

Wittgenstein's Razor: The Cutting Edge of Enactivism

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While thinking philosophically we see problems in places where there are none. (PG 47)

The primacy of the deed

If I had to say what the single, most important contribution Wittgenstein made to philosophy was, it would be to have revived the animal in us; the animal that is there in every fibre of our human being, and therefore also in our thinking and reasoning. This means, his pushing us to realize that we are animals not only genealogically, but as evolved human beings – whether neonate, or language-possessing, civilized, law-abiding, fully-fledged adults. Constitutionally, and in everything we do, still *fundamentally* animals.

Wittgenstein's evocation of the 'animal' in us is strewn, more or less implicitly, throughout his philosophy, but it is clearly articulated in *On Certainty*, where he says he wants to conceive of our basic certainty 'as something that lies beyond being justified or unjustified; as it were, as something animal' (OC 359). By this he means: as something instinctive, thought-free, reflex-like. And this animal state is applied to us also in our acquisition of language:

I want to regard man here as an animal; as a primitive being to which one grants instinct but not ratiocination. As a creature in a primitive state. Any logic good enough for a primitive means of communication needs no apology from us. Language did not emerge from some kind of ratiocination. (OC 475)

As also in our grasping of the world's 'furniture':

Children do not learn that books exist, that armchairs, exist, etc., etc., – they learn to *fetch* books, *sit* in armchairs, etc., etc.

Later, questions about the existence of things do of course arise. “Is there such a thing as a unicorn?” and so on. But such a question is possible only because *as a rule* no corresponding question presents itself. For how does one know how to set about satisfying oneself of the existence of unicorns? How did one learn the method for determining whether something exists or not? (OC 476; my emphasis)

One does not learn a method of figuring out whether something exists or not until a question presents itself. And a question does not *normally* present itself as to whether I or the chair I am sitting in exist. It *does* normally present itself about unicorns, or about whether there are chairs in the *next* room. What Wittgenstein is doing here is deproblematizing or de-intellectualizing what we have problematized and intellectualized. There is no question or problem about existence until there is a question or a problem about it:

'So one must know that the objects whose names one teaches a child by ostensive definition exists.'— Why must one know they do? Isn't it enough that experience doesn't later show the opposite?

For why should the language-game rest on some kind of knowledge?
(OC 477)

Does a child believe that milk exists? Or does it know that milk exists? Does a cat know that a mouse exists? (OC 478)

If a cat doesn't need to know that a mouse exists before chasing it, nor does a child need to know that milk exists before drinking it. And nor does an adult need to know that a house exists before entering it. For Wittgenstein, grasping the world is *by default* done primitively – not epistemically, or indeed propositionally. Here, perception – be it of the milk, the mouse or the house – is, as Dan Hutto puts it, 'not contentful but enabling' (Forthcoming). And contrary to 'the widely-endorsed thesis that cognition always and everywhere involves content' (Hutto & Myin 2013), Wittgenstein regards cognition as always and everywhere involving man as an animal, as a creature in a primitive state. He insists that we cannot make a move or have a thought that does not stem from the animal in us; and that it is only after that primitive start that cognition can have content.

This translates into saying that, for Wittgenstein, 'at the beginning is the deed', not the word, not the proposition, but the deed, action: 'Language – I want to say – is a refinement. "In the beginning was the deed."' (CE 395; CV 31). And 'the beginning' here – as also the term 'primitive' whenever used by Wittgenstein or myself in this paper – is not to be understood only ontogenetically and phylogenetically, but also logically¹. This is where 'enactivism' comes in. Action, in Wittgenstein, is everywhere – not only at the origin of thought and language for the human species and for all individual human beings, but at the origin of any human thought or utterance. That is, it has regained its rightful place in the description of our human mindedness; a place usurped by an inflated intellect and brain, in the form of content, propositions, representations, engrams² or intelligent neurons. Action – and not any of these – is, for Wittgenstein, at the logical foundation of thought. This is not merely to say that we need to be alive to think – or that thinking is a form of acting – but that much – not all, but much – of what we have always regarded as thinking is in fact *acting* or behaviour. Acting, however, that looks like thought because we – philosophers – have put it into words. This includes such things as our basic beliefs, spontaneous utterances³, and rules of grammar. Now of course, all of these *can* be put into sentences or, if you like, propositions, but what Wittgenstein has shown is that they do not *stem* from propositions; and so they do not start out as any kind of content.

So, two things I'd like to do here: one is to briefly survey two of the 'topics' that Wittgenstein has 'enactivized', as it were; the other is to stress that this enactivism is not

¹ Lars Hertzberg (1992) distinguishes two senses in Wittgenstein's use of the notion of 'primitive': a *logical* sense, indicating the place occupied by a type of reaction or utterance in relation to a language-game; and an *anthropological* sense, connected with understanding the place of a reaction in the life of a human being. I would add: *in the history of the human species* – and so: primitive in the *phylogenetic* sense as well. It is of course the *logical* that is of philosophical interest, but Wittgenstein's method of philosophizing 'by example', appeals to *anthropological* cases in point. 'But what is the word "primitive" meant to say here? Presumably that this sort of behaviour is *pre-linguistic*: that a language-game is based *on it*, that it is the prototype of a way of thinking and not the result of thought.' (Z 541)

² An engram is 'the transient or enduring change in our brain that results from *encoding* an experience' (Shacter 1996, 58; my emphasis).

³ See Moyal-Sharrock (2000).

anything added but rather what is left when our superfluous, unsubstantiated, explanation-hungry enhancements have been erased from the straight-forward picture of human action and cognition. The two topics I will look at are: basic beliefs and memory, thereby hoping to give an idea of how Wittgenstein's Razor⁴ has pared off some of the excess in epistemology and philosophy of mind.

