

Published in Adaptive Behaviour: DOI: 10.1177/1059712314547646

Online version can be found at:

<http://adb.sagepub.com/content/early/2014/09/21/1059712314547646>

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## **Radical Enactivism, Wittgenstein and the cognitive gap**

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### **Abstract.**

REC or Radical Enactive (or Embodied) Cognition (Hutto and Myin, 2013) involves the claim that certain forms of mentality do not involve informational content and are instead to be equated with temporally and spatially extended physical interactions between an agent and the environment. REC also claims however that other forms of mentality do involve informational content and are scaffolded by socially and linguistically enabled practices. This seems to raise what can be called a cognitive gap question, namely, how do non-contentful behaviours give rise to contentful behaviours? In this paper, I show how REC can tackle a certain understanding of this question. I argue that if REC were to endorse claims made by the later Wittgenstein, then REC could deny that there is any (synchronous) gap in our intelligent behaviour.

**Key words.** REC, radical enactivism, Hutto and Myin, Wittgenstein, cognitive gap

## 1 Introduction

Hutto and Myin (2013) propose to radicalize Enactivism by showing that creatures can respond in lots of intelligent ways to their environments without the use of internal mechanisms that present or represent the world as being a certain way. They do this by challenging the idea that we have to posit sub-personal content-involving states in order to explain mind and cognition. According to Hutto and Myin, such an idea confronts a so-called Hard Problem of Content, the avoidance of which requires abandoning the claim that informational content is a ubiquitous feature of the natural world. A Radical Enactive (or Embodied) Cognition or REC thus aims to fulfill what can be regarded as the original ambition of embodied approaches to the mind, namely to “call into question the assumption – prevalent throughout cognitive science – that cognition consists in the representation of a world that is independent of our perceptual and cognitive capacities” (Varela, Thompson and Rosch, 1991, pxx, as quoted in Hutto, 2013a, p5).

However, Hutto and Myin acknowledge that, “some cognitive activity – plausibly, that associated with and dependent upon the mastery of language – surely involves content” (ibid, pxviii). This suggests that, on the REC proposal, linguistic behavior is contentful behavior. That is, it involves informational content.<sup>1</sup> There is thus a distinction to be drawn between the sorts of contentless, non-representational behaviours that are exhibited by what can be called basic minds (behaviours which can be sophisticated, even skillful and expert) and the sorts of contentful, representationally based behaviours that are exhibited by what can be called non-basic minds.

This distinction naturally prompts the query as to what is the relationship between these two behaviours. More importantly, it seems to raise a ‘cognitive gap’ question, namely how does non-

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<sup>1</sup> It suggests this link between linguistic behavior and contentful behavior. Hutto and Myin do not offer an explicit argument in support of such a link.

contentful behaviour give rise to contentful behaviour? <sup>2</sup> Hutto and Myin note the importance of this question. They state that, “[t]he ultimate task is to explain how basic minds make the development of contentful forms of cognition possible when the right supports, such as shared social practices, are in place” (ibid, p36).

Significantly, there are a number of ways to understand this question. For example, we could understand it developmentally. If so, then it requires consideration of evolutionary and/or biological concerns. Alternatively, we could understand it synchronously. A synchronous cognitive gap question asks how, at this moment in time, does my non-contentful behaviour give rise to my contentful behaviour? <sup>3</sup> My focus shall be on this second, synchronous understanding of the gap question. For present purposes, I shall set to one side the developmental question and/or how it should be addressed. In this paper, I shall argue that once we understand the relationship between non-contentful and contentful behaviours, then this supports the claim that there is no synchronous gap between these two behaviours. In which case, we can dissolve the synchronous cognitive gap question. <sup>4</sup>

My argument has two parts. In the first part, I argue for a particular reading of later Wittgenstein. Later Wittgenstein makes it clear that our use of language is built upon what he refers to as our primitive, natural reactions. I am going to claim that the Wittgensteinian account allows for two possible readings. On the first reading, Wittgenstein is claiming that there is a continuum from our primitive, natural reactions to our trained linguistic expressions. On the second reading, Wittgenstein is claiming that there is no such continuum, and instead there is a change from “quantity to quality” between, for example, the child’s initial primitive reactions and the child’s later learned linguistic behaviours. I shall endorse a non-continuum reading. Such a reading suggests that, rather than solving a synchronous cognitive gap question, Wittgenstein was dissolving such a question i.e. showing that there is no such

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<sup>2</sup> De Jaegher and Froese (2009, p444) also talk of a cognitive gap, when they ask: how can the life-mind continuity thesis “cross the gap” between, on the one hand, insect level behaviour and on the other, human-level cognition? However, I shall not address their reading of the cognitive gap in this paper.

