



5. Is *knowing how* a natural kind?

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Abstract Many philosophers think *propositional attitudes* like beliefs, desires, and states of *knowledge that* can only be properly attributed to language-using creatures and that explaining behaviour in terms of them is answerable to rational norms that have no echo in nature. Many philosophers also think this view is consistent with thinking that what Ryle called *knowing how* can be attributed to animals and hence is a natural psychological kind. This chapter argues this combination of views is less easy to sustain than is commonly thought.

Keywords knowing how | knowing that | natural kind | logical space of reasons | skilful coping

1. INTRODUCTION

This chapter is about whether we should view knowing how as an explanatory category of scientific psychology. My suggestion will be that, at least when understood as something beyond mere ability, there are reasons to answer “no”.

To appreciate what I think these reasons are, we need first to “zoom out” and look at a broader issue in the philosophy of mind. In everyday life we often explain people’s behaviour by attributing them mental states like beliefs, desires, hopes, fears, and so on. These are standardly understood by philosophers as *propositional attitudes*: a belief *that the war will end soon*, a hope that it will do so, and so on. One central issue here concerns the scope of such explanations: do they also apply to non-human, non-language-using animals? Can we make sense of, say, a dog having a *propositional attitude*? One might think only a being possessed of concepts and (ergo) language might be in a position to do that, since these things are arguably necessary to grasp propositions.¹ Another central issue, distinct but not unrelated, is whether such explanations are or could be *scientific*. Are explanations that involve everyday or *folk* psychological notions like belief and desire a

1 For a classic argument to this effect, see Donald Davidson, “Thought and Talk,” in his *Inquiries into Truth and Interpretation* (Oxford: Oxford University Press, 1984).

(putative) kind of scientific explanation? Or do they involve a quite different kind of understanding from that we find in science? Though different combinations of views on these questions are possible, a common opposition exists between two broad camps. In the first, folk psychological notions are viewed as at least the basis for a kind of (natural) scientific psychology, one that is also applicable to animals; this is the view of Jerry Fodor and most supporters of the computational-cum-representational view of the mind in cognitive science,² though some who call themselves “non-representationalists” also hold this combination of positions.³ The other camp, represented perhaps most famously in the contemporary debate by Donald Davidson and John McDowell, rejects both these ideas and sees in so-called folk psychological explanations a distinctive kind of rational normativity that is quite different from anything we find in the purely physical or biological realm.⁴ This normativity implicates the states attributed (belief, desire, etc.) in a web of conceptual understanding and, thereby, language. To invoke the terminology of Wilfred Sellars (as particularly McDowell has done): such states are standings in *the logical space of reasons* rather than *the logical space of causes*.⁵

What has all this got to do with knowing how? Following Gilbert Ryle’s seminal discussion,⁶ knowing how is often contrasted with propositional knowledge, or *knowledge that*. I know (or can come to know) *that* $25+167=192$, for example, while I know *how* to add in a way that seems to involve no specific knowledge that. Now it is standardly taken that knowing that *p* consists in part in believing that *p*. Insofar, attributing such knowledge to someone also seems like a part of our folk psychology. If that is the case, it seems one might also think, in line with the second camp above, that it does not figure in scientific explanations and that it does not apply to animals, at least in a literal sense. The question thus arises: what about *knowing how*?

Many seem to think, regardless of one’s stand on propositional knowledge, that knowing how is clearly applicable in the animal realm and thus also, presumably, that of natural science. Thus Hans Johan Glock writes:

2 See, e.g., Jerry Fodor, *Psychosemantics* (Cambridge, MA: MIT Press, 1987).

3 An example is Hans Johan Glock, “Animal Minds – A Non-Representationalist Approach,” *American Philosophical Quarterly* 50, 3 (2013).

4 Donald Davidson, *Essays on Actions and Events* (Oxford: Oxford University Press, 1980); John McDowell, “Functionalism and Anomalous Monism,” in *Actions and Events: Perspectives on the Philosophy of Donald Davidson*, ed. Ernie LePore and Brian McLaughlin (Oxford: Blackwell, 1985).

5 Wilfrid Sellars, “Empiricism and the Philosophy of Mind,” reprinted in his *Science, Perception and Reality* (London: Routledge, 1963); John McDowell, *Mind and World* (Cambridge, MA: Harvard University Press, 1994).

6 Gilbert Ryle, *The Concept of Mind* (London: Hutchinson, 1949), esp. ch. 2.

Few contemporaries would doubt that animals possess knowledge how, in Ryle's phrase. Intelligent animals know how to do certain things, not just because they are genetically pre-programmed or have been behavioristically conditioned, but also because they can learn how to do them off their own bats, whether by trial and error or through foresight and planning. The moot point is whether animals possess what Ryle called knowing that.⁷

The idea that animals possess knowledge how indeed seems to be widely assumed. For many this rests just on the idea that know-how is a matter of abilities or capacities to do certain things,⁸ and animals clearly have these. But more elaborated philosophical views of this kind have also been given. Thus, Hubert Dreyfus thinks that we and animals both exhibit what he calls *skilful* or *absorbed coping*, something that he understands as a form non-conceptual, non-propositional, and non-rational know-how. Alva Noë also sees both humans and animals as possessed of skilful know-how in virtue of their being perceivers. I will be discussing Dreyfus's and Noë's views in the sequel.