But before I do this, I'd like to briefly enumerate a few of the *other* ways in which Wittgenstein helped emphasize the primacy of action, together with the superfluity – in basic or primitive cases – of propositions and cognition, in his account of mind, language and action. We can start with his signature phrase: 'meaning is use'; meaning is the product of *our operating* with words (AWL 21); and so: 'The meaning of a word is described by describing its use' (AWL 48) – that is, how we *operate* with that word. And so it goes for *understanding*. As Wittgenstein says:

We think there must be something going on in one's mind for one to *understand* the word 'plant'. We are inclined to say that what we mean by one's understanding the word is a process in the mind. ... There is a way out of the difficulty of explaining what understanding is if we take 'understanding a word' to mean, roughly, being able to use it. The point of this explanation is to replace 'understanding a word' by 'being able to use a word', which is not so easily thought of as denoting an [inner] activity. (AWL 78)

In most cases it [the word 'understand'] is used to mean being able to do so-and-so. When a man understands an order it is true that often certain pictures are present to his mind, though often not. (AWL 80)

Add to this his view of rule-following in terms of making a *move* rather than a *judgment*. To follow a rule is to *do* something; calculating, using mathematical rules, are mechanical *activities*; like making *moves* that one was *trained* to perform⁵. Rules of mathematics are akin to *orders* or *commands* (RFM VII 40; V 13) that impart technique (RFM VII 1) – 'The mathematical proposition says to me: 'Proceed like this!' (RFM VII 73); it 'determines ... lays down a path for us' (RFM IV 8). 'The expressions 'being *able* to', 'understanding how to', 'knowing *how to go on*' [...] have practically the same grammars' (AWL 92; my emphasis).

Wittgenstein's razor is seen at work on the subjects of perception, belief, feelings, sensations, emotions and of course action, wherever we have traditionally inserted an intellectual process or state – be it a thought, a description, an interpretation, an inference, a

⁴ Of course, Wittgenstein's Razor is not exactly Occam's, but the underlying idea is the same: using parsimony, simplicity, and making the fewest assumptions in our descriptions (Occam would probably say 'explanations'); preferring 'the *simplest* law that can be reconciled with our experiences' (TLP 6.363).

⁵ Might we not do arithmetic without having the idea of uttering arithmetical *propositions*, and without ever having been struck by the similarity between a multiplication and a proposition? / Should we not shake our heads, though, when someone shewed us a multiplication done wrong, as we do when someone tells us it is raining, if it is not raining? – Yes; and here is a point of connection. But we also make gestures to stop our dog, e.g. when he behaves as we do not wish. / We are used to saying "2 times 2 is 4", and the verb "is" makes this into a proposition, and apparently establishes a close kinship with everything that we call a 'proposition'. Whereas it is a matter only of a very superficial relationship.' (RFM III 4). See also RFM I 143-4 and the thought experiment at IV 15-20 and V 8.

judgment, or a justified true belief – that turns out, upon scrutiny, to be superfluous. Here are some examples:

The squirrel does not infer by induction that it is going to need stores next winter as well. And no more do we need a law of induction to justify our actions or our predictions. (OC 287)

You don't need any *knowledge* to find a smell repulsive. (LWI 758)

It is not as if he had only indirect, while I have internal direct evidence for my mental state. Rather, he has evidence for it, (but) I do not. (LW II, p. 67)

Whether I *know* something depends on whether the evidence backs me up or contradicts me. For to say one knows one has a pain means nothing. (OC 504)

If I let my gaze wander round a room and suddenly it lights on an object of a striking red colour, and I say "Red!" – that is not a description. (PI p. 187)

My attitude towards him is an attitude towards a soul. I am not of the *opinion* that he has a soul. (PI 287)

... we can see *from their actions* that [people] believe certain things ... (OC 284; my emphasis)

And Wittgenstein has drawn our attention to the enacted nature of spontaneous first-person psychological utterances, showing that, here too, 'words are deeds' – adding a new twist to the notion of speech-acts⁶:

The words "I am happy" are a bit of the behaviour of joy. (RPP I, 450)

The exclamation "I'm longing to see him!" may be called an act of expecting. But I can utter the same words as the result of self-observation. (PI 586)

Are the words "I am afraid" a description of a state of mind? It depends on the game they are in. [PI, p. 187]

Also, for Wittgenstein, meaning, language-acquisition and concept-formation are rooted in instinctive reactions and gestures⁷ and further developed through training and enculturation⁸. The field of language acquisition – Michael Tomasello's work particularly

⁶ See Moyal-Sharrock (2000).

⁷ "'Meaning' (*Bedeutung*) comes from 'point' ('deuten'). What we call meaning must be connected with the primitive language of gestures (pointing-language)." (BT 24); 'The origin and the primitive form of the language game is a reaction; only from this can more complicated forms develop. Language – I want to say – is a refinement. "In the beginning was the deed.'" (CE 395 – CV p. 31); 'Being sure that someone is in pain, doubting whether he is, and so on, are so many natural, instinctive kinds of behaviour towards other human beings, and our language is merely an auxiliary to, and further extension of, this relation. Our language-game is an extension of primitive behaviour. (For our *language-game* is behaviour.) (Instinct).' (Z 545) [cf. RPP I, 151].

⁸ On the latter, see José Medina's excellent *The Unity of Wittgenstein's Philosophy*, Albany: SUNY Press, 2002.

attests to this – is starting to be infiltrated by Wittgenstein. And I have myself tried to show how Wittgenstein's work helps destabilize the picture of an innate mental grammar with a grammar that is rooted in our primitive reactions and transmitted socio-culturally⁹. Meaning, believing, thinking, understanding, reasoning, calculating, learning, following rules, remembering, intending, expecting, longing – there is hardly anything, traditionally thought to be emergent from, underwritten by, or reducible to, a mental process or state, that Wittgenstein has not subjected to the razor of enactivism; that is: shown to be primitively embodied or enacted rather than originating in propositions, theories of mind, or ghostly processes.

