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Still searching for the pineal gland? Reading the Ricoeur-Changeux debate in terms of Meillassoux's critique of correlationism

Jaco Kruger
North-West University, Potchefstroom, South Africa
St Augustine College of South Africa
j.kruger@staugustine.ac.za

Abstract

The spectacular advance in neurobiology and neuroscience in general ensures that the question of the relation between the brain and the mind remains actual. The dialogue between philosopher Paul Ricoeur and neuro-biologist Jean-Pierre Changeux that took place around 1998 remains an important contribution in this regard, primarily due to the interdisciplinary character of the conversation. This article attempts an interpretation of both Ricoeur's and Changeux's positions in their dialogue using the interpretive lens provided by Quentin Meillassoux's notion of correlationism. It is argued that such an interpretation highlights the similarities between Ricoeur's and Changeux's positions that might not otherwise be apparent, and also calls for a broadening of the terms of reference of the dialogue beyond those accepted by both Ricoeur and Changeux. The article subsequently investigates what a broadening of the terms of reference of the approach to the mind-brain problem might entail in terms of Meillassoux's anti-correlationism, but rejects this approach in favour of what might be called hyper-correlationism.

Key words

Paul Ricoeur; Jean-Pierre Changeux; Quentin Meillassoux; correlationism; mind-brain relation

1. Introduction

What ontological and epistemological assumptions underlie the investigation of the relation between the brain and the mind? This is the overarching question that occupies the present paper. It is thus *not* primarily the question of the relation between the brain and the mind as

such, but rather the methodological question of the approach to the inquiry into the relation between brain and mind that guides this essay. Within the broad parameters of this question, the proximate focus of the essay is the textual account of a dialogue that took place around 1998 between philosopher, Paul Ricoeur, and neuro-biologist, Jean-Pierre Changeux. The dialogue took place as a series of live encounters, which were subsequently transcribed and elaborated on by both intellectuals, finally to be published in a book with the title *What makes us think? A Neuroscientist and a Philosopher Argue about Ethics, Human Nature, and the Brain* (Ricoeur and Changeux 2000). At the time the dialogue was touted as a shining example of an interdisciplinary approach to the questions surrounding the relation between mind and brain, and it is indeed the interdisciplinary nature of the interaction that contributes to the enduring appeal of the book, given the fast pace of the actual development of neuroscience in the intervening two decades. In order to search for points of convergence between their separate disciplines, Ricoeur and Changeux were both obliged to lay their methodological cards on the table quite explicitly. That is, each interlocutor was compelled to be explicit about *from where he* speaks – *d'où il parlez*. This, rather than the ethical, political and religious implications of the recent advances in the neurosciences, that make up the later chapters of the book, will be the focus of my investigation in the present article.

Another interesting characteristic of the debate – perhaps not so surprising given the French nationality of both intellectuals – is the role played by the father of modern French thought, René Descartes, as a recurring point of reference especially in the earlier chapters of the book. As I hope to show in this paper, the Cartesian lineage of the debate will prove significant.

The hermeneutical lens that I will use to interpret the Ricoeur-Changeux debate bears the name of anti-correlationism, and is associated with another contemporary French philosopher, Quentin Meillassoux. Meillassoux, who, as far as I know has not commented on the Ricoeur-Changeux debate, rose to prominence on the back of the publication of his book *After Finitude – An Essay on the Necessity of Contingency* (Meillassoux 2008). In this book Meillassoux coined the phrase "anti-correlationism" to characterise a certain reaction against a hitherto dominant mode of doing philosophy. In this essay I argue that anti-correlationism, as a criticism of much of contemporary thought, provides for an interesting and illuminating