Notwithstanding this consensus (or apparent consensus) on the status of knowing how, I want to argue in this chapter that it is not something we should think of animals as possessing or as a category of scientific psychology – as a *natural kind*, as I shall put it.⁹ What I first and foremost want to argue here is that this applies insofar as one assumes that animals do not have propositional attitudes like belief, desire, and (propositional) knowledge – because they do not operate in the logical space of reasons that language makes possible – though my argumentation will also to an extent bear on this assumption. My view, I should stress, is not that animals are mere *automata* (or automata along with something like phenomenal qualia): we must, as Dreyfus and Noë claim, understand their activity in terms of embodied, skilful coping, which is a distinctive phenomenological-cum-biological category (I will be arguing). We could of course *call* this kind of activity “knowing how” if we wanted to, but my view is that this is not overall the best theoretical option.

Nor does it, it would seem, map onto what Ryle meant by the term. Much of what Ryle writes about knowing how strongly suggests he think that states of knowledge *generally* have to be understood as part of something like Sellars's logical space of reasons, even if they are essentially practical in nature and not reducible

7 Glock, “Animal Minds,” 226–227.

8 Cf., e.g., Michael Devitt, “Methodology and the Nature of Knowing How,” *Journal of Philosophy* 108, 4 (2011).

9 By “natural kind” here I mean merely a unified category that science might use for explanatory purposes, without being committed to this having an underlying unity or essence.

to ordinary propositional knowledge. Though the kind of skilful coping animals manifest is something recognizable in us too, nevertheless, given one accepts the autonomy of the folk psychological realm *à la* McDowell and Davidson, it is reasonable to withhold attributions of knowledge of any kind to animals. It is only our language and our rational way of being in the world that makes our skilful coping into genuinely cognitive, i.e., knowledge-involving activity.

I will be laying out this argument more fully in the following, which is divided into three further sections. In Section 2 I review the recent “knowledge how” versus “knowledge that” debate and try to unravel the significance of the recent “neo-intellectualist” position on this propounded by Jason Stanley and Timothy Williamson. Drawing on this and recent work by other authors, I will suggest that at least when it comes to the notion of knowing how that Ryle was concerned with, though this is distinct from ordinary propositional knowledge, it is also quite distinct from mere ability. Moreover, given the McDowell-Davidson view on the autonomy of folk psychology, I will argue that Rylean knowing how should also be seen as proprietary to the same logical space of reasons as other folk psychological notions.

In contrast to this are the views of people like Glock, Dreyfus, and Noë, who see talk of knowledge how as also applicable to animals. In Section 3 I take up the views of Dreyfus and Noë and what I see as attractive and indeed correct about them, relating them to the so-called *enactivist* movement in cognitive science more generally. But I will also argue that their appropriation of the idea of knowledge to characterize the phenomenon they rightly point up is suspect. In the fourth and final section I briefly address how we might understand the relationship between the notions of folk psychology understood in the autonomous way I am presupposing and the insights provided by enactivism.

2. THE RECENT “KNOWING HOW” VERSUS “KNOWING THAT” DEBATE

Most textbooks in epistemology begin by drawing a three-way distinction between types of knowledge – knowledge *that*, knowledge by *acquaintance* (with reference to Bertrand Russell), and knowledge *how* (with reference to Ryle) – only to focus exclusively on the first of these.¹⁰ This neglect was always problematic, but the

10 A further possibly distinct kind of knowledge is Elizabeth Anscombe’s non-observational *practical* knowledge: knowing *what one is doing* when one acts; cf. Anscombe, *Intention*, 2nd ed. (Oxford: Blackwell, 1963). A number of authors have discussed Ryle’s knowing how in connection with this – see, e.g., Will Small, “Ryle on the Explanatory Role of Knowledge How,” *Journal for the History of Analytical Philosophy* 5, 5 (2017), fn 19 – but I will not be commenting on this issue in this piece.

last two or three decades have seen a more explicit resurgence of interest in both knowledge by acquaintance¹¹ and not least knowledge how. The latter is plausibly the upshot in significant part of an article by Stanley and Williamson in which they argue – *contra* Ryle, they claim – that knowledge how is in fact fundamentally just a variety of knowledge that.¹² Talk of knowing how to do something can for them be analogised to talk of knowing where something is or when something starts. Someone who knows where the key is knows *that* the key is in some particular location, *L*, and similarly someone who knows how to ski knows *that* a certain way, *W*, is a way to ski. An obvious objection to this is that someone who can point at someone skiing and say, “That is a way to ski!”, though propositionally knowing something, does not really *themselves* know how to ski, at least in some central, “full” sense of the phrase. To answer this, Stanley and Williamson introduce the idea of a *practical mode of presentation* under which certain people will apprehend the relevant way and others not; only the former will be seen as knowing how in this full, “personal” sense. This does not, apparently, render the knowledge any less a form of knowledge that, though it does mean that one cannot fully understand it in exactly the same way one would understand non- (or at least less)¹³ practical forms of knowledge that.

