say that it is essentially *prospective*. I suggest we take self-knowledge to exhibit the following structure in its prospective direction: *for a mental state M of S, S has knowledge of the presence of M if S knows how to engage in M-related actions* (where *knowing how to engage* in a given action means being able to accomplish it).

But that is not the whole story, given the very radical enactivist idea. If the relations we maintain with the environment and other persons are dynamic, the resulting picture is that the occurrence of mental states is dispersed through the events unfolding through our actions. That means that the course of actions an individual takes shapes its mental events. Mental states, therefore, are *action-oriented* as well. So self-knowledge is at least partially *retrospective*, in the sense that it takes into account the relations between our past behaviors, dispositions and belief-forming inclinations. We must be sensitive to our particular history in order to know how we think. This is why self-knowledge is sometimes hard to achieve, despite its appearance of effortlessness, for it involves learning about oneself, learning how one acts and reacts to determinate circumstances. We can explain the misleading appearance of lack of effort sometimes associated with self-knowledge as follows: consider the act of tying your shoelaces. It seems easy enough, most adults are able to do it effortlessly. But to master this very simple act took us patience and exercise when we were children, and it can be something very difficult to achieve for someone with motor impairments. Similarly self-knowledge is not *given,* it is the outcome of a skillful access.[8] It may seem that I know how I feel, say, with jealous, without much effort, but to access the presence of jealously is something I have mastered by tracking my behavior in relevant circumstances. In the retrospective direction, *for a mental state M of S, S has knowledge of the presence of M if S knows how her actions led to M.*

The prospective and retrospective directions are tied together as follows: *for a mental state M of S, S has knowledge of the presence of M if, and only if, S knows how to engage in M-related actions and knows how her actions led to M.*[9]

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8   Thus, this account does not imply that mental states and events are luminous – in fact, it is inconsistent with luminosity so conceived. Our minds can be, and frequently are, completely opaque to ourselves if we lack the requisite know-how.

9   Some mental states clearly are open to the assessment from a second-order, such as jealousy – "do I want to feel jealousy? Should I carry out whatever actions that ensue the persistence of this mental state?".

To consider an example, let us borrow once more from Evans. Knowing that I believe that a third world war is going to happen is knowing how to proceed in such circumstances (build a shelter, stock canned foods, etc.) and effectively doing something in accordance. Because my actions unfold over time, I am able to access my belief about the third world war by knowing how my actions led to that belief. Although not engaging in these actions is possible, as it is almost always possible to act in dissonance to one's known beliefs; doing so would seem irrational for an external observer. In some cases I might acquire the relevant piece of self-knowledge by answering a deliberative question, say, considering what the UN said about it and whether a NATO member was invaded, etc. Doing so, however, is relevant to self-knowledge only insofar it displays a specific, refined form of knowing how – as we mentioned, knowing how to reason, which consists in being sensitive to new evidence, withholding beliefs when necessary, inferring correctly, etc. And just like before, the self-knowledge thus acquired is action-orienting.

We can consider more uneventful cases of self-knowledge as well. Knowing, for instance, that I believe that all swans are white is knowing how to engage in the relevant actions, namely: answering in the affirmative if someone asks me, discriminating (what I take to be) swans from non-white birds, revising the relevant beliefs in the face of evidence to the contrary, and so on. If my actions betray the commitments I set when I access my belief, then I am prone to accusations of irrationality, and rightly so. Naturally, other kinds of mental states can be accounted for in the same way, such as knowing that one is hungry and knowing that one wants to go for a swim.

Before moving on to the topic of other minds, there are two objections to consider. First, there is an imminent threat of behaviorism to the radically enactive view of self-knowledge, for it emphasizes the role played by one's actions in knowing what one's mental states are. But accusations of behaviorism are ungrounded, because the individual does not observe her own behavior and infers the presence of a mental state. Instead, in this view, she access it directly by her know-how, which was acquired and refined through previous engagements. Importantly, in doing so, the individual sets the correct course of action in accordance with her known beliefs, which is something no one else can do for her. In other words, the radical enactivist view does accommodate the intuition that there is a privileged access which is characteristic of self-knowledge. Therefore, insofar as behaviorism implies that there is no fundamental difference between self-knowledge and knowledge of other minds (other than the privileged position one occupies in order to observe one's own behavior), this view is actually incompatible with behaviorism.