reading of the Ricoeur-Changeux debate. To bring Meillassoux's speculative position to bear on the question regarding the relation between mind and brain has, as far as I know, not been done before, and highlights interesting similarities and differences in Ricoeur and Changeux's positions that are otherwise not immediately apparent. A further point of contact with the Ricoeur-Changeux debate is provided by the fact that Meillassoux also explicitly refers back to Descartes in his philosophy, and even sees his speculative materialism as the true heir of what animated Descartes' thought in the first place (2008:3). Whereas Meillassoux's anti-correlationist hermeneutical lens leads us to ask whether both Ricoeur and Changeux, in their methodological points of departure, are not perhaps metaphorically still searching for Descartes' mythical pineal gland, Meillassoux himself connects to another element of Descartes' thought: the belief that mathematics is the key to a scientific engagement with being. While insisting on the absolute contingency of being, Meillassoux argues that developments in mathematical reasoning, particularly Cantorian set-theory, nevertheless allow for the mathematical conceivability of being. Along these lines Meillassoux then develops his speculative materialism, and it would be possible to conjecture what Meillassoux would say about the implications of his position for approaching the mind-brain relation.

The final movement of the present paper, however, comprises a parting of ways with Meillassoux. While Meillassoux's anti-correlationism provides a useful critical lens to interpret the Ricoeur-Changeux debate, I argue that Meillassoux's own revisionist Cartesianism will be problematic if it were to be taken as an alternative to, or extension of either Ricoeur's or Changeux's points of departure. Here I side with Ricoeur in maintaining the centrality of the human perspective for science, thought and culture in general. It is precisely the human that is evacuated in Meillassoux's speculative materialism, along with various other new realisms that populate the philosophical landscape of the first decades of the twenty first century.[1]

If the anti-correlationist reading of the Ricoeur-Changeux debate holds water, and if the terms of reference of the dialogue about the relation between the brain and the mind therefore have to be broadened past

1 See e.g. Bennett (2010), Bryant (2011), Bryant, Srnicek and Harman (2011).

traditional phenomenological and natural scientific methodological stances, then other options beside the evacuation of mind in favour of a strict materialism, as Meillassoux seems to suggest, must be explored. I suggest the idealist position that Meillassoux rejects out of hand merits further investigation. In this regard the proposal by Descartes' admirer and critic, Baruch Spinoza, that being has two attributes open to human conception – matter and thought – may once again provide an interesting philosophical approach to the relation between the brain and the mind. Thus, while I maintain that Meillassoux's critique of correlationism indeed entails damaging criticism of both Ricoeur's and Changeux's positions in their debate, I submit that a better methodological starting point in investigating the relation between the brain and the mind is to be found in what may be called a hyper-correlationism, rather than in the anti-correlationism that Meillassoux advocates.

2. The Ricoeur-Changeux debate

The subject matter that Ricoeur and Changeux deal with in their conversation is not new. The question of the relation between thought and the material world arguably arises with conscious thought itself. Consequently Philosophy of Mind is and remains a seminal field in the global philosophical enterprise. What is fairly new is the spectacular advance of neurobiology and neuroscience in general. These advances range from an increased understanding of the morphology of the brain, to a mapping of the functional areas of the brain, to understanding the electrochemical reactions that happen within the neurotransmitters, to mapping neural pathways, to correlating what happens at a microscopic level in the brain with higher mental functions such as emotions, thoughts, memories, imagination and the ethical sense (cf. eg. Gazzaniga et al. 2013; Passingham 2016). Will these advances in brain- and neuroscience someday – perhaps in the near future – lead to a situation where science and philosophy can dispense with first person reportage of experience? Will we be able to analyse and construct even the highest functions of the human psyche in terms of material interactions in the body, specifically the brain? These are the questions brought about by the awe inspiring advance of natural science and technology.

Jean-Pierre Changeux, for his part, explicitly aligns himself with the natural scientific study of the brain and expresses the hope that what has hitherto been different discourses – that of the physical, chemical and biological study of the brain, and that of the higher humanistic discourses that involve human decision making, ethics, culture and religion – may one day be unified into a single discourse (Ricoeur and Changeux 2000:11). When speaking of the natural scientific endeavour, I have in mind an approach to knowledge that can be described as third personal. In many Indo-European languages the grammatical person of the participants in an action indicates the relation to the deictic centre of the description of the action. Whereas the first personal use of a pronoun indicates that the action is directly related to the deictic centre's subjectivity, the use of the third personal pronoun suggests that the deictic centre experiences the action objectively and externally. The latter is the approach of the natural sciences. A situation or event is described as relating to the deictic centre in an objective, external and quantifiable manner. This is true even if the described activity takes place inside the human brain (Varela and Shear 1999; Chalmers 1997).