This may sound like behaviourism, but it isn't. As Peter Hacker aptly sums up:

... behaviourism was right about *some* matters. *Logical* behaviourism (e.g., Carnap and Feigl in the 1930s) was right to insist that there is an internal relation between mental attributes and behaviour. For the criteria for ascribing mental attributes to others consist in their behaviour in the circumstances of life. Where it was wrong was to suppose that the mental is *reducible* to behaviour and dispositions to behave. Ontological behaviourism (Watson and Skinner) was right to emphasise that language learning is based on training, and that it presupposes common behavioural reactions and responses. It was right to conceive of language learning as learning new forms of behaviour – learning how to do things with words. It was correct to conceive of understanding in terms of abilities and dispositions, rather than as a hidden mental state or process. But the behaviourists were sorely mistaken to suppose that the mental is a fiction. One can think and feel without showing it, and one can exhibit thoughts and feelings without having them. Avowals of experience are indeed a form of behaviour, but what they avow is not behaviour. (Forthcoming)

So, not behaviourism, but enactivism. I remember my first paper at Kirchberg in 1997 – before I'd ever heard the term 'enactivism' – was entitled 'The enacted nature of basic beliefs' and I was taken to task by my audience for using the word 'enacted' as implying that there was something there, preceding the enactment, that was going to be enacted. So I dropped the word, and went on talking about 'certainty in action' and 'logic in action'. But I shouldn't have been so quickly discouraged. The word needn't be, and indeed hasn't been, thus understood. Wittgenstein is an enactivist through and through. Indeed, perhaps the first enactivist, though a bid can also be made there by Aristotle¹⁰. But let me now turn to Wittgenstein and basic beliefs¹¹.

⁹ See Moyal-Sharrock (2010).

¹⁰ For Aristotle, the soul (*psuchē*) is a set of capacities (or functions), and *mind* (*nous*) is one of them. But unlike all the other capacities or faculties (e.g. sight, smell), the mind has no corresponding bodily organ; e.g. the brain. This, however, does not mean that Aristotle thinks the mind is not 'embodied' – that we could think, hope, expect, desire, will etc. without having a body, or that the body plays no role in our thinking, hoping, etc. – on the contrary, he claims there is no separating the mind from the body. This is his *hylomorphism*. Aristotle is then the first philosopher to envisage, and indeed, champion the idea of *embodied mind*.

¹¹ I can, in this brief summary, only hope to gesture at Wittgenstein's treatment of basic beliefs. For a more comprehensive analysis, see Moyal-Sharrock (2007); for a summary account, see Moyal-Sharrock (Forthcoming).

An enacted certainty

I want to say: it's not that on some points men know the truth with perfect certainty. No: perfect certainty is only a matter of their attitude. (OC 404)

On Certainty is Wittgenstein's attempt – prompted by G. E. Moore's problematic conclusion in 'Proof of an External World' (1939) – to uncover the nature of our basic beliefs. As he ponders that nature, we see Wittgenstein consider various possibilities: he thinks of these basic beliefs in propositional terms and in pictorial terms¹², but his *ultimate* depiction of our basic beliefs is as *ways of acting* (OC 204). Let's briefly see how he gets there.

Recall Moore's shortlist of 'truisms' of which he says 'I *know*, with certainty to be true':

There exists at present a living human body, which is *my* body. This body was born at a certain time in the past, and has existed continuously ever since Among the things which have... formed part of its environment ... have... been large numbers of other living human bodies ... the earth had existed also for many years before my body was born... (1925, 33-34)

'Here is a hand', and so on. Wittgenstein considers these 'truisms' and others in *On Certainty*, such as: 'if someone's arm is cut off it will not grow again', (OC 274); 'cats don't grow on trees' (OC 282); 'I am sitting [here]' (OC 195). There are, he says, countless such general empirical propositions that count as certain for us (OC 273). He realizes, however, that our certainty vis-à-vis these apparent empirical propositions – their *standing fast* for us; our not doubting them – is not due to reasoning or verification, to our having empirically or rationally exhausted all avenues of doubt on their behalf, but to our not treating or regarding them as susceptible of doubt in the first place. Our *basic certainty* is not of the order of justification or reflection¹³, or indeed of truth¹⁴, and it is therefore not susceptible of mistake, doubt, or falsification – for where no epistemic route was followed, no epistemic fault is possible: 'I know how to ascertain that I have two coins in my pocket. But I cannot ascertain that I have two hands, because I cannot doubt it' (LWI, 832). To be certain, here, means to be *unwaveringly and yet noncognitively poised* on something that *enables* us to think, speak or act meaningfully. That something is *grammar*.

Wittgenstein comes to realize that Moore's truisms, though they resemble or have the *form* of, *empirical* or *epistemic* propositions are in fact expressions of bounds of sense or rules of grammar – at par with '2+2=4':

I want to say: The physical game is just as certain as the arithmetical. ... If one doesn't marvel at the fact that the propositions of arithmetic (e.g. the multiplication tables) are 'absolutely certain', then why should one be

¹² Wittgenstein speaks of our basic beliefs as forming a *World-picture* – or *Weltbild* (OC 167).

¹³ OC 34, 103, 94, 105, 253, 58-59.

¹⁴ 'But I did not get my picture of the world by satisfying myself of its correctness; nor do I have it because I am satisfied of its correctness. No: it is the inherited background against which I distinguish between true and false.' (OC 94); 'I have a world-picture. Is it true or false? Above all it is the substratum of all my enquiring and asserting. The propositions describing it are not all equally subject to testing' (OC 162); 'If the true is what is grounded, then the ground is not *true* nor yet false' (OC 205).

astonished that the proposition 'This is my hand' is so equally? (OC 447-8)¹⁵

And precisely because these truisms are *not* justified true beliefs, he rebukes Moore for claiming that he *knows* them:

I should like to say: Moore does not *know* what he asserts he knows, but it stands fast for him, as also for me; regarding it as absolutely solid is part of our *method* of doubt and inquiry. (OC 151)

Which is to say – for Wittgenstein – part of our grammar. Moore's truisms, then, express not objects of knowledge, but *bounds* of sense; that which enables us to get to knowledge. In a well-known metaphor, Wittgenstein uses the image of hinges that must stand fast in order for the door of enquiry to turn (OC 341; 343).