<sup>3</sup> Thanks to an anonymous reviewer for their helpful comments about the synchronous gap issue.

<sup>4</sup> What is the status of the cognitive gap? Is it an epistemic gap, that is, a gap in our explanatory frameworks? Or might it be an ontological gap? I don’t propose to resolve all these questions. For the purposes of this paper, I will claim that the synchronous understanding suggests that the gap is ontological, since, if there is such a gap, then it exists between two forms of behaviour (non-contentful and contentful). As the text will make clear however, I am going to deny that there is any such gap.

question need arise. I shall support this non-continuum reading by claiming that forms of life play a constitutive role in our various language-games, where the term “constitutive” is meant to identify the foundations for our language-games.

In the second part, I will claim that if REC were to endorse this reading of Wittgenstein, then they could dissolve any possible synchronous cognitive gap question. That is, if REC were to endorse a constitutive view of forms of life, then they could claim that our form of life is what makes possible all aspects of human mentality, where the term “human mentality” is understood to refer to the REC view of both non-contentful and contentful behaviours. This then supports a non-continuum view of such mentality. That is, it supports the view that, although there are clear differences between non-contentful and contentful behaviours, there is no synchronous gap since the conditions that make possible the former are the conditions that make possible the latter and such conditions are manifested or revealed in the realization of such behaviours. If there is no synchronous gap between these various behaviours, then there can be no question as to how does non-contentful behaviour give rise to contentful behaviour.

The lay out of the paper then is as follows. In section 2, I briefly outline the REC claim and describe two examples REC gives of non-contentful and contentful behaviour. In section 3, I introduce the Wittgensteinian account and endorse a non-continuum reading of that account. In section 4, I support this reading by claiming that forms of life are constitutive of our language-games. In section 5, I show how if REC were to endorse the reading of Wittgenstein developed in sections 3 and 4, then REC could dissolve the synchronous cognitive gap. Before beginning, it is worth noting that the argument given in this paper is predicated on one accepting the account of human mentality given by REC and the sorts of claims found in later Wittgenstein’s philosophical writings and interpretations of those writings. Consequently, my argument does not exclude other ways to approach the gap question. For example, as previously noted, I leave open the issue of a developmental approach to the cognitive gap.

## 2 Radical Enactivism

Cognitive science has long traded on the orthodoxy that representational states are needed to understand mind and cognition. Such states present or represent the world as being a certain way, that is, such states ‘stand in’ or ‘stand for’ features of the world in such a way that they underpin or play a key role in cognitive behaviour. Naturalising this claim is then the job for the explanatory naturalist. Such a naturalist seeks to explain representational states in scientific terms e.g. in terms involving causation, nomic dependencies or biological function etc. Hutto and Myin (2013), and Hutto (2013a/2013b) variously point out that most theories that invoke representations seek to naturalise this claim by assuming the existence of informational content. Such content is understood as “serving as the platform for...representational accounts” (Hutto, 2013a, p15).

However, Hutto and Myin (2013) argue that appeals to informational content confront a Hard Problem. This is because the sorts of claims that can be given a scientific backing - for example, the way states of affairs can reliably co-vary such that one state can be used to gain information about another (think of the age of a tree and the rings of the tree) - do not support claims about informational content. Informational content has conditions of satisfaction and these conditions must be instantiated if the content involved is to be regarded as true or accurate (ibid, px). Consequently, content “has special properties – e.g. truth, reference, implication – that make it logically distinct from, and not reducible to, mere covariance relations between states of affairs. Though covariance is scientifically respectable, it isn’t able to do the required work of explaining content” (ibid, p67).

If informational covariance is the only scientifically respectable way to understand naturally occurring information, then it looks like informational content is not amenable to a scientific explanation. In other words, informational covariance may have bona fide naturalistic credentials but the same cannot be said about informational content. If so, then “explanatory naturalists in fact lack the basic resources even to begin explaining non-linguistic mental content” (Hutto, 2013b, p17).

Hutto and Myin (2013) consider a number of ways of responding to this Hard Problem (pp68-70). They claim that the least costly response is to “retain the scientifically respectable notion of information-as-covariance...while relinquishing the idea that there is such a thing as informational

content [outside of shared social and linguistic practices]" (ibid, p68). If correct, then informational content is not a ubiquitous feature of the natural world, that is, "on-line sensory signals "carry information" in the covariance sense but [they do not] "pass on" meaningful or contentful messages. There is no naturally occurring contentful information that can be "used and fused" to form inner representations" (ibid, p70). And as Hutto (2013b) points out, this then supports "accounts that appeal only to the existence of devices that have the biological function of responding to non-contentful covariances [which then] supports non-representationalism, not representational theories of mind" (p18). All of which would vindicate the claim that, "REC approaches [i.e. approaches that do not appeal to contentful, representational states can] make substantial inroads into explaining important forms of human cognition [since] representationally hungry tasks make up only a small portion of mental activity. Representationally based cognition might just be the tip of the cognitive iceberg" (Hutto and Myin, 2013, p46).