This line has provoked a large debate as to whether personal knowing how is interestingly distinct from knowledge that, and, if so, how. For many, this kind of knowing how is not a form of knowledge that at all, but more like an ability to do something.¹⁴ To say I know how to ski just means I can ski, more or less, and will do so given I have the requisite desire, opportunity, etc. Indeed, in many languages,

11 See, e.g., Jonathan Knowles and Thomas Raleigh, ed., *Acquaintance: New Essays* (Oxford: Oxford University Press, 2019).

12 Jason Stanley and Timothy Williamson, “Knowing How,” *Journal of Philosophy* 98, 8 (2001). As we shall see below, their assumption that they are strongly in disagreement with Ryle is questionable.

13 Thus a further relevant issue is whether standard examples of *knowledge that* are themselves as divorced from action and performance as is often assumed in the contemporary debate. If propositional attitudes are partly to be understood in terms of such things in any case (as Ryle himself thought), this would be another reason to think that what he was (rightly) concerned with about the *intellectualist legend* (see below) does not automatically lead to a view on which knowing how is more basic than knowing that. For further discussion of this point and its implications, see Natalia Waights Hickman, “Knowing in the ‘Executive Way’: Knowing How, Rules, Methods, Principles and Criteria,” *Philosophy and Phenomenological Research* 99, 2 (2019), 324 ff., building on John Hyman, *Action, Knowledge and Will* (Oxford: Oxford University Press, 2015).

14 See, e.g., Devitt, “Methodology”; many also assume this was Ryle’s view, such as Stanley and Williamson; cf. also Paul Snowdon, “Knowing How and Knowing That: A Distinction Reconsidered,” *Proceedings of The Aristotelian Society*, 104, 1 (2004).

the very syntactic form “know how to X” has no equivalent and is often rendered most naturally as a translation of “can X” (thus in Norwegian it would be natural in most contexts to translate “I know how to ski” as “Jeg [I] kan [can] gå på ski [‘walk on skis’, i.e., ski]”). At the very least, the phrase “knowing how” in English seems to harbour a kind of ambiguity such that though on one reading it might be understood as a kind of knowing that, perhaps along the lines Stanley and Williamson suggest, on another it refers to abilities.

However, this kind of line is now generally rejected as a fully satisfactory account of knowing how, for it seems someone can have even personal know-how without the corresponding ability. To use an example of Stanley and Williamson’s: an expert concert pianist who has lost their arms in an accident cannot play – has lost the ability to play – but plausibly not the skill or know-how they have, even though this is not just a superficial knowledge of the kind I might express by pointing to someone playing the piano and saying, “*That* is how (or: one way) to play the piano!” It also seems there are some things I can do that one wouldn’t usually describe as involving any knowledge how to do, like wiggling one’s ears or even just raising one’s arm.¹⁵ It thus seems there is something distinctively cognitive or intellectual about certain kinds of skills as much as there is something practical about (at least) certain kinds of knowledge. Given this, the question naturally arises whether one should think of *mere* abilities, such as being able to raise one’s arm or the kinds of thing all are in agreement animals and small children can possess, as cognitive at all; as worth distinguishing with the label “knowledge” – at least, in a serious theoretical sense of the word. If one doesn’t need to do this, then presumably by general considerations of parsimony one should not. In other words, what seems philosophically or theoretically interesting about the idea of knowing how is precisely the idea of something that is both cognitive *and* practical.

Stanley and Williamson try to capture this two-sidedness of knowing how in the idea of propositional knowledge of ways grasped under a practical mode of presentation, but one needn’t buy into precisely their view to respect this feature. For example, Natalia Waights Hickman offers a slightly different account that is nevertheless inspired by Stanley and Williamson’s, allowing know-how to involve knowledge of rules and methods as well as propositions and otherwise arguing for a view of it as knowing “in the executive way” (what knowing “in the executive way” involves will be touched on below).¹⁶ But whatever exactly the more demanding account involves, as long as some such account can coherently be

15 Cf. Waights Hickman, “Knowing,” 315.

16 Waights Hickman, “Knowing.”

given,¹⁷ it seems we have a theoretical reason to preserve the epithet “knowledge” for things this account refers to and to regard mere abilities as “knowledge” in at best a secondary or non-literal sense.