Now some of these bounds of sense or rules of grammar (e.g. 'This is (what we call) a table' or 'People sometimes lie') are *acquired*, yet – like all rules – they are acquired not empirically or epistemically¹⁶ but through training¹⁷ or *repeated exposure*. Others are 'there like our life' (OC 559); they are a *natural*, animal-like or instinctual certainty that need never be taught or even articulated – e.g. 'Humans have bodies', 'There exist people other than myself'. Here, *to be certain* does not imply that one can understand the sentences just written out. A one-year old child not yet in possession of language shows that she is endowed with such certainties by reaching out for her mother, interacting with others, etc.

Yet whatever their origin – whether they be natural or 'second-nature' certainties – all hinges function as grammatical rules¹⁸; they 'form the foundation of all operating with thoughts' (OC 401). Wittgenstein, however, warns us against thinking of this grammar in propositional terms:

Giving grounds, however, justifying the evidence, comes to an end; -- but the end is not certain 'propositions' striking us immediately as true, i.e. it is not a kind of *seeing* on our part; it is our *acting*, which lies at the bottom of the language-game. (OC 204)

¹⁵ See also: 'When Moore says he *knows* such and such, he is really enumerating a lot of empirical propositions which we affirm without special testing; propositions, that is, which have a *peculiar logical role* in the system of our empirical propositions' (OC 136; my emphasis).

¹⁶ Of course, some certainties may have started out as empirical or epistemic observations, but then underwent *nonratiocinative* assimilation. For more on this, see Moyal-Sharrock (2007).

¹⁷ Wittgenstein even speaks of *taming* (*Abrichten*); cf. PI 5; and in the *Blue Book*: 'I am using the word "trained" in a way strictly analogous to that in which we talk of an animal being trained to do certain things. It is done by means of example, reward, punishment, and suchlike' (BB 77).

¹⁸ This highlights the various manifestations of what Wittgenstein calls 'grammar': it is not always verbalised or explicitly taught; it is often grasped unawares – and of course, used unawares; nor does it only regulate the use of *specific words*, but also more generally denotes the *conditions of thought*: 'the *conditions* necessary for the understanding (of the sense)' (PG p. 88). The hinge: 'There exist people other than myself' is an artificial expression of one of the grammatical *conditions* necessary for the use and understanding of the sense of such descriptive or informative statements as: 'The world's population doubled between 1950 and 1990'. In the same way that our speaking about a rod (e.g. 'Cut this rod in half!') is conditioned by the grammatical rule: 'A rod has a length'. And neither of these rules need ever have been explicitly formulated to be operative: 'The propositions describing this world-picture might be part of a kind of mythology. And their role is like that of rules of a game; and the game can be played purely practically, without learning any explicit rules' (OC 95).

Grammar is seen as belonging to the realm of acting¹⁹.

Hinge or basic certainty is not a matter of propositions or intellection at all, but takes the form of spontaneous *acting in the certainty of...* an innumerable array of things. It is much like an unselfconscious *know-how*:

My life shews that I know or am certain that there is a chair over there, or a door, and so on. – I tell a friend e.g. "Take that chair over there", "Shut the door", etc. etc. (OC 7; my emphasis)

Although I have never uttered or thought the words 'Chairs are for sitting on' or 'Doors can be opened and closed', what I say about, and do with, chairs and doors shows that I have grasped these conceptual features – though the certainty of my grasp is not a conceptual or propositional one. Rather:

It is just like directly taking hold of something, as I take hold of my towel without having doubts. (OC 510)

And yet this direct taking-hold corresponds to a *sureness*, not to a knowing. (OC 511)

This sureness which, unlike a knowing, does not originate in doubt or hesitation and which has the characteristics of a reflex action, of an automatism, of an instinct, is then foreign to *thought*. And this *thoughtlessness* – that which lays the basis for thought (OC 411), and is therefore itself *not* (a) thought – is also a *wordlessness*; it *goes without saying*:

I believe that I had great-grandparents, that the people who gave themselves out as my parents really were my parents, etc. This belief may never have been expressed; even the thought that it was so, never thought. (OC 159)

An ineffable certainty: *it goes without saying*

Such is the enacted nature of grammar and basic beliefs that they do not even, as such, bear saying within the *stream* of the language-game but only in heuristic situations: that is, in situations where rules of grammar are transmitted (through drill or training) to a child, a disturbed adult or a foreign speaker; or in philosophical discussion. To articulate grammatical rules *within* the stream of the language-game – that is, non-heuristically – is to articulate bounds of sense as if they were informative statements. If a forester were to say to his men: 'This tree has got to be cut down, and *this* one and *this* one', that would be an informative statement. If he were then to say, pointing to a perfectly ordinary tree: 'That is a tree', his men would look at him askance. The language-game is suddenly frozen; the forester isn't making sense: he seems to want to inform his men of something so basic they would have learned it as children. As Wittgenstein writes, the only way 'the information "That is a tree", when no one could doubt it' might have meaning is as 'a kind of joke' (OC 463). The forester's certainty that *that is a tree* can only *show* itself in his normal *dealing* with the tree; it cannot

¹⁹ The reform of logical necessity from its traditional depiction as an inexorable *law* to an inexorable *attitude* in the face of what it makes sense to say or think about certain things was undertaken by Wittgenstein in the *Remarks on the Foundation of Mathematics* – an attitude of inexorable *application* in the *Remarks* (p. 82), this attitude is glossed in *On Certainty* as one of nonratiocinated, immediate trust (cf. OC 150, 283, 509) and thoughtless grasp (OC 511).

qua certainty be meaningfully said. That *that is a tree* is the ineffable²⁰ hinge on which turns his singling out the targeted trees. The hinge is 'fixed and ... removed from the traffic' (OC 210) – that is, it *enables, but does not belong to* the language-game. To say a hinge in the flow of the language-game invariably arrests the game; the fluidity of the game depends on its hinges remaining invisible (unsaid): all the forester needs to say for his men to get to work is which trees need cutting.