The third personal perspective is what characterises Changeux's approach to the study of the relation between brain and mind. Starting from the current state of neuroscientific research, Changeux tries to find links or correlations with the work that is being done in the cognitive sciences. This is also what allows Changeux to deny that he is a reductionist (Ricoeur and Changeux 2000:19): he is happy to allow for the existence of mental objects such as intentions, desires and memories and he tries to find the links between what happens at a neuronal level, and what happens at the level of human behaviour that is modelled in terms of mental objects. In this regard Changeux alludes to electrical and chemical activities that occur throughout the neural network, and that constitute a "link between the anatomical organization of neurons and connections, on the one hand, and behaviour on the other." (ibid. 17). It should be noted that the behaviour that Changeux speaks of is still objectively describable behaviour. His approach therefore remains consistently third personal: he seeks to describe two objective levels of existence – a neuronal level and a level of mental objects, and then tries to correlate these two levels. In his words: "New technologies

of brain imaging allow the experience of others to be 'objectively' analysed and reproduced from one individual to another." (ibid. 19).

Turning to Paul Ricoeur's stance in the debate, one finds, as always in his thought, a high sensitivity towards his own situatedness and points of departure. Right at the start of the dialogue Ricoeur states that his perspective may be characterised in terms of three approaches. The first he terms "reflective philosophy" and describes it as "the mind's attempt to recover its power of acting, thinking and feeling." (ibid. 4). The second he terms phenomenology, and the third hermeneutics. Ricoeur then concludes his opening statement by saying that he will henceforth in the debate refer to his approach in all three of its strands – reflective, descriptive and interpretive – in terms of the generic term "phenomenology." (ibid. 5).

I suggest that Ricoeur's approach may helpfully be characterised in the linguistic grammatical category of the first personal. This means that a situation or experience is consistently described in terms of the subjectivity or subjective experience of the deictic centre. What is important for a first personal approach is what appears within the horizon of experience of a subject, or what originates as a movement of the will of a subject. (Varela and Shears 1999:1).

Ricoeur shares Changeux's opinion that the discovery of a link or correlation between the material structure of the brain and the higher mental activities would be enormously significant (Ricoeur and Changeux 2000:27). He seems, however, not as certain as Changeux about where and how to start searching for such a link. Ricoeur is adamant that the semantic dualism that is the result of the different starting points of a first personal expression and a third personal description of thinking and mental activities be respected (ibid. 20). To describe mental objects in functional and behavioural terms is after all not the same as to report one's own experience of pain, or desire or loss.

Later in the debate Ricoeur makes the same point with regard to human agency. Whereas Changeux, for example, points to the possibility, opened up by scientific research, to distinguish between the cerebral images of a subject who tells the truth and a subject who is lying (ibid. 109), Ricoeur insists that such an objective investigation cannot take the place of intersubjective communication (ibid. 110) and that the capability of a

person to take responsibility for an action should be taken into account when understanding motivation.

Despite his hesitation, Ricoeur nevertheless also asks how the distinct discourses of mind and body may be unified. In so doing he reflects back more than once on Descartes' thought. Having radically distinguished extended substance and thinking substance, Descartes, in his sixth meditation, cast about for a mixed discourse that would allow for the language of spatial extension and the language of thought to be mingled, as it were (Descartes 1996:50-62; Ricoeur and Changeux 2000:33). Ricoeur finds it significant that Descartes turns to a discussion of man directly following on these methodological questions (ibid. 33) and mentions that some commentators have suggested that Descartes may have hinted that the human as such might be a "third substance" mediating between the extended substance and the thinking substance (ibid. 29). Ricoeur seems to think that this approach of Descartes held promise, but nevertheless does not follow the thought further. Instead he focuses on the idea of a third *discourse* hinted at by Descartes that may be able to incorporate both the first personal and the third personal perspectives (ibid. 28). Ricoeur suggests that the lifeworld, which is always an embodied world, may prove to be a discourse where the descriptions of the body are in the final instance inseparable from the reports of first personal experience (ibid. 15).