There is also reason to believe that it was precisely such a richer notion that Ryle, in introducing the idea of knowing how to the philosophical discourse in the first place, was interested in, under a charitable interpretation.¹⁸ Ryle’s primary focus of interest in *The Concept of Mind* as a whole was intelligent action: action which can be performed more or less well or badly by the person carrying it out in such a way that they might be held accountable for it. His target thesis – *the intellectualist legend* – was the idea that such action might spring exclusively from considering a body of purely factual information or propositions, and the problem with this was that applying such information is itself an action that can be done more or less well, or intelligently, hence leading to a regress. “Knowledge how”, in one sense, was simply the label Ryle used to denote whatever was needed in addition.¹⁹

At the same time, he clearly also saw such knowledge as exemplified in skilful action of many different kinds, be that intellectual, musical, sporting, artistic, or other kinds of performances. A central distinction for Ryle is between such intelligent *skills* and what he called *habits*. Skills, in Ryle’s sense, involve several identifiable features in contradistinction to habits: one is *aware* of what one is doing; they are *robust* in being applicable in many different kinds of situation; they are acquired through *learning* from others and not merely through drill; and they are *multi-track* dispositions insofar as they are manifestable in activities other than the skilful performance itself, such as appreciating and understanding the activities of others or in instruction.²⁰ A sea lion that is trained to juggle balls on the end of its nose has a certain kind of skill or ability, as does the human clown. But the sea lion has a *mere* ability, or (in Ryle’s phrase) habit; it does not have know-how insofar as it is merely trained or drilled to do this trick on demand. The clown, by contrast, in having learned what they do from others, being able to reflect on what they are doing, aim to improve, and so on, does. In light of this it would be

17 Another slightly different line that can also be seen as seeking to respect the cognitive and practical nature of knowing can be found in Jennifer Hornsby, “Ryle’s Knowing-How, and Knowing How to Act,” in *Knowing How: Essays on Knowledge, Mind, and Action*, ed. John Bengson and Marc A. Moffett (Oxford: Oxford University Press, 2012).

18 Cf., e.g., Waights Hickman, “Knowing”; Hornsby, “Ryle’s Knowing-How”; Small, “Ryle”. Ryle himself was not always totally clear on this, sometimes seeming to offer a mere ability view (see Snowdon, “Knowing How”), but there is enough in his discussion more generally to suggest this would not be his most considered view (see also below in relation to his skills-habits distinction).

19 Hornsby, “Ryle’s Knowing-How,” 81–83.

20 Ryle, *The Concept*, 41 ff.; cf. Small, “Ryle”, 69–70.

at best premature to see Ryle's rejection of the intellectualist legend as involving an embrace of any kind of *anti-intellectualism* about knowing how (as Will Small puts it)²¹ – of a view on which skilful performance is divorced from the kind of conceptual, language-based rationality that (I am assuming here anyway) is necessarily involved in having more purely propositional knowledge.

In light of Ryle's distinction between skills and habits, some might be tempted to regard the sea lion, its impressive performance notwithstanding, as ultimately just a complicated machine or at least a locus of machine-like dispositions (possibly infused with some kind of purely phenomenal consciousness). However, one needn't see the sea lion as being a mere machine to uphold the Rylean distinction. Rather, what is arguably crucial is that knowing how proper, though practical, is in the *logical space of reasons*. Though inextricably interwoven with their body, the clown's antics can be seen as reason-governed: as meaningful and pointful, for them as well as others, in a way that it is difficult to see what any animal does as being. This doesn't mean that they would be able to articulate these reasons in context-independent ways, let alone during a show; only that they could, possibly in advance or in retrospect, with some effort and in context-dependent ways, be articulated.²² That is what makes the clown's performance a genuine form of knowledge or as manifesting such knowledge: knowledge how to clown.

There is of course scope for push-back here. Though it seems that Ryle's writings on knowing how, at last when combined with the McDowell-Davidson view on knowledge more generally, do suggest we should not see it as a category of a psychological natural science, this does not in and of itself show that other views of knowing how are not possible; that it is not a wider natural phenomenon, genuinely predicable of animals and essential to understanding their experiential lives, regardless of whether they possess propositional knowledge or not. In the next section I will consider two lines which seek to motivate this idea.

3. KNOWLEDGE HOW AS SKILFUL COPING AND AS PERCEPTUAL UNDERSTANDING

Hubert Dreyfus, unlike Ryle, does defend what one might (in Small's terminology) call an anti-intellectualist view of knowing how; at the same time he does not see it as a bare ability or, at least, as a pure disposition that might be understood mechanistically. Inspired by the phenomenological works of Martin Heidegger

21 Small, "Ryle".

22 Again see Waights Hickman, "Knowing"; cf. also Neil Gascoigne and Tim Thornton, *Tacit Knowledge* (London: Acumen, 2013), e.g. 76 ff.