My aim here is not to adjudicate on the REC claim. Rather it is to examine a consequence of this claim. For if the REC proposal is correct, then there is a distinction between, on the one hand, the sorts of contentless, non-representational behaviours that are exhibited by basic minds and on the other, the sorts of contentful, representationally based behaviours that are exhibited by non-basic minds.

Examples of contentless behaviour, according to Hutto and Myin, are activities like perceiving (ibid, p87) or reaching and grasping (ibid, p47). Take visual perception. Hutto and Myin claim that, "true perceivers fall into the class of aspectual respondents but not that of attributive claimants. On such a view, perception doesn't depend on, or entail, the existence of attributive states of mind – states that attribute, say, X's being F. Rather, it depends on, and entails the existence of, aspectual states of mind according to which X looks or feels F" (ibid, p121). By rejecting informational content for basic perceptual states but allowing that animals (including ourselves) can respond in aspectual ways to their environments, REC aims to offer a view of perception that avoids the Hard Problem. It thus challenges rival accounts (for a recent example, see Lauwereyns, 2012), which claim that perception involves internal mechanisms that present or represent the world as being a certain way. REC argues that such accounts either run afoul of the Hard Problem since they possess a robust notion of content, or they

weaken the notion of representation to the extent that such accounts does not present a challenge to the REC claim.<sup>5</sup>

Alternatively, contentful behaviour is “scaffolded” by social and linguistically enabled practices. An example of such behaviour is intelligent planning (Hutto and Myin, 2013, p40). Suppose I am sitting in my office and I wish to plan the best route from the train station to a hotel in a foreign city. I can do so, according to Hutto and Myin, because I have the necessary background knowledge and relevant know how. That is, I know how to read train timetables; I know how to read maps of cities etc. I also know that the train timetables, plane schedules and cities plans I am using are current and reasonably accurate and that if any of these elements were to change, then I would have to adjust my plans accordingly. For instance, if the flight I had booked for that day were to be cancelled, then I would need to re-arrange my booking at the hotel etc. All of this background knowledge requires the exploitation and manipulation of “symbolic representations of the target domain” (ibid), that is, such knowledge is scaffolded by the sorts of social and linguistically enabled practices that enable us to “plan how to act within the domain without ever having to (or ever having had to) interact with it in a first hand manner” (ibid, p41).

As previously mentioned, such considerations seem to leave REC with some form of cognitive gap question, namely, how does non-contentful behaviour give rise to contentful behaviour? And as I also made clear, this question can be understood developmentally or synchronously. It is latter understanding that shall be my focus. In the following sections, I will argue that later Wittgenstein can be used to show that no such synchronous gap question need arise.

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<sup>5</sup> Roberts (2013) objects that the REC claim entails that, “the distinction between veridical and illusory experience is hard for the radical enactivist to draw...[On the REC proposal, not] only are creatures with basic minds, who are without fully-formed conceptual abilities, thus unable to undergo perceptual illusions, it is difficult to see how to resist this conclusion even for adult human perceivers once perception is understood to be content-free across the board.” Addressing this objection in detail would require separate treatment. However, as Hutto and Myin (2013) point out, “if things look somehow abnormal to an individual then we can expect that individual to respond in inappropriate ways to certain stimuli. But there is no compelling reason to suppose that inappropriate responding of such kind involves errors of content attribution” (p126). In other words, REC does not understand perception in veridical and illusory terms, but rather in terms of the sorts of considerations evident in the Embodiment and the Developmental-Explanatory theses (ibid, p5) i.e. in terms of embodied interactions with environments and histories of such interactions. If these manoeuvres work, then REC perhaps side steps the problem Roberts describes, since it seemingly rejects the distinction assumed by that problem.

### 3 Wittgenstein

As Braver (2012) states, for later Wittgenstein, “[n]ecessary to successful conditioning is conditionable human nature which reliably reacts in certain ways rather than others” (p159). That is, according to Wittgenstein, human beings are set-up-to-be-set-off in distinctive and unique ways. This makes it clear that Wittgenstein is very much concerned with what he calls the “primitive, natural” in human beings. And this impacts on how Wittgenstein understands language: “The origin and the primitive forms of the language-game is a reaction; only from this can more complicated forms grow. Language – I want to say – is a refinement; ‘in the beginning was the deed’ ” (Wittgenstein, 1998, p36e).