While Ricoeur makes a link with Descartes' sixth meditation, Changeux takes his cue from Descartes' *Treatise on Man* that remained unpublished during his lifetime (ibid. 33 ff.). In the Treatise Descartes searches in the brain for evidence of the connection between brain and thought – the famous pineal gland (Descartes 2017; Ricoeur and Changeux 2000:36). In this regard Changeux avers that Descartes "anticipates present-day work in cognitive neuroscience that consists in modelling our knowledge acquisition apparatus … with the ultimate aim of establishing a correspondence between … the 'rational soul' (cognitive functions) and the relevant cerebral architecture." (ibid. 36).

The point to be made here is that even though the pineal gland proved to be mythical, it may still be understood as a metaphor for a certain *kind* of connection between neuronal architecture and mental activity. This is

exactly the kind of connection that Changeux pursues in his own work, and what moves him to celebrate Descartes as a precursor of modern neuroscience. Ricoeur, again, is much more hesitant that the search, even if metaphorical, for a pineal gland will be successful (ibid. 40). And yet, if the pineal gland is taken to be a metaphor for a finite, localisable place where mind and body intermingle, the question might still be asked whether the embodied lifeworld of Ricoeur's mixed discourse might not be regarded as a kind of a pineal gland – still finite, albeit extended over the whole of the lifeworld.

3. Quentin Meillassoux and the anti-correlationist critique of Philosophy

I turn now to a discussion of the notions of correlationism and anti-correlationism, in order to bring them to bear on the Ricoeur-Changeux debate. As I mentioned, the notions of correlationism and anti-correlationism became prominent in the wake of the publication of a book by Quentin Meillassoux with the English title *After Finitude – An Essay on the Necessity of Contingency*. According to Meillassoux, one of the principal problems of Medieval and Modern Philosophy up until the time of Immanuel Kant was to conceptualise substance (Meillassoux 2008:6). In addition, with the advent of the modern epoch, the thought of substance was paired with the problem of subjectivity and objectivity. This received paradigmatic expression in the thought of René Descartes with his dualism of a thinking substance and an extended substance. With Kant's critical philosophy, however, the emphasis changed. With the dual insight that thought can never grasp an object "in itself" and that a subject can also never be grasped "that would not always-already be related to an object" (ibid. 5), the focus shifted to the relation between thinking and being, instead of considering each of these terms on its own. In Meillassoux's reading of this history, the great Kantian insight was that thought and the object of thought are always co-given and co-related. Thought only ever has access to the relation between thought and being, and never to pure thought, or to being apart from thought (Meillassoux is presumably leaving aside Kant's transcendental arguments for the possibility of synthetic *a priori* knowledge in order to focus on the practical outcome of the Kantian epistemological

project.)[2] The only escape from dogmatism for philosophy would be to trace the outlines of the correlation and elaborate the characteristics of the correlation as rigorously as possible. This, according to Meillassoux, has been a central project in modern philosophy since Kant:

> Such considerations reveal the extent to which the central notion of modern philosophy since Kant seems to be that of *correlation*. By 'correlation' we mean the idea according to which we only ever have access to the correlation between thinking and being, and never to either term considered apart from the other. We will henceforth call *correlationism* any current of thought which maintains the unsurpassable character of the correlation so defined (ibid.).

Meillassoux then goes on to distinguish two manifestations of correlationism that became prominent since the time of Kant. The first mode of correlationism may be termed "weak correlationism". This is effectively what was proposed by Kant himself. The second mode, "strong correlationism," came to dominate much of twentieth century continental philosophy (ibid. 30). The distinction between the two versions of correlationism pertains to the status of the thing-in-itself. In the wake of Kant's critical philosophy, weak correlationism holds that, while the thing-in-itself cannot be known, it is nevertheless possible to think the existence of a mind independent thing-in-itself (ibid. 31; Harman 2011:16.) In other words, it is possible to think the existence of things-in-themselves, while not having knowledge of them. In the Kantian system logical contradiction is absolutely impossible, and if there were appearances (phenomena) without anything that appears, this would be contradictory. Therefore the noumenal is thinkable, even though not knowable (ibid. 31; cf. Langton 1998).