and Maurice Merleau-Ponty, for Dreyfus, knowing how is most basically a distinctive kind of non-rational, non-propositional, non-conceptual kind of activity that constitutively involves both the body and the world in its exercise but, importantly, not the kind of reflective, conscious kind of thought characteristic of human reasoning²³ – a kind of reasoning that nevertheless for many years provided the model in cognitive science and AI for what cognition quite generally is, something he also famously criticizes.²⁴ Dreyfus calls this kind of interaction “absorbed coping” or “skilful coping.” Absorbed coping is what constitutes our most basic intentional contact with the world and is something we find in animals and young children as well as adult humans. Importantly for Dreyfus, human experts – musicians, sportspeople, and so on – also exhibit this mode of operation in their performances; indeed, such performances can even be disrupted by concurrent explicit, “rational” thought (he uses as an example the baseball player Chuck Knoblauch’s “yips”).²⁵ For Dreyfus, absorbed coping is knowing how in its most primordial form, and insofar as this is ubiquitous in the animal world it seems reasonable to see his view as one in which know-how is to be seen as both a distinctively psychological and a natural kind.

Though his concerns and terminology differ significantly from Dreyfus’s, Alva Noë can also be seen as cleaving to the idea that knowledge how is a natural kind. For Noë, knowing how is intimately involved in sensory perception. Again inspired by phenomenological philosophy, Noë defends a so-called *sensorimotor* theory of perception according to which perceiving involves not an apprehension of sense data or material objects in the world, nor the entertaining of a thought or representational content about such things, but rather an active understanding of sensorimotor regularities or laws.²⁶ The cup you see in plain view in front of you (as we ordinarily say) is not in fact *fully* in view: think of the side facing away from you or the bottom of it resting on the table. You do see it, the cup, but this is in virtue of a kind of tacit, active awareness of what you would see (or what sensations would obtain) if you or your eyes or it moved in various specifiable ways. Importantly, this applies however circumscribed one attempts to make one’s

23 Cf. Hubert Dreyfus, “Overcoming the Myth of the Mental: How Philosophers Can Profit from the Phenomenology of Everyday Expertise,” *Proceedings and Addresses of the American Philosophical Association* 79, 2 (2005).

24 Cf. Hubert Dreyfus and Stephen Dreyfus, *Mind Over Machine: The Power of Human Intuition and Expertise in the Era of the Computer* (New York: Free Press, 1986).

25 Cf. Wikipedia, s.v. “Yips”, 31.10.22. <https://en.wikipedia.org/wiki/Yips>.

26 Cf. Alva Noë, *Action in Perception* (Cambridge, MA: MIT Press); Kevin O’Regan and Alva Noë, “A Sensorimotor Account of Vision and Visual Consciousness,” *Behavioral and Brain Sciences* 24, 5 (2001): 883–917.

awareness. Perceiving the colour of the cup essentially involves understanding how that varies in relation to the cup's curvature and shadowing, likewise its shape. Nor can we resort to restricted regions of uniform colour or form at the cup's surface: perception is, as Noë puts it, "virtual all the way in";²⁷ in that whatever we can be said to perceive *always* involves a background of movement, sensation and tacit awareness of how these relate, even if this is only at the level of the saccadic movements of the eyes. This does not imply that there can't be better and worse conditions under (or perspectives from) which to ascertain what something is, what shape and colour things have and so on. Nevertheless, no experience just *reveals* anything to us, independently of how we are disposed to act, to move and, as it might be, to manipulate the object in question. For Noë, then, perception presupposes understanding, and this in turn is a kind of know-how.²⁸

Unlike Dreyfus, Noë also holds that such knowledge is conceptual, because he thinks concepts can be realized in non-linguistic episodes of understanding, as well as linguistically mediated ones.²⁹ In light of this, his view is not perhaps appropriately classed as an "anti-intellectualist" account of knowing how, as Dreyfus's is. I suspect this difference may be more a matter of how one understands the notion of a "concept" than a substantive one, but in any case I will not investigate its consequences further here. Whatever one makes of it, the two views have something important in common, not least with respect to our question.

Now as accounts of what experience of the world in its most basic form involves I have a great deal of sympathy with these lines of thought. They can be seen as part of a more general *enactivist* approach to cognition, in the sense first put forward by Francisco Varela, Eleanor Rosch, and Evan Thompson, ideas that have been extended, clarified, and refined in the subsequent decades.³⁰ For enactivism, this experiential contact has to be seen not representationalistically in terms of internal symbol manipulation, but rather as dynamically structured cycles of activity embracing brain, body, and world. A crucial further aspect of enactivism, at least of the Varela et al. variety, is the idea of an autonomous agent seeking actively to create meaning – indeed, in a certain sense, simultaneously to create both itself

27 Noë, *Action*, 193.

28 See, e.g., O'Regan and Noë, "A Sensorimotor Account," 946, for an explicit statement to this effect.

29 See Noë, *Action*, ch. 5, also Noë, "Concept Pluralism, Direct Perception, and the Fragility of Presence," in *Open MIND: 27 (T)*, ed. Thomas Metzinger and Jennifer Windt (Frankfurt am Main: MIND Group).