Hinge certainty is an *enacted* certainty, exhibiting itself in the smoothness of our normal, *basic* operating in the world. Moore's saying "I know that 'here is a hand'" conveyed no certainty that was not already visible in his speaking about his hand, in his raising it, or simply in his unselfconsciously using it. Our hinge certainty that 'That is a tree' shows itself in our *treating* it as something to cut for firewood, or to sit under for shade, or to examine for its classification. Hinges are grammatical rules, but they are rules *in action; logic in action*: 'That is to say, it belongs to the logic of our scientific investigations that certain things are *in deed* not doubted' (OC 342). It is our deeds that show we do not, *cannot*, doubt some things if we are to make sense. And if we were *in deed* to doubt, it would not be a manifestation of uncertainty, but of nonsense or madness. Our foundational certainty is operative only *in action, not in words*²¹.

Wittgenstein's conclusion in *On Certainty* is that our basic certainty is logical, logically ineffable, and enacted. I have elsewhere called this a *logical pragmatism*²². As he'd already suspected in the *Remarks on the Foundations of Mathematics*, 'The limits of empiricism are not assumptions unguaranteed, or intuitively known to be correct; they are ways in which ... we act' (RFM VII, 21).

An enacted foundationalism

If I have exhausted the justifications I have reached bedrock, and my spade is turned. Then I am inclined to say: 'This is simply what I do.' (PI 217)

With *On Certainty* foundationalism sheds its old skin. Where epistemologists have always thought of our basic beliefs as propositions, Wittgenstein sees them as rules of grammar or bounds of sense that manifest themselves as ways of acting. These rules can be articulated into sentences, as I've been doing, but such articulation is effected only for heuristic purposes. The problem is that, once verbalised, these rules of grammar misleadingly *look like* empirical propositions, conclusions that we come to from experience. This resemblance has

²⁰ Ineffable or, as Guetti and Read have it, *invisible*: 'Grammatically, a rule in action is "invisible" just in virtue of the fact that, to be taken as a rule – to be an actionable or capacitative concept – it must be *un*-expressed and *un*-exposed.' (1996, 52).

²¹ Though of course the certainty shows itself as much *in* what we say (e.g., 'I've got to wash my hands') as in what we do (cf. OC 431). To stress the ineffability of hinges is not merely to point out the superfluity of saying what (in normal circumstances) is *already certain* and whose articulation would be idle repetition, it is to underline the *logical* unsayability of hinges. A hinge *cannot* be meaningfully articulated other than in a heuristic situation – that is, *as a grammatical rule*. Only in such contexts, is it plainly not offered as a hypothesis, but *pointed at* as a rule, an enabler. It must be noted, however, that sentences identical to hinges but that do not function as hinges – what I have elsewhere called nongrammatical *doppelgänger* of hinges – *can* be meaningfully articulated *within* the stream of the language-game. The *doppelgänger of a hinge* is a sentence made up of the same words as a hinge, but which does not *function* as a hinge.

²² See Moyal-Sharrock (2003).

confused philosophers, and disconcerts Wittgenstein himself throughout much of *On Certainty*. But he comes to see that we have, yet again, been mystified by the appearance of language²³: 'I am inclined to believe that not everything that has the form of an empirical proposition *is* one' (OC 308). Wittgenstein realises that our basic certainties are, indeed, not propositions but animal or unreflective ways of acting which, once formulated, look like propositional beliefs. It is this misleading appearance that leads philosophers to believe that at the foundation of thought is yet more thought. This insight enables him to solve the problem that occupied Moore and plagues epistemology – that of the foundation of knowledge. What philosophers have traditionally called 'basic beliefs' cannot, on pain of infinite regress, be themselves further propositional beliefs, and Wittgenstein's conception of *hinge certainty* shows they aren't.

Having, in the *Investigations*, put the animal back in language²⁴, Wittgenstein allows the animal to surface in epistemology, making clear for philosophy at large, and not only epistemology, that thought is prefaced by thoughtlessness that has been interpreted as thought; by spontaneity, automatism, rule, reflex and instinct. In resisting the temptation to underpin knowledge with yet more knowledge, he shows that we do not start with judgments or propositions, but with animal actions and reactions that evolve into content-laden thought and action. We do not go from proposition to deed, but vice-versa: from a non-reflective grasp to a sophisticated one; from doing to judging and thinking. It would seem, then, that it is our ambition to explain, to gain firmness and hold on a phenomenon, that leads us to turn ways of acting into 'tacit beliefs' and 'basic propositions'.

In our standard pictures of memory, Wittgenstein discerns yet another instance of our need to solidify, fix, incarnate or reify what deploys itself in our ways of acting.

Memory is not in the brain

As regards memory, Wittgenstein debunks our preconceptions about it residing in the brain – in storage as it were – in the form of encoded traces (or engrams). He starts off grazing away at our preconceptions by suggesting that it is not a necessary law – a logical one – that remembering be caused by anything physiological:

I saw this man years ago: now I have seen him again, I recognize him, I remember his name. And why does there have to be a cause of this remembering in my nervous system? Why must something or other, whatever it may be, be stored-up there *in any form*? Why *must* a trace have been left behind? Why should there not be a psychological regularity to which *no* physiological regularity corresponds? If this upsets our concepts of causality then it is high time they were upset. [Z 608] (RPP I, 905)

That this is a mere 'logical' reminder – one to shake us out of our physicalist complacency²⁵ – is confirmed by the fact that it comes after Wittgenstein's *assumption*, a

²³ 'We remain unconscious of the prodigious diversity of all of our everyday language-games because the outward forms of our language make everything alike.' [Cf. PI p. 224] (LWI, 909)

²⁴ Cavell: 'Wittgenstein's motive ... is to put the human animal back into language and therewith back into philosophy' (1979, 207).