Simply put, the second objection is that there is no phrase in English to capture the idea of 'self-knowledge-how'. We normally say "I know *that* I believe that *p*", but it seems too far-fetched to say "I know *how* I believe that *p*" (and it is not clear what that would mean). Therefore, to analyze self-knowledge in terms of an ability or a know-how seems not to do justice to what we normally take self-knowledge to be, namely, (the objection goes) a representational mode of access to our own mind, where one represents, to oneself in a privileged manner, one's own mental states. My reply is that we can grant the premise without conceding the conclusion. The key here is to note that linguistic expressions of self-knowledge usually arise in response to certain conversational challenges. In order to answer to a conversational challenge, one has to direct one's attention towards one's self-knowledge and put it into words. Plausibly, the high-level of attention needed leads to a propositional (but more fundamentally, to a representational) articulation of the events that were already in place. That is, one's skillful access to one's own mental states becomes the object of representational awareness. Now, one could object that this answer brings back representations as an explanation of how self-knowledge is verbalized, which in turn is incompatible with radical enactivism. But that is not the case, for radical enactivism eschews the ubiquity of representational content in cognition, but that does not imply that representations do not play an important role in some (high-level) cognitive performances, such as publicly avowing one's mental states. These performances already take for granted some kind of access to them. Consider this analogy: we may say that I perceive a hen with 43 specks when I take a quick look at one, but we do not say that I perceive *that* a hen has 43 specks unless I am paying attention to, and keeping track of, some of its qualities. *Perceiving-that* is a more sophisticated cognitive gesture than *perceiving* (*simpliciter*), at least partly because the role attention plays in the former. Nonetheless, I could not perceive that a hen has a certain number of specks without perceiving a hen in the first place. Something analogous happens when we verbalize our self-knowledge, we focus on our know-how through "representational lenses", so to speak, but this does not necessarily capture its underlying structure.

6. Other Minds

Preserving the privileged access intuition might come at a high price, namely, creating an insurmountable gap between one's own mind and the minds of others. That is clear when we consider sense-data accounts of self-knowledge, according to which the objects of self-knowledge are luminous (one cannot fail

to form a judgement about their presence) and one's access to them is infallible (one's judgement about them cannot be false). Privileged access in its finest. Solipsism quickly follows, for: if knowing one's own mental states is the model through which we construe the knowledge of mental states more generally, including the mental states of others, then mental states are robustly private according to the sense-data account, and we simply cannot reach out to other minds. I want to conclude this paper by pointing out that the radically enactive approach to self-knowledge offers a plausible view on how we come to know other minds by knowing how to engage with the mental states of others – and, by doing so, this account is free of the worries about an insurmountable gap.

The fundamental difference between self and alter-knowledge is that we can *make up our own minds*, as Moran rightly points out, in knowing how to engage with our mental states by performing the relevant actions, whereas we do not enjoy decisive power and commitment over the mental states of others. When I perceive what you intend to do, say, to pick something on the other side of the dinner table, I cannot carry out *your* action for you, but I can anticipate it. It might be tempting to interpret cases like this as suggesting some kind of theory theory or some kind of simulation theory. Both these views, however, assume that knowledge of other minds cannot be accessed directly, so that the mental states of others have to be either inferred through observation plus theoretical beliefs (theory theory), or simulated by some instrumental processes internal to the observer (simulation theory) (Gallagher & Varga, 2014). Radical enactivism, as one would expect, favors a direct approach to other minds.

Radical enactivism finds support in the findings about the resonance of mirror neurons (MNs), which are located in the premotor cortex and the parietal cortices and are usually regarded as the most plausible candidates of how we come to know other minds. The MNs response occurs when primates observe other primates engaging in an action, in the same way MNs are activated when the subject herself performs an action. MN are, therefore, essential to motor behavior and "subject neutral". This is why mirroring processes may seem specially fitting for a simulation theory, according to which the observer:

> Creates in herself pretend states intended to match those of the target […] The second step is to feed these initial pretend states into some mechanism of the attributor's own psychology […] and allow that mechanism to operate on the pretend states so as to generate one or more new states. Third, the attributor assigns the output state to the target (Goldman, 2005, pp. 80-81).