The strong version of correlationism radicalises the weaker version's position by stating that it is not only impossible to know the thing-in-itself, but it is also illegitimate even to claim that we can think the thing-in-itself (Meillassoux 2008:35). According to this view Kant is not critical enough when he assumes that contradiction is impossible. For how can Kant and the weak correlationists know that there is not perhaps a God powerful

2 For a critique of Meillassoux's reading of Kant, see Golumbia 2016.

enough to render something true even if it contradicts logic? It cannot be ruled out a priori that being in itself might be irrational and contradictory. Thus strong correlationism holds that we simply cannot say anything at all about what lies outside of thought (Harman 2011:16). We are completely locked into the correlation between thought and what appears to thought. In Meillassoux's formulation, for strong correlationism "it is unthinkable that the unthinkable be impossible." (Meillassoux 2008:41). In other words: anything might be possible outside of thought.

In Meillassoux's estimation the strong form of correlationism became dominant in much of twentieth century philosophy, both in its analytic and its continental variants, as witnessed in the thought of its two "emblematic representatives" (Harman 2011:16), Wittgenstein and Heidegger. By contrast it may be said that much of contemporary natural science is partial to the weak form of correlationism. The thing-in-itself is not known in itself – only in its appearance. Yet it is there, and it can be described, measured and analysed in its appearance. In this regard one might think of the influential development in Philosophy of Science called critical realism that was pioneered by Roy Bhaskar (cf. Bhaskar 2008). Though Meillassoux doesn't explicitly draw this conclusion, one might say that in the natural sciences, the weak-correlationist approach often manifests as a critical realism: science does not know the thing in itself, and yet, through the scientific method of third personal analysis, gradually attains a more and more proximate description of the thing in itself (cf. Harman 2011:11).

I suggest now that both Paul Ricoeur's and Jean-Pierre Changeux's positions – at least in their debate under discussion – may be understood as expressions of the correlationist stance. I have argued that Changeux's search for the connection between the brain and the mind has a third personal stance typical of the natural sciences. Objective description of what appears, either through brain imagery, or through observation of mental behaviour might lead to the link being described better and better. This is the weak correlationist position of the natural sciences. Ricoeur's position, on the other hand, might best be described as a strong correlationist position. Even though Ricoeur is critical of the "excessive subjectivization" (Ricoeur and Changeux 2000:126) that has characterised phenomenology of late, he nevertheless takes as his point of departure the intentionality of awareness, and thus very much

works from first personal subjective thought towards more objectifying linguistic expressions (ibid.).

The point of this reading of the Ricoeur-Changeux debate is to indicate that despite their different points of departure, there nevertheless exists an important similarity in Ricoeur's and Changeux approaches, one that, according to Meillassoux, characterises contemporary phenomenology and natural science. Both assume that the connection between the brain and the mind, that each is investigating from his own perspective, is a finite, localisable connection. For Changeux, the connection is to be sought somewhere in the cerebral architecture of the brain. For Ricoeur the connection might be more extended – the whole of the embodied lifeworld, but in keeping with correlationism still within the finite horizon of conscious thought.

This brings us to the critique that Meillassoux levels against correlationism. In this regard he speaks of the Kantian catastrophe (Meillassoux 2008:124, 125) and suggests that with the tyrannical dominance of correlationism, philosophy has left the great outdoors of the world itself, and retreated into a ghetto that is structurally no different from the worst forms of fideism (ibid. 7, 28ff.). The "outside" that Meillassoux speaks of is "an outside which was not relative to us, and which was given as indifferent to its own givenness to be what it is, existing in itself regardless of whether we are thinking of it or not; that outside which thought could explore with the legitimate feeling of being on foreign territory – of being entirely elsewhere" (ibid. 7).