Accordingly, primitive, natural behaviours and reactions mark the beginning (though not the end) of our various language-games: “[b]ut 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 a prototype of a way of thinking and not the result of thought” (Wittgenstein, 1970, 541).<sup>6</sup> Various commentators have noted this insistence on the “primitive, natural”. For example, Fogelin (1987) remarks that, “[f]or Wittgenstein, it is important that language arises through shaping various ‘primitive and natural’ human responses” (pp108-9); Johnston (1993) adds that on the Wittgensteinian account, “the use of the word does not involve the learning of rules; rather it builds on a natural reaction” (p25).

A recurring theme in Wittgenstein’s later writings is discussion of the child and the child’s entry into our language-games. This theme is evident in the following passage from the *Philosophical Investigations*, where Wittgenstein writes, “How does a human being learn the meaning of names of sensations? For example, of the word “pain”. Here is one possibility: words are connected with the primitive, natural, expressions of sensation and used in their place. A child has hurt himself and cries; then adults talk to him and teach him exclamations and, later, sentences. They teach the child new pain-behaviour” (Wittgenstein, 2009, s244). Here it is evident that Wittgenstein regards the primitive, natural, expressions of sensation - crying, being upset, clutching one’s arm, recoiling etc - as forming the basis of the language-game about sensations. That is to say, it is “[b]y nature and by a particular

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<sup>6</sup> Moyal-Sharrock (2013) claims that the term ‘primitive’ is “to be understood [not] only ontogenetically and phylogenetically, but also logically” (p2). In this paper, I will be focusing on the logical understanding of this term, that is, the role the primitive plays within our language-games.



training” (ibid, s441) that the child goes from displaying natural reactions towards pain to then being able to use complex verbal expressions about their painful sensations.

One way to understand the sort of account Wittgenstein is presenting in the above passage is that he is addressing the type of cognitive gap question that we encountered in the introduction and in section 1. For example, we could claim that, in offering an account of how the child’s current verbal expression of pain – “Ow, my arm is really sore!” – emerges out of the sorts of primitive, natural reactions the child possesses, Wittgenstein is addressing the relationship between the child’s natural reactions and their verbal expression in order to show how the former gives rise to the latter.

Notice that if we were to read Wittgenstein as providing such an answer, then this would be to assume that Wittgenstein is endorsing the idea that there is some form of continuum from the primitive pain-behaviour at one end of the spectrum through to the trained linguistic pain-behaviour at the other. Support for such a continuum reading can perhaps be found in the following passage where Wittgenstein notes that, “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)” (Wittgenstein, 1970, 545).

There are a number of points, however, that would instead favour a non-continuum reading of the Wittgensteinian account. Before elucidating these points, it is worth clarifying both why discussions of continuums or non-continuums matter, and what I mean by the terms ‘continuum’ and ‘non-continuum’. First, the gap question asks about the relationship between various types of behaviours. If so, then talk of continuums or non-continuums provides a means to make sense of such relationships. Second, a continuum, in this particular context, implies that there is a clear line of development between the various kinds of behaviours under consideration. Contrarily, a non-continuum highlights significant differences between such behaviours, and claims that even though such behaviours are related, their relation is other than simply that of development from one behaviour to the next.

Support for a non-continuum reading can be found in the following ways. First, the above passage from the *Philosophical Investigations* continues by saying that, “the verbal expression of pain replaces crying, it does not describe it” (Wittgenstein, 2009, s244). That is, it is not the case that once the child has entered the language-game, the child has the original primitive pain-behaviour, the new linguistic pain-behaviour and must now, somehow, bring together or connect these two types of behaviours. As Johnston notes (1993, p27), Wittgenstein denies that this is what is occurring here on the grounds that if this were the case, then the child may wonder, “which of my sensations do I cry out when I injure myself”? (Wittgenstein, 1980, 305). Instead, the relation between the sensation and the words is, according to Wittgenstein, criteriological, that is, the use of the words acts as the criteria for the having of the sensation. This is what is referred to when Wittgenstein talks about how the verbal expression “replaces” the crying, or how the words are “used in [the] place” of the primitive, natural expressions.

Second, this suggests that in being trained in the language-game, and so now being able to play the language-game about pain sensations, the child can now do things that are importantly distinct from what it could do before. Wittgenstein notes as much in the following passage: “A child who learns the first, primitive verbal expression for its own pain – and then begins (also) to talk about his past pains – can say one fine day: “When I get a pain the doctor comes” (Wittgenstein, 1990, 899). Moreover, as Johnston (1993) indicates, the child can now spontaneously articulate new descriptions of her pain: “the individual can take the word ‘throbbing’ which was originally used in connection with something that can be seen to be pulsating and [use] it to describe her pain even when no pulsating motion is visible” (p25). In other words, new conceptual possibilities (and with them, new experiences) now emerge for the child.

