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A Kantian Take on Mind Extension

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Abstract

I assess Andy Clark and David Chalmers' groundbreaking exposition of the extended mind thesis (EMT), as originally put forward in 1998, from the viewpoint of Immanuel Kant's transcendental idealism. Both stances are committed to investigating how extension might be constitutive of the mind, yet they do so on completely different terms. In Section 1, I set out how Kant relativises the Cartesian distinction between mind and world by showing how the very internality of the mind is necessarily constituted in relation to extension, giving rise to the suggestion that the mind is an activity. In Section 2, I use this Kantian dynamic to assess Clark and Chalmers' claim that at certain times and under certain conditions the mind is extended into the world. Although they compellingly show that the functions of the mind are sometimes *taken over* by the world, a close reading of their text reveals that this does not really challenge the Cartesian opposition between mind and extension. This allows for the conclusion that Kant's eighteenth-century approach to EMT stands much further from Cartesianism – but also from computationalism – than its twentieth-century competitor, thus preluding an alternative and perhaps more radical pathway to conceptualising mind extension.

1. Immanuel Kant

1.1 A Kantian Take on 'Basic Minds'

Immanuel Kant's epistemological legacy originates from his attempts at investigating the necessary conditions of possibility of the object (*KrV*, B xvi).[1] In this respect, Kant's philosophy of transcendental idealism (TI) has given way to the widespread yet powerful assumption that the objectivity of the empirical world is constituted by *a priori* (i.e., non-empirical) subjective conditions.[2] Broadly speaking, TI adheres to the

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[1] As custom dictates, all references to Kant cite from the *Akademieausgabe*, indicating title abbreviation (for instance *KrV* for the *Critique of Pure Reason*), followed by volume number and page number. Moreover, for the *KrV*, citations refer to the A and B editions of this work. These citations are inserted in the text itself.

[2] According to Kant, concepts are objective (have objectivity) when they can be related to sensible intuition. Sensible intuition, on the other hand, is objective when it can be related to concepts (see *KrV*, B 75). The term 'object' itself, then, should be understood as that in which conceptuality and sensibility are united into a whole (see *KrV*, B 137).

philosophical strand that the world is, in a sense, *made possible* by the mind – by conditions that 'belong' to the mind. Kant's 'Copernican revolution' might indeed give way to the idea that what is proper to the mind is *constitutive* of the world.

At first sight, then, Kant's transcendental philosophy seems unfit for hitting the target of contemporary philosophy of mind. Kant actually says this: "[T]he chief question always remains: 'What and how much can understanding and reason cognize free of all experience?' and not: 'How is the faculty of thinking itself possible?'" (*KrV*, A xvii). What the mind itself could amount to *as an object of investigation* is indeed a question not readily associated with TI. The overall absence of TI from contemporary debates in philosophy of mind could indeed be due to the fact that the central aspects of Kant's philosophy are mainly concerned with the epistemological issue of object constitution. What is perhaps primarily at stake for Kantians is the objectivity of the empirical world, and the *a priori* laws of the mind that govern the former. Kant's focus lies with the object (and how it is constituted), not with the mind as a separate entity. However, it is often left unnoticed that in Kant's oeuvre the faculties of thinking come forward as requiring constitution as well. In the transcendental deduction of the *Critique of Pure Reason*, for instance, the constitution of the object seems to involve what Kant calls the 'modification' of the mind (*KrV*, A 97–99) and of 'inner sense' (*KrV*, A 367). In line with Jeff Malpas, I will argue that, for Kant, 'the mind' is as much in need of constitution as 'the world'.[3]

Furthermore, I will argue that because of this two-way model, whereby the mind is constitutive of the world and the world is constitutive of the mind, the Kantian mind is essentially a *basic mind* – that is to say, a mind explained in non-contentful and non-representational terms.[4] In Section 1, I explain, firstly, why Kant can be seen as committed to such a conception of the mind. Secondly, I conclude the section by

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[3] Malpas 1999.