30 Cf. Francisco Varela, Eleanor Rosch, and Evan Thompson, *The Embodied Mind: Cognitive Science and Human Experience* (Cambridge, MA: MIT Press, 1991); Evan Thompson, *Mind in Life* (Cambridge, MA: Harvard University Press, 2007); Ezequiel Di Paulo, "Autopoiesis, Adaptivity, Teleology, Agency," *Phenomenology and the Cognitive Sciences* 4, 4 (2005).

and its meaningful environment. This idea of autonomy is in turn linked to a non-Darwinistic understanding of living organisms through the theory of *autopoiesis*, as well as a *developmental systems* theoretic approaches to evolution.³¹ Enactivism has also more recently been connected to a highly influential conception of brain functioning known as *predictive coding* which stresses the centrality of endogenous activity of the brain aimed at maintaining internal organismic homeostasis in the face of a hostile world in determining the contents of experience.³² This is not the place to go into detail about enactivism and these and other connections (such as to Gibson's ecological psychology).³³ But that the paradigm at least today commands respect as an alternative to classical representationalist cognitive science seems beyond doubt, and many would see it as inherently more promising than the latter in taking seriously the subjective, lived dimension of cognition, both through its stress on biological autonomy and its acknowledgement of phenomenological philosophy as an integral part of its empirical research programme.

However, one thing is being a cogent or at least promising form of cognitive science; another question is whether, as Dreyfus and Noë in effect maintain (and indeed many other enactivists), these ideas in themselves home in on a phenomenon worthy of the epithet of knowledge, specifically knowledge how.

Some enactivists have answered this question negatively. According to Dan Hutto and Eric Myin, enactivism should leave behind *all* "mentalist" notions in explaining basic cognition, including all notions of content and knowledge.³⁴ Only when it comes to human, linguistically mediated cognition are these needed to account for the phenomena. My overall view is in fact similar to Hutto and Myin's, but my reasons for scepticism towards seeing know-how as a natural kind of enactivism are different from theirs.

Before presenting these, I do want to emphasize again my fundamental sympathy with the broad ideas behind Dreyfus's notion of absorbed, skilful coping and the similar ideas in Noë. With their origin in phenomenological analysis, and

31 The theory of autopoiesis is central to the original enactivist movement. On developmental systems theory, see Richard Levins and Richard Lewontin, *The Dialectical Biologist* (Cambridge, MA: Harvard University Press, 1985), and Thompson, *Mind in Life*, ch. 7.

32 Jelle Bruineberg, Julian Kiverstein, and Erik Rietveld, "The Anticipating Brain Is not a Scientist: The Free-energy Principle from an Ecological-Enactive Perspective," *Synthese* 195, 6 (2018).

33 For a more detailed if opinionated overview of the terrain here, see Jonathan Knowles, *Representationalism, Experience, and Metaphysics: Towards an Integrated Anti-Representationalist Philosophy* (Cham, Switzerland: Springer, 2023), ch. 2–3.

34 Cf. Dan Hutto and Eric Myin, Erik, *Radicalizing Enactivism: Basic Minds Without Content* (Cambridge, MA: MIT Press, 2013); also Hutto, "Knowing What? Radical Versus Conservative Enactivism," *Phenomenology and the Cognitive Sciences* 4, 4 (2005), which critiques Noë's view in particular.

in fitting with the central tenets of enactivism, I see these as providing important insights into the nature of cognition and to constitute a distinct advancement on classical representationalism. But the way these ideas are played out by these authors, especially Dreyfus, are problematic.

Along with several other authors,³⁵ I think Dreyfus errs in thinking that skilful coping constitutes a primordial intentional contact with the world exhibited by all sentient beings that constitutes a *basis* for our distinct capacity to think truth evaluable thoughts and that human conceptual activity is in turn a peculiarly intellectual or “mental” mode of operation, one that can even often disturb absorbed coping. To start with, this seems phenomenologically false. As James McGuirk has urged, though in some cases one can certainly overthink what one is doing and thereby perform sub-optimally (as in the case of Chuck Knoblauch, allegedly) it is not *in general* true that thought and absorbed coping with the world stand in opposition to one another. He gives the example of teaching as a case of expert skilful coping where, though one is not necessarily reflecting on what one is doing, one is very clearly still thinking – indeed thinking very hard! As he writes about this case:

[F]ar from being mindless, such coping seems to involve a heightened sense of oneself as minded inasmuch as the situation calls for an intensely minded attention to what is going on. In other words, absorbed coping in situations such as this should better be understood as a sense of mindful self-presence that transcends programmatic reflective thinking by better integrating the agent as a unitary whole in action.³⁶

In other words, what we think of as higher-level cognition is implicated in much that at the same time would qualify as absorbed coping in its performance. Anyone who has played a sport or a musical instrument or created something with some reasonable level of proficiency will surely testify to the same.