This is highly significant, since it ensures that, as McGinn (2013) points out, the “child acquires the characteristic ways of operating with words which inform our complicated form of life”, all of which entails that the child begins to take “on the distinctive form of a minded being” (p186).<sup>7</sup> The child is now “trained to use our language in a way that is essential to our distinctive form of life” (ibid). For example, he or she is now “trained to notice and respond, not only to other’s use of language, but to the

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<sup>7</sup> Williams (1999) makes the same point: “Learning to participate in language games is acquiring a human mind” (p6).

characteristic patterns of movement, gesture, facial expression, and so on against the background of which our psychological concepts function” (ibid).

McGinn (ibid, p183) views this as, to borrow terms from Wittgenstein, a change from “quantity to quality”. We can understand it as drawing an important contrast between the child’s primitive reactions and the child’s full immersion in the various language-games. Note however that this isn’t to deny that our language-games begin with such reactions. That is, it does not challenge the idea that such language-games are shaped by, built upon, grow from etc, such reactions. Instead, it is simply to draw out the important differences between what the child could do before its immersion in the language-games and what it can do after such immersion.<sup>8</sup>

Of course, these considerations do not rule out or exclude a continuum reading of the Wittgensteinian account. Nonetheless, they do favour a non-continuum reading. Such a non-continuum reading is interesting because it suggests that, for example, instead of answering a synchronous cognitive gap question (as would follow from a continuum reading), Wittgenstein can be used to dissolve such a question or show how no such question need arise. Here I do not propose to finally settle the matter as to which of these readings can be regarded as the correct interpretation of Wittgenstein.<sup>9</sup> Rather I am going to endorse a non-continuum reading and I am going support such a reading by claiming that forms of life are constitutive of our various language-games.

#### **4 Forms of life**

According to McGinn (1997), Wittgenstein’s claims about forms of life “serves to bring into prominence the fact that language is embedded within a horizon of significant, non-linguistic behaviour... language and linguistic exchange are embedded in the significantly structured lives of

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<sup>8</sup> Wittgenstein (1990) writes: “Neither is the newborn child capable of being malicious, friendly, thankful. Thankfulness is only possible if there is already a complicated form of behaviour. If a figure consists of three straight lines it can be neither a regular nor irregular hexagon” (942).

<sup>9</sup> The difficulty in settling such a matter is that, as far as I am aware, Wittgenstein never talks directly about the issue of cognitive gap. Hence, a continuum or non-continuum reading of Wittgenstein is going to need to be argued for. In this paper, I support my non-continuum reading by claiming that forms of life play a constitutive role in our language-games. My counter to those who would instead favour a continuum reading is that they will need to (a) offer an argument for such a continuum view and (b) show why my claim about forms of life is incorrect.

groups of active human agents” (ibid, p51). Forms of life thus refer to “a horizon of past training, manifest abilities and forms of responsiveness” (ibid, p93), the “indeterminate and unspoken horizon within which our language-game functions” (p96), and as what “constitutes ‘the scene of the language-game’” (ibid, p103). On the McGinn reading then, later Wittgenstein understands forms of life as the “unspoken horizon” of manifest abilities, forms of responsiveness and training. Wittgenstein writes: “It is what human beings say that is true and false; and they agree in the language they use. That is not agreement in opinions but in a form of life” (2009, s241).

In this section, I do not intend to develop a novel reading of Wittgenstein’s view.<sup>10</sup> Instead, my aim is to show how readings already available in McGinn (1997), Ter Hark (1990, 2004) and Hutto (2006, 2013a) can be utilized to support my claim that forms of life are constitutive of our language-games. By this I mean that, first, the term “forms of life” refers to the set of conditions - the “very general facts of nature” (Wittgenstein, 2009, xii, s365) - that need to be in place for our various language-games to occur, that is, it refers to those basic contingent facts which, according to Wittgenstein, make our language-games possible. And, second, to say that forms of life are “constitutive” of our language-games is simply to say that forms of life refer to those conditions that are the foundations for our language-games.

Ter Hark (1990) remarks that, for Wittgenstein, “[f]orms of life and grammatical rules are ‘foundations’ in the sense that they constitute the meaning of our concepts in the first place and that if we were to change the rules, our concepts would have an entirely different meaning or no meaning at all” (p68). As Wittgenstein puts it: “I am not saying: if such-and-such facts of nature were different people would have different concepts (in the sense of a hypothesis). But: if anyone believes that certain concepts are absolutely the correct ones, and that having different ones would mean not realizing something that we realize – then let him imagine certain very general facts of nature to be different from what we are used to, and the formation of concepts different from the usual ones will become intelligible to him” (2009, xii, s366).