[4] This implies that a Kantian take on basic minds might be interesting for the (radical) enactivist movement in philosophy of mind, which aims, among other things, to conceive of minds without appealing to representation and content. The notion of the 'basic mind' was introduced by David Hutto and Erik Myin as follows: "[W]e propose, the nature of the mentality in question is not underwritten by processes involving the manipulation of contents, nor is it, in itself, inherently contentful. Basic minds do not represent conditions that the world might be in. To think otherwise, as many do, is to ascribe features and characteristics to basic minds that belong only to enculturated, scaffolded minds that are built atop them" (2013, p. ix). Apart from a rejection of content, I take it that the concept of the basic mind also involves the search for what is *sufficient* as well as *necessary* so as to identify what counts as a mind *überhaupt*, and nothing more. In this text, I use the term especially in the latter sense, as Hutto's and Myin's use of the term 'content' is far from on par with my Kantian understanding of the term.

I propose, however, that the notion of content across the many philosophical traditions, and especially regarding radical enactivism and TI, is worthy of investigation, especially since both aim to discard it somehow (cf. infra). But this is for another paper. One hurdle that such research would have to face concerns the question how Myin and Hutto's aim to give a *naturalised* account of the mind can be reconciled with Kant's *transcendental idealist* take on it. The latter is concerned with a transcendental investigation of how naturalist explanations of world phenomena are made possible to begin with. That is, Kant's TI aims to explain empirical phenomena in terms of principles that are *a priori* and pure, i.e., not empirical. Likewise, Kant aims to determine the conditions of possibility of the mind (cf. infra), rather than investigate into its causal – naturalised – constituents. However, if Kant has a contentless (i.e., 'basic') account of the mind, I do take this to be a result of his transcendental analysis of it.

showing how such a Kantian theory of mind amounts to the idea of mind extension, whereby the mind 'is there' by virtue of a world.

1.2 A Kantian Take on 'Minds Without Content'

In his review of Samuel Thomas von Sömmerring's monograph *On the Organ of the Soul* in 1796, Kant characterises the mind (*das Gemüt*) as the capacity for combination.[5] Here, Kant appears to brush up his earlier comment in the first *Critique* that "the synthesis of the manifold" occurs "through a common function of the mind for combining it in one representation" (*KrV*, A 109). In his commentary on Sömmering, however, Kant seems to stipulate that only the single qualification *that* the mind must entail some sort of combination counts. Of course, in a most rigid sense, the very concept of combination requires that *something* be combined. *What* this is, however, need not be determined *a priori*.

In that strict sense, Kant's account of the mind is a bit like a Fregean propositional function: $y = f(\,)$. According to Gottlob Frege, one must take seriously this notation: a propositional function merely prepares a *place* for an argument to be inscribed. That is, functions only *formally* anticipate possible *contents*. The question as to *what* specific arguments come to satisfy a function is irrelevant to the structure of the function itself. Yet the fact *that* functions must anticipate said arguments in the very structure of their notation, however, is of the essence.[6]

Something similar goes for Kant's theory of object constitution. In the *Critique of Pure Reason,* Kant develops a theory of object constitution and cognition in quite formal and general terms.[7] Nevertheless, Kant develops this theory so as to account for the constitution and cognition of objects insofar as they can be related to a specific content. He is not only interested in mapping the constitution of the object *in general.* What seems ultimately at stake in doing so is the constitution of empirical, singular objects – say, the ones you use every day.[8] His transcendental theory of the object is formal and mundane at the same time. Quite similarly, Frege's purification of the relation between values, functions, and arguments – $y = f(\,)$ – undoubtedly accounts for *satisfied* functions as well. That is, Frege is not only interested in the *structure* of functions, but he is also interested in how, for instance, they underlie specific arithmetical operations – e.g., 64 as the value of the function x^3 with 4 as the satisfying argument. But here it is crucial that, according to Frege, the essence of the function is to be understood as if 'not yet' enabling such specific function values. The same goes

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[5] Eisler 2002, p. 182.

[6] Frege 2008, p. 2.

[7] In the 'Analytic of Concepts', for instance, Kant develops an account of the object whereby categories are *legislative* with regard to nature. To do so, Kant does not need to give an account of specific, contingent features of nature. He need only account for the possibility of nature in general, or what he calls *natura formaliter spectata* (*KrV*, 162–65).

[8] Especially in the 'Analytic of Principles', Kant gives examples of such singular empirical objects to substantiate his formal account of object constitution: he discusses houses (*KrV*, B 235), boats (*KrV*, B 237), and arithmetical operations (*KrV*, B 205), among other things. The message seems to be that mundane objects are formal affairs as much as objects in general.

for Kant's formal system of categories and forms of intuition: it is itself to be understood as if it were 'not yet' constitutive of singular, empirical objects.