This point bears in turn on our question. What it fundamentally brings out is that it is wrong to see skilful coping as in any way opposed to our distinctively human intellectual activity: to see these as two radically different varieties of intentionality. Rather, in us humans, certain kinds of absorbed coping are *also* precisely rational and/or intellectual. McDowell also presses this point against Dreyfus.³⁷

35 E.g., Gascoigne and Thornton, *Tacit Knowledge*, ch. 5; James McGuirk “Dreyfus, Merleau-Ponty and the Phenomenology of Practical Intelligence,” *Norsk filosofisk tidsskrift* 48, 3–4 (2013); John McDowell, “What Myth?,” *Inquiry* 50, 4 (2007).

36 McGuirk, “Dreyfus,” 299.

37 “What Myth?”

He too does not deny the phenomenon of absorbed coping – that much of our rationality is manifested in skilled performance and sensorimotor interaction with external objects. However, though this means we will not be able discursively to express all our thoughts in context-independent terms, often having to resort to irreducibly demonstrative concepts to articulate what we are doing and how (viz. “I am doing *this*...in *this* way...”), it does not follow that there is something with a content of a distinctively different type from that involved in more abstract thought in these sorts of cases.

For me the view on our question that emerges from this consideration is that outlined in the previous section: that on which genuine knowing how, along with the more standard propositional attitudes like knowledge that and belief, should be seen as belonging to the logical space of reasons and of language-using creatures. This doesn't of course follow from the phenomenological objection to Dreyfus alone. However, given we accept this, my view does seem to me to provide a better overall explanation of the situation than the anti-intellectualist alternative, i.e., that on which animals also possess genuine know-how (in the literal sense). Animals do exhibit what Dreyfus calls skilful, absorbed coping. Moreover, this may involve quite sophisticated capacities and employment of neural resources, as well as being in a biological sense meaningful. Hyenas bringing down a straggling antelope, for example, are without doubt intensely engaged in what they are doing in ways that presuppose high levels of bodily and brain functioning as well as fine-tuned coordination between them. The world “for them”, of their experience, is not the world of the scientific observer charting their activity, but is charged with its own idiosyncratic significance and meaning. But should we see them as *knowing how* to do what they are doing – as we would be doing in a somewhat analogous situation?

If we do say this, we would need to see the kind of phenomenon they are exhibiting as a kind of basis upon which our distinctively linguistically mediated kind of mentality is somehow built. But this strikes me (and many others) as problematic. To start with, it seems to require that we can understand the normativity of our thought and talk in terms of the biological normativity that is involved in something like hyenas hunting an antelope straggler. And here it seems the famous Sellarsian problematic of “givenness” raises its head – that or (or possibly in addition) the more general problem of how to naturalize full intentionality of the kind all agree humans instantiate. Are we, in engaging in the intellectual activities we do, somehow epistemically in contact with a kind of non-conceptual content at the level of our *purely* embodied interactions? Here is not the place to go into that issue in depth, but reflecting on it has led many to doubt that we can so much as make sense of a meeting between the conceptual and non-conceptual such that the

former can be somehow rationally based on the latter.³⁸ Alternatively, one might think that our intentionality simply *reduces* to complex patterns of pure embodied interactions – a form of what McDowell calls “bald naturalism.”³⁹ From the perspective of the current chapter, however, such a line is not dialectically germane; for I am assuming that propositional attitudes have their home in the logical space of reasons and that only linguistic creatures can operate in this and then asking about the status of knowing how. I would go further and argue that there are positive reasons for thinking that the realm of propositional thought *is* normatively *sui generis* in this way, but the conditional claim is all I am strictly speaking concerned with here.

The upshot seems to be, at least given the assumptions we are operating with, that the idea that knowing how should be extended to beings that lack the capacity for propositional thought looks unmotivated. Dreyfus’s idea of a strict divide between absorbed coping and intellectual activity is a fiction. Moreover, it seems we cannot explain *our* kind of rational capacities, either knowing how or knowing that, in terms of something else purely non-rational or non-intellectual. Rather than see what animals have as a form of knowing how, then, I suggest a more streamlined view is one on which this notion is reserved for us. This leaves us admittedly with a kind of puzzle about how we relate to the animal world of pure embodied coping, insofar as we are (I would want to maintain anyway) clearly a *kind* of animal; and relatedly how we should conceptualize such “worlds”. But I also believe we can at least start to give answers to those questions (see Section 4).

Although Noë’s view is different from Dreyfus’s and does not involve the kind of commitment to the “mindlessness” of human expert performance, it should hopefully be clear how the argumentation above also applies to Noë’s view construed as an account of the idea of know-how as a natural kind. Briefly, his allegedly “conceptualist” picture notwithstanding, there seems no way he, any more than Dreyfus, can deny the problems of givenness or bald naturalism; and so, assuming that propositional attitude normativity is *sui generis* and restricted to language using creatures, my claim again is that the more streamlined view – in light of the phenomenological facts – is one which restricts literal attribution of know-how to this realm.