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<sup>10</sup> Richter (2010, p75) notes that although the term “forms of life” has long been associated with Wittgenstein, the notion itself receives little treatment in the *Philosophical Investigations* or elsewhere and is never clearly defined by Wittgenstein. This perhaps explains why there is so much disagreement among commentators about this term. As the text will make clear, I will be utilizing the McGinn, Ter Hark and Hutto readings of forms of life.

If we endorse this view of forms of life, then this has a number of important consequences. First, according to Ter Hark, “no grounds can be produced for a form of life itself” (ibid, p57), and “[t]he foundation of the language-game is agreement in forms of life. The agreement cannot be explained” (ibid, p59). That is, one cannot articulate exactly what agreement in forms of life consists in since such agreement is presupposed in order to articulate anything at all. Second, as Hutto (2006) puts it, “there is no understanding forms of life from some theoretical hide *outside* the activities and practices that they ground. There is no getting behind, beneath or above a form of life for the philosophical purpose of providing an explanation or justification” (p111, emphasis in original). Forms of life are what is needed for there to be explanations, and so cannot themselves be given an explanation. Or, to put the same point another way, forms of life do not explain our language-games but rather are the condition for there being explanation in our language-games.

Forms of life thus serve as the explanatory ground for our practices. However, this arguably also reveals the constitutive nature of forms of life. Consider the following points. First, Ter Hark (1990) continues that, “[t]he ‘foundation’ which the form of life is *is something which we ourselves are, our way of life*, not something we have and on which we can base ourselves as an independent foundation” (p69, emphasis added). In other work, Ter Hark (2004) notes that, for Wittgenstein, “what is a priori possible or impossible, what is empirical or contingent, what is sense and what is not, is relative to the grammar of the language, which is itself shaped by what is contingent – by facts of (human) nature” (pp129-130). This is a constitutive claim, that is, such “facts of (human) nature” are those foundations that “shape” our language-games. Second, Hutto (2006) adds that, “what is fundamental to our practices is something that can only make itself manifest in and through the practices and activities in which we engage and the way in which we are inaugurated into them” (p112). I would contend that this is also a constitutive claim. That is, it is because of the *fundamental nature* of these conditions that they can only be manifested, revealed or shown by the playing of our language-games.<sup>11</sup>

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<sup>11</sup> It is worth noting that my reading of Wittgenstein differs from the Hutto (2006) account, since Hutto makes it clear that he thinks it mistaken “to theorise and give explanations about what lies at the base of all our activities” (p111). In contrast, I am following a distinction I take from Stern. Stern (2004) states, “Pyrrhonian Wittgensteinians believe philosophy, properly conducted, should not result in any kind of theory, while non-Pyrrhonian Wittgensteinians maintain that Wittgenstein’s criticism of traditional philosophy leads us to a better philosophical theory, albeit not the kinds of theorizing we find in the philosophical tradition” (p36). The sort of reading of Wittgenstein I give here could be

In order to illustrate this, think back to the child's primitive, natural reactions and how training in various linguistic techniques ensures that the child can give verbal expression to his or her pain sensations. This raises the following question: when the child is fully immersed in the language-game, what now happens to the original primitive, natural reactions? As we saw in section 3, Wittgenstein talks of them being "replaced", or of how words are used in their place. Yet it would be uncharitable to regard Wittgenstein as claiming that such natural reactions are thus removed, or no longer play any sort of role. After all, even when immersed in the language-game, the child still cries out, holds their arm, recoils etc. Suppose we regarded such primitive reactions as now manifested, revealed or shown in what the child says. Could we view this as a constitutive claim, that is, as a claim about the foundations for the language-game?

I am going to answer this question in the following way. First, the role of the primitive reactions is not one of causal dependence. As noted earlier, once immersed in the language-game, it is not the case that the child has the original primitive pain-behaviour, the new linguistic pain-behaviour and must now, somehow, bring together or connect these two types of behaviours. Instead, the link between the sensations and the words is, according to Wittgenstein, criteriological. Second, if the linguistic behaviour is not causally dependent on the primitive natural reactions, but such reactions nonetheless still play a role, then we could regard the relationship between the reactions and the language-game as more intimate, complex or involved than that of dependence. For example, we could endorse Hutto's (2013a) remark that, "[t]hese [primitive reactions and language-games] relate to one another in a nested way" (p8).<sup>12</sup> Support for such a "nested" view could perhaps be found in the following remark from Wittgenstein: "Could a legislator abolish the concept of pain? The basic concepts are *interwoven so closely* with what is most fundamental in our way of living that they are therefore unassailable" (1992, s43e-44e, emphasis added). If so, then the language-games are shaped by, built upon, grow from etc, such reactions because such reactions are interwoven so closely, that is, nested, manifested or revealed,

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regarded as non-Pyrrhonian, since it aims to dissolve a synchronous gap question but it does so in order to lead to a better understanding of the conditions that constitute our language-games (and RECish human mentality). Hence, on this reading, we are interested in identifying "what lies at the base of all our activities".