Thus Meillassoux's anti-correlationist project is an attempt to demonstrate the legitimacy of thinking being outside of its correlation to thought. But before that, he has to demonstrate the problems with correlationism, and he does so by invoking the notion of ancestrality (ibid. 10). The "ancestral" refers to any reality existing before the emergence of human thought on earth as indicated by what Meillassoux calls "arche-fossils" – those materials that, after the emergence of thought, give evidence to thought of an ancestral reality prior to the emergence of thought (ibid.). The point, according to Meillassoux, is that today we know that life only emerged on earth about 3.8 billon years ago, while we also know that the earth itself is about 4.5 billion years old, and the universe much older. If, therefore, being is anterior to thought, it cannot be that thought of being should

be locked into the correlation between being and thought. Later in *After Finitude* the notion of ancestrality is expanded into "diachronicity", which not only refers to any reality anterior to human thought, but includes every awareness of a temporal discrepancy between thinking and being – also, say, the possibility of the being that may exist after the extinction of human thought (ibid. 112; Harman 2011:13).

Another way of expressing the problem with correlationism is that it links being with the finitude of thought. Thought is finite – it has a horizon that with correlationism then perforce becomes the horizon of being. But this precisely loses the great outdoors of being as such – a being that might not necessarily be finite just because thought is finite.

What are the implications for understanding Ricoeur's and Changeux's methodological presuppositions in their conversation regarding the link between the brain and the mind? My contention is that such an anti-correlationist reading allows us to highlight the finitude of the mind-brain relation that is seemingly assumed by both thinkers, regardless of their otherwise differing points of departure. Such a finite, localisable in time and space, connection between brain and mind is what I have in mind with the metaphor of the pineal gland. Whereas Changeux searches for the link between brain and the mind from a third personal perspective through the objective description of brain states and mental states, Ricoeur, working from a first personal perspective, explores the possibilities of a discourse of the embodied lifeworld. Such a discourse, however material and embodied, would nevertheless still have the finite boundaries of the horizon of the lifeworld. But what would the implications be if the anti-correlationist critique of modern philosophy were to be taken seriously, and the finite, localizability of thought questioned?

4. Meillassoux's speculative materialism

Having drawn attention to the challenge that ancestrality and diachronicity pose for correlationism, Meillassoux forges ahead with a project to re-ontologise philosophy, which would also mean to free philosophy from its epistemological straightjacket. He goes about this by replacing our supposed ignorance of the things-in-themselves with an absolute knowledge that the things-in-themselves exist without reason and can change at any moment

for no reason at all (Harman 2011:24). In other words, Meillassoux replaces correlationism's epistemological agnosticism, with the certain knowledge that being is absolutely contingent and irrational.

There are two movements to Meillassoux's return to speculative philosophy. The first is to argue for a renewed talk of being in itself, and the second is to argue that certain knowledge of this being in itself is possible. In terms of the first step, the search for a non-metaphysical absolute being, Meillassoux says that this can only be achieved through an absolutization of strong correlationism's insistence on facticity, that is on the contingent structures of the world that can only be described, not explained (Harman 2011:22). For correlationism it is not possible to get out of the factical to provide a reason why the factical is as it is. But, says Meillassoux, what correlationism has taken to be the failure of reason, must be absolutized because this is in fact what reveals something of being itself. Thus, if the factical itself is taken to be factical, that is contingent, we arrive at a being that is absolutely contingent and disengaged from thought. Absolute contingency means "everything in the world is without reason, and is thereby capable of becoming otherwise without reason" (Meillassoux 2008:53). This way of talking about the facticity of facticity itself in order to open up a vista onto an absolutely contingent being, Meillassoux calls the principle of factiality (ibid. 79).

The second movement of Meillassoux's "wonderfully bizarre metaphysics" (Harman 2011:24) is to argue that certain knowledge of this absolutely contingent being is nevertheless possible. It is at this point that he consciously seeks to emulate what Descartes had done in his meditations. "Following Descartes' example, we are attempting to move beyond a 'cogito' by accessing an absolute capable of founding science's (ancestral) discourse." (Meillassoux 2008:50). Descartes argued for the absolute existence of extended substance together with a non-correlational mathematical knowledge of such an extended substance (Descartes 1996:55). Similarly, Meillassoux now argues for a non-correlational mathematical knowledge, not of extended substance, but of absolutely contingent being.