²⁵ 'Nothing is more important in explanations of thought and brain processes than throwing away all the old prejudices about causality. This seems to me by far the most important step' (MS 134, 104-5, originally

couple of passages earlier, that there exists a correlation between such activities as talking or writing and what goes on in the brain: 'if I talk or write there is, I assume, a *system* of impulses going out from my brain and correlated with my spoken or written thoughts' (RPP I, 903). This, however, is ensconced in a passage where he also seems to reject correlation. So what exactly is Wittgenstein is rejecting? Let's have a closer look:

No supposition seems to me more natural than that there is no process in the brain correlated with associating or with thinking; so that it would be impossible to read off thought-processes from brain-processes. I mean this: if I talk or write there is, I assume, a *system* of impulses going out from my brain and correlated with my spoken or written thoughts. (RPP I, 903)

The kind of correlation Wittgenstein is rejecting is one which would putatively allow one to read off thought-processes from brain processes – that is, a representational or encrypted (codified) correlation. But he endorses the other kind of correlation, the nonrepresentational, non-encrypted kind – the *merely* physiological correlation. Having done this, he adds that we should not look for anything more in those physical impulses; there is no deeper correlation or 'system' or further 'order' in those impulses that would, say, represent the content of our thoughts:

But why should the *system* continue further in the direction of the centre? Why should this order not proceed, so to speak, out of chaos? (RPP I, 903)

This last sentence seems outlandish; yet not if 'chaos' is understood merely as the negation of 'order'. All Wittgenstein is saying here is that nothing warrants our looking for a further *order* or narrower *correlation* – that is, an isomorphic one – between a brain impulse and a thought. A certain kind of brain impulse may be correlated to thinking (rather than, say, to feeling pain), but not to a particular thought or other (so that by reproducing the impulse, we would reproduce the particular thought). Elsewhere, he writes:

... nothing seems more possible to me than that people someday will come to the definite opinion that there is no copy in either the physiological or the nervous systems which corresponds to a *particular* thought, or a *particular* idea, or memory. (LW I 504).

appearing between RPP I, 906 and 908). In the *Brown Book* already, Wittgenstein had deplored our being in the grip of the physicalist picture of memory and causality: 'we can hardly help conceiving of memory as a kind of storehouse. Note also how sure people are that to the ability to add or to multiply or to say a poem by heart, etc., there *must* correspond a peculiar state of the person's brain, although on the other hand they know next to nothing about such psycho-physiological correspondences. We regard these phenomena as manifestations of this mechanism, and their possibility is the particular construction of the mechanism itself.' (BB 118). Although Wittgenstein means RPP I, 905 to be a mere logical reminder, may not the question it contains: 'Why should there not be a psychological regularity to which *no* physiological regularity corresponds?' – which echoes this from the previous passage: it is 'perfectly possible that certain psychological phenomena *cannot* be investigated physiologically, because physiologically nothing corresponds to them' (RPP I, 904) – be, in some sense, empirically plausible? Think of cases such as someone's excessive ambition causing their loneliness; or greed causing someone to become corrupt, where no physiological trace or connection or mediation or causation obtains, though many psychological or intentional connections do.

Just as a certain kind of seed will engender only a certain kind of plant, some impulses may enable only thoughts – and may be identified as thought-enabling impulses – but just as the seed does not contain, even in encoded form, the individual plant that will grow from it, nor does a brain impulse contain or carry the thought it enables, or even something that *corresponds* to that thought. There is nothing that physiologically *corresponds* to our thoughts, which does not mean that our thoughts are not dependent on physiological structures and processes.

So that what Wittgenstein unambiguously rejects is not a psychophysical correlation, but a psychophysical *parallelism*; that is, an *isomorphic* correlation between brain processes and thoughts or memories:

Even if we knew that a particular area of the brain is changed by hearing *God Save the King* and that destroying this part of the brain prevents one's remembering the occasion, there is no reason to think that the structure produced in the brain represents *God Save the King* better than *Rule Britannia*. (LPP 90)

The brain is a *mechanical* enabler; it is not *ipso facto* the storehouse and codifier of our memories:

An event leaves a trace in the memory: one sometimes imagines this as if it consisted in the event's having left a trace, an impression, a consequence, in the nervous system. As if one could say: even the nerves have a memory. But then when someone remembered an event, he would have to *infer* it from this impression, this trace. Whatever the event does leave behind in the organism, *it* isn't the memory. (RPP I, 220)

As Stéphane Chauvier notes: 'That a lesion in a part of her brain prevents an individual from recognizing certain familiar faces informs us about the neural conditions required for someone to recognize a face, but the recognition of a face is not itself a neuronal process' (2007, 46). Recognizing is not a neuronal process, though a neuronal process enables recognizing. Here is how Bennett and Hacker put it with respect to remembering:

It may well be the case that but for certain neural configurations or strengths of synaptic connections, one would not be able to remember the date of the Battle of Hastings and would not recollect being told it. But it does not follow from that idea that what one remembers must be, as it were, written down in the brain, or that there must be some neural configuration in the brain from which one could in principle read off what is remembered. *Nor can it be said that this neural configuration is a memory.* ... The expression of a memory must be distinguished from the neural configurations, whatever they may be, which are conditions for a person's recollecting whatever he recollects. But these configurations are not the memory; nor are they representations, depictions or expressions of what is remembered. (2003, 170-1; my emphasis)

Not only do we conflate causal *conditions* with causal *representations*, and mistakenly take the brain to be recording what we see in an isomorphic trace, we also see this trace as having an *activating* function: it acts as mediator and activator between the original event and our ability to call it to mind. So that every time we remember an event, besides representing it, the trace is also supposed to select, decode and activate the memory. But this amounts to attributing intentionality (i.e. conscious selection, decision, rejection) to an

unconscious process. Nothing has been gained, since we find ourselves with an unconscious made up of the same elements as a conscious subject; and what we had invoked to *explain* conscious memory now itself requires an explanation (Dalla Barba 2000, 146-7). To accept the hypothesis of unconscious monitoring mechanisms is to fall prey to the *homunculus fallacy*. Memory cannot rely on such things as mental representations or memory engrams because there is no homunculus there to interpret them and to provide memory traces with their past tense. Neuronal changes in the brain may be necessary, but they are not sufficient for memory; and they are not codified memory²⁶.