In the *Critique of Pure Reason*, Kant specifies the mind's capacity for combination in terms of twelve categories, famously organised according to the four headings of quantity, quality, relation, and modality. These categories serve as the 'necessary conditions of possibility' for the constitution (and cognition) of empirical objects. They are deduced from what Kant holds to be the twelve basic 'forms of judgement' (which are also organised according to quantity, quality, relation, and modality). Kant is adamant, in this regard, that the twelve categories and their corresponding forms of judgement are all instances of 'the logical function'. Logical functions, according to Kant, concern "the unity of the act" (*die Einheit der Handlung*) enabling to bring "different representations under a common one" (*KrV*, B 93).[9]

These subtly coupled elements governing the constitution of the object – namely the logical function, the forms of judgement, and the categories – seem indebted to Kant's more generic account of the mind (*das Gemüt*) as the capacity for combination. As far as epistemology is concerned, this combining capacity of the mind comes forward as a logical and objectifying act (*Handlung*).[10] When related to representations, this act falls apart into twelve forms of judgement. And, says Kant, when these representations involve *intuitions* delivered by our faculty of sensibility, the twelve forms of judgement give way to the twelve pure categories of the understanding (*KrV*, B 104–05).

Although representations are in that sense at stake, their *specific content* remains, in fact, irrelevant.[11] When the mind concerns cognition through categories, content is

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[9] In that sense, the Kantian function *might* be seen as the precursor of the Fregean one, though much can be said about their differences. It is still an open question whether the Fregean function – namely in terms of (*i*) a *function*, (*ii*) an *argument*, and (*iii*) a *value* – is in a way anticipated by the Kantian function, which is described in terms of (*i*) the unity of an act that combines (*ii*) different representations under (*iii*) a common one (*KrV*, B 93). Generally speaking, both seem to hold dear to a 'triadic' or 'trichotomic' structure. All the while, one should note that, for Frege, a function seems to be a figure of formal logic that is only *potentially* accompanied by epistemological and ontological implications, whereas it seems that, for Kant, a function is an element of formal logic that has epistemological implications *at the same time*. Kant's logical function and its twelve specific forms give rise, namely, to the categories of the understanding that count as the necessary conditions of possibility for the constitution and cognition of the object – see the metaphysical deduction of the categories in the *Critique of Pure Reason* (*KrV*, A 66–83/B 92–116).

[10] Terms like *Actus* and *Handlung* are crucial to Kant's theory of the mind (see Kaulbach 1978; Saugstad 2009). Kant is quite adamant that the Cartesian dictum of the mind – the *cogito* (the 'I think') – is to be called an act (*KrV*, B 137, 423). But what does this mean? In line with what I have argued already, it seems to imply that, for Kant, to have a mind is a *consequence* of *saying* 'I think' rather than the fundamental basis of it. To be able to say, write, or discursively judge that I think has an effect: it constitutes the mind, it creates the distinction between *res cogitans* and *res extensa*, between what can be *called* 'internal' and what can be *called* 'external'.

[11] In Kantian scholarship, the term 'representation' is a tricky one. The term itself alludes to something being re-presented, but this is a bit at odds with the original German term *Vorstellung*, which is perhaps better translated as 'presentation'. It seems to be a very generic term, signifying the occurrence *that* something *presents* itself to the mind (see *KrV*, B 377). So, it is not surprising that in Kant's philosophy, the term *Vorstellung* emerges in various contexts. In the context of cognition, a representation is objective when it involves a sensible intuition for which we can at the same time give a concept. In this case, that which *presented* – namely, the representation – does is presented in intuition while also being determined conceptually. But both a *mere* sensible intuition (without being determined

nothing but an explanandum *in general*. Kant's infamous 'Transcendental Deduction of the Categories' (*KrV*, A 95–130/B 116–69) does indeed precisely consist in abstracting from the content of representations in order to identify the latter's *formal* conditions of possibility. Or, as Jeff Malpas has it: "In so far as content is established through connection [i.e., the formal conditions of possibility], content surely cannot be that on the basis of which connection is established".[12]

So, if a philosophy of mind is extracted from Kant's critical oeuvre, and more precisely in relation to his theory of cognition, a basic mind can be encountered that is fundamentally non-contentful, precisely because content is somehow at stake. Therefore, a Kantian philosophy of mind would have to involve a basic mind insofar as it is 'not yet' a particular and contentful mind. It would have to involve a basic mind, namely, as if it were 'not yet' deeply engaged in representation and cognition. Or, for instance, with regard to the *Critique of the Power of Judgment* and the *Critique of Practical Reason*, Kant's philosophy involves a basic mind as if it were 'not yet' committed to aesthetic contemplation and wilful action in accordance with the categorical imperative.