Whereas the certainty of Descartes' knowledge rested on the prior logical demonstration of the existence of a perfect God that will not deceive, the certainty of Meillassoux's knowledge rests on the prior logical

demonstration of the absolute necessity of contingency. This certain knowledge then becomes the springboard for a further inference. Given that we know that contingency, and contingency alone is absolutely necessary, it is possible to infer another absolute necessity: the necessity that the all-powerful chaos of contingency will never be able to produce a necessary entity (Meillassoux 2008:65). Thus, the impossibility of necessity is certain, and just as the certainty of the existence of God allowed Descartes to proceed with a mathematical mapping of extended substance, so the certainty that necessity is impossible allows Meillassoux to propose that a certain kind of mathematical discourse can provide the foundation for the contemporary scientific investigation of nature (ibid.). Following in the footsteps of Alain Badiou, Meillassoux now claims that Cantorian set theory provides the mathematical apparatus for conceiving such a contingent, non-totalizable, infinite being (ibid. 103).

Let us summarise Meillassoux's project. He tries to break out of the straightjacket that only speaks of the correlation between being and thought, and does not try to explore being on its own. Through the correlation, the finitude of thought restricts the being that philosophy can and should speak of. But Meillassoux's breaking out of the correlationist circle paradoxically allows him an absolute discourse about being again. The talk of being is no longer the talk from within the finitude of thought, but the talk that is enabled through the mathematical transfinite language of Cantorian set theory. Having thus evacuated the human, Meillassoux still believes that a philosophical foundation for certain knowledge is possible on which the natural scientific endeavour may be built.

5. A hyper-correlationist reading of the Ricoeur-Changeux debate

How convincing is Meillassoux's project? How far does it help us in our interpretation of the Ricoeur-Changeux debate? In my view the value of Meillassoux's work lies in his illumination and critique of correlationism, followed by the insistence that philosophy should once again dare to attempt speculative thought. Herein, too, lies the value of interpreting the Ricoeur-Changeux debate in terms of his notion of the correlation. For now one can say that, even though Changeux works from a third personal

perspective and Ricoeur from a first personal perspective, they may both be regarded as working from within the correlationist circle. But if the critique of correlationism holds water, then the methodological and ontological presuppositions of the debate should be revisited and the terms of reference of the conversation broadened. Perhaps the finitude of thought, with its spectre of a mythical pineal gland looming in the search for the connection between the mind and the brain, should be reconsidered?

What would Meillassoux say if he were to have been part of the Ricoeur-Changeux debate? Perhaps it could be conjectured that his contribution would comprise a kind of radicalization of Changeux's position in the debate. For on the other side of the finitude of thought, Meillassoux in effect evacuates thought altogether and would see it as a completely unnecessary contingent phenomenon that appeared without reason out of the hyper-contingent flux of being. This, even while the current practices of natural science may be legitimated by and grounded in mathematical set theory.

Meillassoux's alternative speculative materialist proposal is nevertheless problematic. A first criticism may be levelled against his logicistic proof of the necessity of contingency. Such criticism will be analogous to the criticism that Kant levelled against Descartes regarding his logicistic proof of the existence of God. Kant's objection to the ontological proof of God's existence, a certain variant of which was already levelled against Anselm's proof, is that it leaps unwarranted from the world of logical concepts to the real world of actual existence. Even if we accept that "necessary existence" is irrevocably part of the concept "God", then it still does not necessarily follow that God should actually exist in the real world (Nolan 2015). Similarly one could argue against Meillassoux that he makes a leap from his "principle of unreason" (Meillassoux 2008:60) to the absolute necessity of the contingency of everything (ibid. 62). For if, accepting Meillassoux's point that "everything must, without reason, be able not to be and/or be able to be other than it is," (ibid. 60) then it still does not follow that it is so in actuality.

A second criticism pertains to the evacuation of thought in the wake of the critique of finite thought locked into the correlationist circle. Is it really the best option for philosophy to evacuate the human, and to revel in a post-human world, as Meillassoux's speculative materialism would do along

with various other attempts to theorise the post-human? In this regard Ricoeur's sentiments in the debate to the effect that human capability is important and valuable, should be affirmed.[3] What would the options be then, given that the terms of the debate should nevertheless be broadened past the phenomenological boundaries to which Ricoeur wants to remain true?