However, argues Gallagher (2008), mirroring processes also display motoric states of complementary and anticipatory actions, so they do not *match* the mental states of others in building an instrumental model of them. Moreover, the

very subject-neutrality exhibited by the MNs suggests that they "do not involve pretense, which requires distinguishing one agent (me) from another (you). There is no I or you registered in MNs, per se" (Gallagher, 2008, p. 448). Therefore, insofar as the mirror-neuron system does not *register states of others*, it does not play the role that simulationists ascribe to it. The alternative is to construe the activation of mirror areas not as input to a simulation of mental states of others, but as essential to social interactions in the second person (therefore, not in the typical observational stance of the third person).

> In contrast to an internalist/simulationist interpretation of MN activation, the enactivist view conceives of MN activation not as subserving an act of mindreading, but as something that is intrinsic to the structure of perception – my perception being shaped by my own action possibilities – what I *can do* in response to the other (Gallagher & Varga, 2014, p. 190).

According to this construal, the activation of MNs is attuned to intentional action (Gallese, 2006), which enables the *direct perception of possibilities of social interaction*. So understood, MNs provide an explanation of the phenomenon of joint action, that is, shared co-operative activities in which two or more autonomous agents co-regulate their actions and intentions (Newman-Norlund *et al.*, 2007). Precisely because the mirror-neuron system enables the anticipation of complementary actions of other individuals, their responses are sufficiently malleable in order to detect errors prior to their occurrence, whereas error-detection in adaptive behavior is central to learning. If our mirroring processes enable our perception of other persons' mental states and are involved in adaptive learning, then the radically enactive construal of the role of MNs offers good support to the idea that *we learn how to engage with other minds through practice and social interaction*. De Jaegher, Di Paolo and Gallagher are explicit: "social cognition […] involve[s] the *know-how* that allows us to sustain interactions, form relations, understand each other, and act together" (2010, p. 442, my italics).

That we primarily *know how* to engage with other minds by perceiving possibilities of interaction is not to say that we never come to (or have to) *know that* other persons are thinking by interpreting their behavior. This might indeed be the case when someone acts unexpectedly, or when one finds oneself in unusual circumstances (say, as an observer in an impromptu play). In regular cases, on the other hand, in the same way that we directly perceive our environment as offering possibilities of action, we directly perceive other minds as offering possibilities of interactions. Accordingly, we access the environment and the minds of others directly by engaging with them, with no need of postulating mental models and folk-psychological theories. If a challenge calls for our

attention (and the subsequent observational inferences), then we enter a more sophisticated, contentful cognitive relation, but this is not nearly as common as epistemologists sometimes suggest. Consider, for example, how we can easily know how someone else is feeling if we are fairly well known to each other. We can even discriminate complex patterns of emotions and subtle intentions without observing and inferring, which might not be as easy if we are merely acquainted (in the colloquial, non-Russellian use of the phrase). The idea here is that knowing other minds is a matter of engagement and practice, just like knowing one's own mind.

7. Concluding remarks

My aim in this paper is to explore a radically enactive approach to self-knowledge. In order to do so, I argued that the radical enactivist has to construe embodied abilities as displays of know-how and rationality as an emergent quality which is already at work in perceptual cognition. That enables us to counter Shoemaker's claim that self-knowledge is radically different from perceptual knowledge and, more importantly, we can also block the conclusion of his argument from self-blindness. This strategy, however, vindicates Shoemaker's insight, namely: that there is a constitutive relation between self-knowledge and its intentional constituents. I explored Moran's transparency account with the adjustments mandated by radical enactivism, and the resulting picture is that self-knowledge is a form of knowing how to make up one's own mind. A significant difference between self and alter-knowledge remains, thus avoiding behaviorism, but without putting too much weight into the idea of privileged access, thus avoiding solipsism. It remains an open possibility whether *the self* itself (no pun intended) can be construed in a radically enactive manner, an interesting idea that we should investigate in future occasions.

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