However, I will argue that Kant's formal take on the mind not only involves *combination* and its different modalities, but *activity* as well. We will see that Kant's peculiar notion of the unity of the *act* (*Handlung*) is essential to grasping the formal and potentially elusive notion of combination. Reminiscent of a radical enactivist strand, we will see that, for Kant, combination *is* activity. In order to address this, I turn to Kant's infamous 'Refutation of Idealism' (*KrV*, B 274–80).

1.3 A Kantian Take on Extended Minds: The 'Refutation of Idealism'

Although a Kantian theory of the mind can be seen as a purely formal, non-contentful concern, this is not to say that the Kantian mind does not, in a way, *anticipate* content. Or, to put it with a Kantian idiom: content *in general* can (and must) be part of a formal take on the mind, but not content *itself*. At the end of the second chapter of the 'Analytic of Principles', Kant lucidly states the following: "All principles of the pure understanding are nothing further than a priori principles of the possibility of experience, and all synthetic a priori propositions are related to the latter alone, indeed their possibility itself rests entirely on this relation" (*KrV*, B 294). Indeed, the possibility of the mind's *a priori* principles of experience (that are systematically tied to the categories), which enable cognition of objects, rests entirely on the latter's relation to objects of experience itself.

In his 'Refutation of Idealism' (*KrV*, 274–80), Kant explains how this transcendental epistemological theory significantly problematises a Cartesian take on the mind. According to Kant, the Cartesian method of doubting the existence of the *res extensa* (extended thing) in the interest of isolating a fully functional *res cogitans* (thinking

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conceptually) and a *mere* concept (without being related to an intuition) can be called representations (*KrV*, B 377).

[12] Malpas 1999, p. 4.

thing) is a kind of substantivist or material – as opposed to transcendental – idealism.[13] On Kant's reading, René Descartes allows for one empirical statement about the world only, namely the proposition that 'I am'. All other empirical statements are 'problematic' or dubitable from the viewpoint of absolute certainty. Therefore, all other empirical statements can be disconnected from the proposition 'I am', and more importantly, from the underlying analytical statement 'I think'. The crux of Descartes' material idealism is that the thinking mind can be an object of investigation without reference to the extended world outside of the subject, as the former's existence is indubitable whereas the latter's is not.[14]

Now, the crux of Kant's refutation of this Cartesian idealism consists in thoroughly relating these opposed terms – 'mind' and 'world', 'thinking' and 'extension', but also 'inner' and 'outer' – in such an intricate fashion that the one is in fact inconceivable without the other, thus turning any Cartesian 'meditation on the mind' into a pointless endeavour. Kant's argument reveals that the mind – insofar as it concerns 'inner sense' or 'inner experience' – is impossible without extension. It is worth taking a look at Kant's argumentation in its technicity.

Kant's line of reasoning begins with the premise that there is something like 'inner experience' – namely, that one is able to experience 'things' that seem entirely internal to the mind and are somehow disconnected from what can be ascribed to the environment. His second premise is that such inner experience is essentially *successive*; that the *form* of inner experience is, in other words, time: "I am conscious of my existence as determined in time" (*KrV*, B 275). He then goes on to the third premise, quite crucial for his argument, stating that "[a]ll time-determination presupposes something persistent in perception" (*KrV*, B 275). This means that there must be something persistent *in respect of which* change (variation) is possible, indicating that *without* something persistent, change is contradictory and impossible.[15]

Kant then applies this framework to the case of inner experience, which – as it is successive – is exactly such 'change'. Given the third premise, Kant soundly argues that inner experience must have some kind of persistent point as well. Kant then qualifies, quite unproblematically, that this persisting point of inner experience cannot be inner experience *itself*. After all, persistence and change do not coincide – this would be absurd. Crucially, then, the persisting point of inner experience *must lie elsewhere*. The persistence of the successive change we call *inner* experience lies, then, *outside* of us. In other words, inner experience is *made possible* by what is external.