<sup>12</sup> Though see footnote 11 for the differences between my reading and that of Hutto's.

in the playing of the language-games. This is to accord a constitutive role to such reactions, namely it is to claim they are the foundations for the language-games.

Following these considerations, I would contend that forms of life are constitutive of our various language-games. At the end of section 3, I stated that according a constitutive role to forms of life supports a non-continuum reading of the Wittgensteinian account, and hence dissolution rather than solution of the synchronous cognitive gap question. We can now show why this is so.

The non-continuum reading claims that there is an important contrast between what the child could do before his or her immersion in the language-games and what he or she could do after such immersion. On such a reading, there is not a clear line of development from the primitive reactions of the child to the child's trained playing of the language-games. Once it is understood that the conditions that are the foundation of those language-games are manifested, revealed or shown in the playing of those games (and so forms of life are constitutive of the language-games), then, although there remain clear differences between the primitive reactions of the child and the child's playing of the language-games - for example, the former manifests or reveals itself; the latter is verbalized or spoken - the former is nonetheless nested inside the latter. If so, then there is no synchronous gap between the primitive reactions and the language-game. So, for example, during those moments when the child cries out in pain and says "Ow, my arm is really sore!", there is no gap in the child's behaviour, since the child's primitive reactions are manifested or revealed in his or her verbal expression.

Recall the synchronous cognitive gap question. If the relationship between the primitive reactions and the verbal expression is such that the former is nested, manifested or revealed in the latter, then there is no synchronous cognitive gap between such reactions and the verbal expression. If so, then the gap question can be dissolved. For if there is no gap between the primitive reactions and the verbal expression, then there can be no synchronous question as to how does the former give rise to the latter.

In the following, final section, I will claim that if REC were to endorse this reading of the Wittgensteinian account, then REC would have the means to similarly dissolve a synchronous gap question.

## 5 REC and the cognitive gap

Ter Hark (1990) points out that “the primacy of forms of life is the primacy of practice. Language-games, in the sense of rule-governed frameworks for more or less intellectual skills, can only develop if this practice is presupposed” (p57). This emphasis on practice offers a way link (or, at the very least, draw a parallel between) enactivism and Wittgenstein since, as Hutto (2013a) claims, “the enactive approach...fundamentally agrees with the emphasis on primacy of action, forms of life, shared practices and customary ways of going on in Wittgenstein’s philosophy of psychology” (p5). For example, Wittgenstein (as quoted in Ter Hark, 1990, p57) states, “I want to say: it is characteristic of our language that it grows on the basis of stable forms of life, *regular ways of acting*. *Its function is above all determined by action*, of which it is the companion” (MS 119, pp148-149, emphasis added). It is my contention that if the sort of Radical Enactivism championed by Hutto and Myin were to endorse the reading of the Wittgensteinian account I have argued for, then REC could claim that our form of life is constitutive of all aspects of human mentality, where the term “human mentality” is understood to refer to the REC view of non-contentful and contentful behaviours.

The claim is that our form of life constitutes, that is, is foundation for, both non-contentful and contentful behaviours. I will now defend this claim in the following way. In section 3, I made it clear that, according to Wittgenstein, at the basis of all our language-games are our primitive, natural reactions. The REC account of non-contentful behaviour is that we can respond in lots of intelligent ways to our environment without the processing, storing or transmitting of informational content. An example of such behaviour, as outlined in section 2, is perception. But notice how we can give a non-contentful account of the child’s primitive natural reactions. For instance, consider the child who has hurt himself or herself and then cries out. The REC account would be that the child could see, for example, that his or her arm is bleeding, and so cry out in distress, without the child having to make any contentful attributions about what has just happened or what is now happening. This is because the child is simply set-up in such a way as to be set-off by the appropriate visual (and other sensory) signals. If our form of life plays a constitutive role, then the child’s primitive, natural reactions are the foundation for the child’s non-contentful behaviour such as perception.