38 For classic elaborations of the problem, see Sellars, “Empiricism,” and McDowell, *Mind and World*.

39 Cf. *Mind and World*.

4. MEDIATING BETWEEN THE LOGICAL SPACE OF REASONS AND ENACTIVIST COGNITIVE SCIENCE

I have been arguing that if one holds a view on which propositional attitudes like beliefs and desires are the preserve of humans and the logical space of reasons, then the idea that knowing how by contrast is not in fact seems, at best, unmotivated and theoretically profligate. Knowing how is not plausibly just ability, nor is it simply “mindless” coping; moreover, insofar as one might seek to ground our kind of knowing how in a kind of distinct animal form of this, one runs straight up against the problems of mythical givenness and bald naturalism.

Establishing that is the main aim of the current chapter. Nevertheless, the view might seem somewhat unstable as an overall positive package. If we alone possess knowledge how, how should we think of animals that merely exhibit “absorbed coping”? What exactly *is* absorbed, skilful coping, if it is not a form of knowing? And how does it relate to what *we* are doing in performing skilfully, i.e., in genuinely knowing how? We don’t want to slide from a view in which we are a rather special kind of animal to one in which we are not an animal at all. But how is this slide to be avoided?

I believe a proper understanding of enactivism and of the relationship between this and the “logical space of reasons” in which knowledge, of all kinds, has its home can give answers to these, admittedly good, questions. Enactivism’s central ideas as I see them are not dependent on the idea of a knowledgeable subject; what these rather concern is an autonomous, *biological* subject that through its bodily interaction with the physical world brings forth both itself and a meaningful environment. In this way, the idea of a *perspective on a world* is made sense of in a naturalistic way, and this is something that we will want to relate to our own mentality in order to illuminate it and anchor it in the natural world. But illuminate and anchor, not reduce. We are not doing something *ontologically* different from animals in behaving in the skilful way we do (they can be just as *competent* in their own distinctive ways), but we are doing so in a different way: in a way that opens for a distinctive kind of normative assessment. In virtue of this it is appropriate to talk of belief, knowledge, and the rest – which thus take their place in a logical space of reasons that has “no echo” in the physical or even a biologically meaningful world.⁴⁰

There is more one could say here to fill out and further embellish these thoughts; though I don’t have space to go into much detail here I would like to add a little more in conclusion. As I see things, this non-reductive naturalistic picture depends

40 The quoted phrase is from Davidson, *Essays*, 231.

on a kind of relation of mutual illumination between the two levels in question, the naturalistic and (as we might call it) logico-linguistic level. Not only do we have to appeal to enactivist ideas to vindicate our place in nature, but it is also necessary to invoke our peculiarly linguistic form of mentality to underwrite this vindication. An important insight here is Hans Georg Gadamer's idea that what we humans relate to is precisely a *world* and not a mere environment or *Umwelt*, as non-linguistic animals do.⁴¹ Like other animals, we do relate to an *Umwelt*, one that is peculiarly human in being relative to our sensory and somatic capabilities, but also one that is understood in terms of categories like *object* (tables and chairs) and *property* (brownness, made of wood) and *fact* or *truth*. It is thus a world about which one can have knowledge and act intelligently, i.e., for reasons. For the postulation of a mere animal's *Umwelt* – something not in itself conceptually articulated in this way – to shed explanatory light on our world, it must be brought into connection with a living perspective on a world in Gadamer's sense. Hans Jonas's words "life can be known only by life"⁴² can also be instructive here. Though these are often taken to point out something negative – that a disembodied, analytic perspective is insufficient to understand living phenomena – they can and should in my view also be seen as emphasizing the positive thought that living things like us humans, that exhibit understanding, or knowledge, *can* understand (or at least seek to understand) other living things in a way that builds on precisely this commonality between us: the lived perspective. In doing this, we appreciate that we are natural beings: without the connection to the idea of the perspectival *Umwelt* we would be without an anchoring in the natural world. But at the same time, without our *understanding*, our *knowledge*, manifested primarily in the world we inhabit but something we can also apply to understanding other species' *Umwelts*, the explanatory value of the latter would be nugatory.

These are admittedly difficult issues, and more could be said about them (something I try to do elsewhere).⁴³ My main remit here has in any case been to argue that if one accepts that belief and propositional knowledge is the preserve of human beings, and is not scientifically explicable, then there is a lot less reason to think – *pace* it would seem what very many do think, and think is relatively uncontroversial – that knowing how nevertheless can and should be seen as a psychological natural kind.⁴⁴

41 Cf. McDowell, *Mind and World*, 115.

42 Jonas, *The Phenomenon of Life: Toward a Philosophical Biology* (Illinois: Northwestern University Press, 2001), 91 (the phrase is discussed by Thompson in *Mind in Life*, 163 ff.).

43 Knowles, *Representationalism*, ch. 2–3.

44 An ancestor of this chapter was presented at the *Doing, Saying, and Showing* conference in June 2021, and I would like to thank the participants on that occasion for their questions and

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