Here, perhaps, the approach of that great admirer of Descartes, that nevertheless took a radically different approach from him, Baruch Spinoza, should be reconsidered. Spinoza's project may be read as an attempt to follow Descartes' search for rational certainty while yet holding onto the tradition of metaphysical thought (Grondin 2012:123). This is clear from Spinoza's evident sympathy for the age old metaphysical insight that being and thought are given to each other. In fact, it has been argued that "the entire content of classical metaphysics, follows from and depends on the law that to be is to be intelligible." (Perl 2014:7). For classical metaphysics being is intelligible. According to Perl (ibid. 8) this should not be understood as idealism in an anti-realist sense[4] – as if being should be deduced from, or reduced to thought – but rather as an "intellectualism" in the sense that Pierre Rousselot used the expression (Rousselot 1999:16): thought is the apprehension of being, and being is what is given to thought. In classical metaphysics being and thought belong together, and cannot be spoken of separately. This "conjugal togetherness" (Perl 2014:8) of being and thought might best be described as a hyper-correlationism in order to distinguish it from the correlationism that characterises post-Kantian thought. The distinction lies in the fact that Kant, following Descartes in this regard, wanted to have being and thought separate – even alien – from each other, yet correlated. The correlationism that results is a kind of external correlation between being and thought that on the one hand gives rise to the strong and the weak variants amongst its supporters, and to accusations of being an epistemological straightjacket amongst its detractors.

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3 See also Rutten's (2015) defence of correlationism.

4 In *After Finitude* Meillassoux does consider the option of an absolute idealism as a response to the critique of weak and strong correlationism. He nevertheless rejects this in favour of a materialist point of view (2008:37, 38, 57ff.).

In opposition to the substance dualism of Descartes, Spinoza emphasised the unity of nature that is accessible to cognition under two attributes, namely that of matter and thought. These, according to Spinoza, are attributes of one infinite substance. While the metaphysics of substance do not have to be resurrected, the ontological co-inherence of being and thought that is Spinoza's point of departure merits revisiting precisely because of the promise such an ontological presupposition holds for the approach to the question of the relation between the mind and the brain. According to Spinoza there are finite things or "modes" that are dependent on the one infinite substance. Lin (2018a) suggests the helpful metaphor that the finite things stand to the infinite substance as waves stand to the waters of the ocean: "[j]ust as a wave is nothing more than the waters themselves insofar as they move in a certain way, a finite thing is the infinite substance insofar as it satisfies a certain condition." These finite things can be conceived under both of the attributes of infinite substance open to human cognition: extension and thought. Under the attribute of extension, finite things are conceived as bodies, and under the attribute of thought these same things are conceived as ideas (Lin 2018a). It is important to note that for Spinoza a specific finite idea is always the idea of a specific finite body, and that this pertains to all ideas and all bodies – not only to the human body and mind.

Spinoza can thus be interpreted as a panpsychist: the mental is a feature of the whole of the natural world. Even stronger: every physical thing that inhabits the natural world – be it rock, plant, microbe, animal, part of the human body, or the human body as a whole – has a mind (Lin 2018b). This is so because, just as a physical thing can be considered to be like a wave, a certain configuration, on the ocean of extension, so a mind may likewise be considered to be like a wave on the ocean of thought – a thought-wave that is isomorphic to the specific extension-wave of which it is the thought.

As an attribute of the one infinite substance, mind, according to Spinoza, is infinite and ubiquitous. Correspondingly, all finite bodies – animate and even inanimate – may be regarded as having minds. The difference between the mentality of these finite things is to be found in the complexity of the objects that the ideas represent (Lin 2018a, 2018b). The human mind is the idea of the human body – the most complex finite body known to us. But as a finite mind with a first personal experience it may nevertheless be metaphorically regarded as a complex wavelike configuration on the ocean

of thought that is isomorphic to its body that is in turn a complex, wavelike configuration on the ocean of extension.

Understood in this way hyper-correlationism might mean that it is not necessary to search for a metaphorical pineal gland in the relation between mind and brain. Precisely because the relation is not finitely localisable. Spinoza invites us to approach the conversation about the relation between the mind and the brain from the perspective that mind is everywhere.

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