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[13] Descartes' substantivist account of the mind seems to entail the view that the mind is a distinct ontological entity.

[14] See the first two meditations of Descartes' *Méditations Métaphysiques* (2009, pp. 79–108).

[15] As suggested by an anonymous referee, someone might object that everything may very well be in a total state of variation, change, or fluctuation. If this were the case, a counterargument could be made that variation does not require a persistent point at all, as Kant maintains. However, if Kant's argument assumes that change is relative to a persistent point, then this is not incompatible with the option that the latter is *itself* subject to, or susceptible to, continual change. The inner change of the mind that Kant seeks to investigate can be relative to a persistent point that is ontologically *fictional* (as 'in reality' it would be in a state of continual fluctuation).

This allows Kant to refute Cartesian idealism: *from* the very assumption that there is something like inner experience, we must conclude that there are objects in space outside of us, i.e., that the possibility of assuming inner experience is tied to the possibility of assuming outer experience. Herewith, Kant maintains, Cartesian idealism is refuted.

Now, from this line of reasoning it might appear that Kant defends a content-based, deeply representationalist take on the mind. In line with his ever-formal approach, however, Kant immediately qualifies that the intertwinement of the internal mind with the extended environment, as elegantly put forward by his refutation of Cartesian idealism, is in no way limited to *actual*, *existing*, and thus *particular* objects. Kant is adamant, namely, that "[h]ere it had to be proved only that inner experience in general is possible only through outer experience in general" (*KrV*, B 278–79). Inner experience, otherwise subjected to the *a priori* categories of the understanding, is also predicated on the outer world in general, that is, on extension in general. More crucially, however, this means that the supposedly 'internal' categories of the mind that serve to constitute our inner experience stand in relation to extension as well. They are, in a sense, 'anticipatory' of extension.[16]

This formal, transcendental argument leads to the following, striking conclusion: insofar as basic minds involve inner experience, they must, on Kantian grounds, at the same time involve extension. Herewith, Kant subtly yet fundamentally destabilises any Cartesian or substantivist account of the distinction between 'mind' and 'world', 'thinking' and 'extension', 'inner' and 'outer'. The epistemological consequences of this destabilisation are not to be disregarded, according to Kant. In the 'Fourth Paralogism', he writes: "I am no more necessitated to draw inferences in respect of the reality of external objects than I am in regard to the reality of the objects of my inner sense (my thoughts)" (*KrV*, A 371).

For my purposes, however, it is crucial to see that the mind in its 'internal' thinking activities, described above in terms of categories and logical functions, is necessarily predicated on extension. Accordingly, to presume that the Kantian categories – i.e., the highly formal modalities of cognition – are 'internal' is perhaps a bit redundant. There is, in any case, no *need* to presume it.[17]

In the 'Transcendental Deduction' Kant seems to suggest, seemingly in this spirit, that the intricate relation holding between extension and the formal modalities of thinking with regard to inner sense must be conceived of as *epigenetically* structured. By shortly

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[16] Although categories anticipate extension, they can only do so formally, as they could not appeal to the specific content of extension. The latter is due to their following the *a priori* and *formal* rules of the faculty of the understanding. Therefore, categories can only anticipate extension (and content) *in general*.

[17] As aptly noted by an anonymous reviewer, it is perhaps a bit redundant as well to talk about 'something outside of us' without already presuming a mind or an inner experience proper to a persisting subject. This is, of course, the rather 'textbook' interpretation of Kant's TI. In his 'Refutation of Idealism', however, Kant subtly argues that what is internal is as much dependent on what is external as the other way around, which is indeed seemingly contrary to the more common way of approaching TI. Considering his closeness in time and spirit to Descartes's dualism, Kant seems to struggle with an often elusive, yet potentially elegant dialectic between what is inner and outer, what is mind and what is world.

analysing the meaning of this 'epigenesis' in the next section, I suggest that Kant's take on the mind must concern activity, and seemingly in the *spatial* sense at that, since extension is involved.