Wittgenstein further counters the pervasive conception of memory as storage and retrieval by insisting that there is no one conception, picture or metaphor that will render the multifarious ways in which we remember something:

... it is not one particular state of mind that is involved in [...] remembering' [...] What happens when I remember my toothache? Perhaps what happens is only that I say I remember it, though there is usually some sort of accompaniment.

Different sorts of memories are to be distinguished. One kind passes in time, cinematographically. Another is like an image given all at once, but afar off. And we must not fail to take account of the kind of memory which consists in remembering a poem or tune rather than some event of the past. In these cases 'to remember it' means 'to be able to reproduce it'. (AWL 56)

Memory as a way of acting

Whereas we are inclined to believe that saying or doing something cannot be all there is to memory; that it leaves out the essential feature of the mental process of memory and gives us only an accessory feature (cf. BB 86), Wittgenstein unprecedentedly affirms that words, as well as gestures, can *constitute* remembering – they don't always, but they can. Remembering can *amount* to 'doing something' such as reciting a poem by heart or fetching someone's key for them; recognizing someone can consist in saying 'Hello!' to them in words, gestures, facial expressions, etc. (BB 165-6). He writes:

Remembering, then, isn't at all the mental process that one imagines at first sight. If I say, rightly, 'I remember it,' the most *varied* things may happen; perhaps even just that I say it. (PG 42)

If someone remembers his hope, on the whole he is not therefore remembering his behaviour, nor even necessarily his thoughts. He says ... that at that time he hoped. (RPP I, 468)

These hardly resemble mental consultations of mental archives. Wittgenstein is not, however, suggesting that there can be no mental process of remembering. If you ask me when the last time was I had chocolate fondue, I'd have to stop and think about it, and so *there* would be a mental process of remembering. Nothing mysterious here; **I** would be doing

²⁶ Colin Allen remarks (in personal communication) that 'we want to say more than that neuronal configurations are required for memory – a supply of oxygen is also required, but different neuronal configurations support different capacities for remembering specific events or items, which is not true of oxygen supply'. I would question that remembering specific events or items requires specific neuronal configurations, and would in any case reply that the fact that more specialized requirements must be met for remembering to occur does not entail that one of those requirements be representation.

the remembering, the deliberate calling to mind of certain moments in my past. What Wittgenstein rejects is only that 'peculiar' mental state or process which is thought to necessarily occur *along with or in advance of* the expressions (utterances, gestures etc.) of memory. On Wittgenstein's view, we are warranted in speaking of a memory act if by it we do not mean a ghostly, amorphous mental event that *must* precede and cause an expression or act of recall:

In remembering a poem we do not first [subconsciously] visualize the printed poem and then say it. We simply start off by saying it ... (AWL 56)

What we deny is that the picture of the inner process gives us the correct idea of the use of the word 'to remember'. (PI 305)

Wittgenstein's major contribution to the elucidation of the concept of memory is his discrediting the picture of memory as information *storage* and replacing it with the idea that memory is nothing but an *ability* (which, of course, is – as are all our abilities – physiologically supported by the brain) and that, in some contexts, remembering *amounts to a way of acting*; that is to an act or expression which does not result from introspection or retrospection (e.g. BB 85).

Wittgenstein gives various examples of remembering as *prompted by or embedded in* certain *acts*: 'I draw a curve on paper when the man speaks; when I trace the curve again I can repeat the sentence; but the curve can't be read as a code' (LPP 90). Although retracing the curve is here a necessary condition for recall, Wittgenstein insists that it is not any representative nature the curve would have acquired that makes it thus necessary – 'the curve can't be read as a code'. Nor would Wittgenstein have agreed with extended mind theorists that such examples of situated and embodied memory are mere *cognitive scaffolding*, or that they are 'best seen as alien but *complementary* to the brain's style of storage and computation', as does Andy Clark (1997, 220; original emphasis). For Wittgenstein, retracing the curve is, along with being a minimally healthy human being, a *sufficient* condition for recall. In a similar passage, he adds: these jottings would 'not be a *rendering* of the text, not a translation, so to speak, in another symbolism. The text would not be *stored up* in the jottings. And why should it be stored up in our nervous system?' (RPP I, 908).

The way forward

Wittgenstein then helps us move away from the distorted picture of memory as the storage and retrieval of reified 'memories' towards a conception of memory as something that can be situated, contextualized, external and in action. My remembering something can be in the form of a mental picture, but it can also have the form of a gesture or a sentence. Remembering can amount to something I say or do. This helps discredit the picture of mental phenomena as essentially representations internal to the brain and sheds light on the mental as an ability whose manifestations can be as much in what we do as in what we think, but never in what our brain 'does' or 'thinks'.

I have shown elsewhere²⁷ that Wittgenstein has influenced some current neuropsychological conceptions of memory, but the struggle is still uphill. Also, the notion of

²⁷ See Moyal-Sharrock (2009).

extended memory²⁸ – for better or for worse – owes something to Wittgenstein, but it is in the conception of *extensive* memory proposed by Erik Myin and Karim Zahidi (2012)²⁹ that I believe Wittgenstein is best present. Dissatisfied with the notion of *extended* memory because it remains grounded in an internalist and representational view of memory (that is, extended memory presupposes an internal memory to extend from), Myin and Zahidi introduced the notion of 'extensive memory', according to which remembering is 'a contextualized capacity' to make the past matter in current activities (2012, 115; Myin translation)³⁰. Here, representations are *eliminated, not accommodated*. What is traditionally explained in terms of explicit representations is explained in terms of interactions. Memory is seen, not as a matter of storing and retrieving representations, but as a particular way of interacting with the environment (*ibid.*, 126).