The REC account of contentful behaviour refers to the sorts of claims that are scaffolded by social and linguistic practices. As noted in the introduction, REC does not offer an explicit argument that links language and informational content. Nonetheless, given the REC account, it is reasonable to assume that linguistic behaviour is contentful behaviour. Suppose this assumption is correct. If forms of life are the foundations for our language-games, and so are constitutive of those language-games (as claimed in section 3), and if we also allow that linguistic behaviour is contentful behaviour, then our form of life must constitute – act as the foundation for - our contentful behaviour. If so, then our form of life is constitutive of all aspects of human mentality, that is, our form of life constitutes both our non-contentful and contentful behaviours.

A possible worry at this point may be that this seems to raise another gap between, say, our form of life and our non-contentful behaviour, and/or between our form of life and our contentful behaviour. This worry is unfounded however since if our form of life plays a constitutive role, then this supports a non-continuum reading of a RECish view of human mentality. That is, it supports the view that, although that there are clear differences between non-contentful and contentful behaviours (for example, the former does not involve contentful, representational states whereas the latter does), the relation between such behaviours is not simply one of development from one behaviour to the next. Instead, the former is nested, manifested or revealed within the latter. If so, then there is no gap between these various behaviours.

Now, you might be forgiven for thinking this all sounds very abstract. Is there a way of concretizing this proposal? Consider the following simple example. I pick up a cup and hoping that it will contain tea, raise it to my lips. However, after tasting the liquid, I am disappointed to find that it contains coffee. We have, according to the REC proposal, a confluence of non-contentful behaviour (perceiving the cup, reaching for the cup, grasping it, raising it to my lips) and contentful behaviour (thinking to myself, “I hope it contains tea”; being disappointed when I find it contains coffee). This would seem to raise the following synchronous cognitive gap question, namely, how, during such moments, does my non-contentful behaviour give rise to my contentful behaviour?

A constitutive reading of our form of life suggests however that no such question need arise. This is because the conditions that make possible and constitute my non-contentful behaviour, that is, my primitive, natural reactions, are the conditions that make possible and constitute my contentful behaviour such as my participation in our language-games.<sup>13</sup> And such conditions are, because of their fundamental nature, manifested, revealed or shown in my behaviour. Hence, during those moments when I reach for the cup, grasp it, hope it contains tea, drink the liquid but am disappointed to find it contains coffee, the relationship between my various non-contentful and contentful behaviours is such that there is no gap between the former and the latter. In which case, there can be no question as to how does non-contentful behaviour give rise to contentful behaviour. Instead, my form of life is constitutive of all of these aspects of my mentality.

## 6 Conclusion

The aim of this paper has been to explore a Wittgensteinian approach to the cognitive gap question and to suggest that such an approach can enable REC to avoid a certain understanding of this question. I did this in two ways. First, I showed how the Wittgensteinian account could be used to dissolve a synchronous cognitive gap question. Second, I claimed that if REC were to endorse this account, then REC could similarly dissolve such a question. As stated in the introduction however, the argument given in this paper is predicated on one accepting the account of human mentality given by REC and the sorts of claims that can be found in later Wittgenstein's philosophical writings and interpretations of those writings. My argument then does not exclude other ways to approach the cognitive gap. Nonetheless, I would suggest that some progress has been made. This paper has clarified the role played by the conditions that make possible a RECish view of human mentality i.e. that they are

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<sup>13</sup> A concern might be that the account I am presenting here presupposes a strong empiricist conception of content, and if it does, then this would face the difficulty of reconciling such an account with the REC claim that content is scaffolded by social and linguistic practices. I would contend however that this concern only confronts a continuum reading of RECish view of human mentality and not the sort of non-continuum reading I am endorsing. For example, if one were to endorse a continuum reading, then there is a clear line of development from non-contentful through to contentful behaviour. This would seem to require presupposing that content is a feature of the natural world, that is, presupposing an empiricist conception of content. Alternatively, if one were to endorse a non-continuum reading, then there is not a clear line of development from non-contentful behaviour through to contentful behaviour. This ensures that there remain clear differences between the two behaviours, one of which will be that content is scaffolded by social and linguistic practices. In which case, it is the former reading of mentality and not the latter reading that confronts the difficulty of reconciling such an account with the REC claims about content.

constitutive. Yet little has been said about the exact nature of such conditions. Consequently, an avenue for other work would be to explore further what these conditions are and perhaps describe how they set us up to be set off by the world around us.

### **Acknowledgements**

Thanks to the anonymous reviewers whose insightful comments greatly improved this paper. Also thanks to Karim Zahidi and Erik Myin for their helpful comments. Thanks also to participants at the Reach of REC conference in Antwerp and the 36<sup>th</sup> International Symposium on Wittgenstein in Kirchberg am Wechsel where earlier versions of this paper were presented. This research was made possible by grants from the Research Council of the University of Antwerp and FWO-project GOB5312N.

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