My own efforts in this field have focused on how Wittgenstein's work encourages us to stop treating *automatic* behaviour as behaviour that is (subconsciously) remembered. What neuropsychologists have called nondeclarative, procedural or implicit memory seems to me nothing but automatic or habitual ways of acting or speaking that are not reliant on memory, though of course, they can initially have been (as when a child first tries to tie her shoe laces and seeks to remember what she is supposed to do). So that so-called 'implicit memory' is no memory at all. There's another cognitive layer pared off by Wittgenstein's razor.

I presented my views on Wittgenstein and memory to neuropsychologists at the International Conference on Memory in York in 2011, and was delighted and relieved to see that my audience was not at all dismissive of the above. Interestingly, however, the main question put to me was: what, if not engrams – those 'transient or enduring change[s] in our brain that [result] from encoding an experience' (Shacter 1996, 58) – would neuropsychologists working on memory be left to work with? Well, that's an odd question, for no evidence has ever been found for the existence of engrams (the engram is a hypothetical entity); indeed, Fergus Craik had, in his inaugural plenary lecture, cautioned that: 'remembering is better thought of as an activity of mind and brain, akin to perceiving, and the 'search for the engram' is therefore doomed to failure'³¹. But there is also a positive answer here, and it is twofold: 1) Wittgenstein is not taking the brain away from

²⁸ According to which remembering involves interaction with an external element (e.g. amnesiac's notebook). This is an offshoot of the Extended Mind thesis: the thesis that cognitive processes and the individual itself can extend into the environment.

²⁹ For discussions of extensive *mind*, see Hutto (2012) and Hutto & Myin (2013).

³⁰ This is a radically situated model of memory according to which organisms simply embody their cognitive capacities, rather than derive these from internal description. (*ibid.* 126) 'The conception of memory as embodied capacity which we have come to, departs from internalism from the very beginning. According to this conception, memory cannot be extended, because it never has been internal, but always *extensive*.' (*ibid.*, 127).

³¹ It should be noted that Craik's stance was uncharacteristic. The talk was untitled 'Understanding memory: A processing view'. Here is the abstract: 'From a biological point of view, 'memory' is typically regarded as a structural aspect of the brain, reflecting the re-activation of memory traces laid down at the time of the initial experience. I will argue instead that remembering is better thought of as an activity of mind and brain, akin to perceiving, and that the 'search for the engram' is therefore doomed to failure. In my talk I will sketch the history of this idea and review current evidence from cognitive psychology and cognitive neuroscience. I will discuss the implications of a processing viewpoint for such concepts as capacity, memory stores, memory systems and processing resources, and also examine the roles of context and the external environment in memory performance. I will illustrate these ideas with examples of my own and others from the general area of lifespan developmental changes in memory ability – both in children and in older adults.'

neuropsychologists; he is merely adjusting the target, what it is they should be (and should not be) looking for in the brain; 2) there is *behaviour* to work on. If, as Craig stresses, remembering is an activity – let's work on that. Which is not to say – as I hope to have made clear – that Wittgenstein is championing behaviourism.

Now, it might be objected, Wittgenstein can say what he likes; but where's the evidence? As Jesse Prinz quips, enactive and embodied approaches are easier to 'sell than to prove' (2009, 419). Well, it is scientists, not philosophers that base their claims on evidence. What philosophers do is work on more perspicuous *conceptual* presentations of how things are. And what Wittgenstein has done is show that we cannot make conceptual sense of basic certainties that start off as propositions, and engrams that work like people. But now let me return the question and ask scientists: where is *your* evidence? As Fergus Craik confirms, there is none. There has not been found anything resembling an engram, no shadow of anything representational or encoded in the brain, since Karl Lashley began his famous 'search for the engram' in the 1920s. So why insist we go micro (or subpersonal) in our accounts of the mind when even science is unable to demonstrate that that's the way to go? If attention is to be paid by philosophy to science, shouldn't it be to scientific results rather than to scientific hypotheses that seem nourished by a preconception of how things should be?

Wittgenstein's enactive account of mindedness is informed by unassuming description, not tendentious explanation; it relies not on 'assumptions unguaranteed' and indeed unsubstantiated, but on what is 'already in plain view', and yet we seem 'not to understand' (PI 89). The burden of proof is therefore not on the philosopher – at least, not the Wittgensteinian philosopher – inasmuch as all she does is rearrange what 'lies open to view' (PI 126), what 'is always before [our] eyes' (PI 129) in an effort to give a more 'perspicuous presentation' of it – a 'new arrangement' which, as Wittgenstein hopes: '*might* also give a new direction to scientific investigation' (RPP I, 950). Why then, when there are conceptually viable enactivist accounts of ourselves as mindful beings – and moreover nothing resembling *or demanding* a realization of the mental in the brain – should we persist in a search that is, as Craik puts it, doomed to failure?

By applying Wittgenstein's Razor, we get the animal back into our understanding of the human mind. But as we labour to reawaken the animal in us, we should beware, conversely, of overly *humanizing* the non-human animal, lest animal concept-possession bounce back on us in the shape of propositions or content. As Hans-Johann Glock's paper in this issue shows, it needn't do; but it often does – at times, wittingly; at others, not. Moreover, we are not, with animals, out of the woods as it were: witness a recent article in the *Scientific American*, entitled: 'Do Plants Think?'³² It is in such moments of what Olli Lagerspetz calls 'misbegotten rationalism'³³ that we gratefully look to Wittgenstein's razor-sharp philosophy.

³² June 2012 *Scientific American Online Newsletter*. 'Scientist Daniel Chamovitz unveils the surprising world of plants that see, feel, smell – and remember.'

³³ 'We may illegitimately attribute human traits to animals or we may, on the contrary, too easily assume that specifically human traits are reducible to biology. But there is also a third risk: that of misbegotten rationalism, blinding us to important features of life, both human and animal' (2012, 65).

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