1.4 Kantian Minds as Activities

In order to situate his epistemological theory of object constitution in the wider philosophical landscape, Kant often made use of one very particular and compelling analogy. In his *Inaugural Dissertation* (and on several other occasions), Kant maintains that the categories are either derived from experience, or innate, or *a priori* acquired (*MSI*, AA 02: 395). Kant aligns these three options with the three most dominant eighteenth-century approaches to embryology: physical influx, preformation, and epigenesis. Kant argues that the categories involve *a priori* acquisition, so he sides with epigenesis and rules out the options of physical influx and preformation.[18] So, not unlike the early modern embryological theory of epigenesis, Kant's transcendental version of epigenesis concerns a procedure, the various elements of which cannot in themselves sufficiently explain the presupposed result, that is to say, the constitution of the object. Whereas embryological epigenesis presupposes (*i*) a material predisposition in combination with (*ii*) a specific environment so as to explain (*iii*) the emergence of a mature organism, Kant's analogy poses (*a*) the combinatory capacity for discursive thought (formative of the forms of judgement) proper to the mind's faculty of the understanding[19] in combination with (*b*) the capacity for sensory affection proper to the faculty of sensibility in order to explain (*c*) the constitution of the object.[20] It is, namely, only under the pressing invitation – "sous la sollicitation", as Herman de Vleeschauwer has it – of sensory affections, that forms of judgement can be invoked to produce categories that stand in relation to experience.[21] Quite importantly, this means that according to Kant there is no pre-formed categorial system 'waiting to be applied'.

In that regard, Béatrice Longuenesse argues that the heterogeneous relation between discursivity and sensibility does not indicate a mere conjunction but rather amounts to a relation of dependence between sensibility and discursivity: "[B]ecause intuitions rest on affections or depend on receptivity, concepts [categories] have to rest on functions".[22] Indeed, insofar as intuitions are in themselves blind (*KrV*, B 75) and purely singular, the human subject *must* make an appeal to its general discursive capacities in order to constitute these intuitions as empirical objects. Therefore, the Kantian mind is not 'filled' with categories, waiting to be applied to intuitions – it is, again, not preformed. Instead, the mind's confrontation with its own faculty of

[18] See Lu-Adler 2018 for an interesting account of Kant's grounds for aligning TI with epigenesis instead of with physical influx (*generatio aequivoca*) or preformation.

[19] Discursive thought or discursivity entails the combination of concepts through judgements (cf. Longuenesse 1998, p. 6) according to general rules. Sensibility, on the other hand, is non-conceptual and therefore also non-discursive.

[20] Malabou 2016, pp. 21–22.

[21] De Vleeschauwer 1937, p. 270.

[22] Longuenesse 2005, p. 93.

sensibility highlights the need for something that is completely different (heterogeneous) from that faculty, namely a capacity for thinking, for judging, for acquiring categories – that is, the faculty of the understanding.[23] However, the latter faculty is in turn also in need of sensible intuitions if it wants to have a relation with objects. Kant is very clear that intuitions and concepts "therefore constitute the elements of all our cognition, so that *neither concepts without intuition* corresponding to them in some way *nor intuition without concepts can yield a cognition*" (*KrV*, B 74, my italics). In light of that, Kant famously states that "[w]ithout sensibility no object would be given to us, and without understanding none would be thought" (*KrV*, B 75). And even more importantly: "Thoughts without content are empty, intuitions without concepts are blind" (*KrV*, B 75).

Now, that object constitution is in that sense organised epigenetically (i.e., neither concepts nor intuitions can account for cognition alone, yet both are necessary) informs the following: despite the fact that the categorial system necessarily amounts to a general, formal discursivity – otherwise it could not make a difference with regard to sensibility – this is not to say that the occasion for this system to be invoked and developed (to be *a priori* acquired) does not presuppose the singular position of a sensory, embodied subject. The Kantian mind of discursive categories is, therefore, at the same a mind that moves through a world of sensibility, that attempts to orient itself amidst a manifold of intuitions. The highly formal and discursive categories are fundamentally *distinct* from our sensible intuitions, but they are not *detached* from them. This is why the determination of intuitions on account of categories involves a 'modification' of the mind (*KrV*, A 97–99).

In other words, *if* the Kantian mind is above all to be called a *thinking thing*, then it is at the same time to be called an *extended thing*. The discursive features of the Kantian mind are indeed inseparable from the latter's active, embodied, moving – that is to say *sensible* – aspects. So, if Kant puts us on the track of assuming that the mind is a combining capacity and, in a second move, that this combining capacity is to be called a *Handlung* (e.g., *KrV*, B 93) or *Actus* (e.g., *KrV*, B 137, 423), then we could, in fact, take this literally. The mind, it seems, *is* an act. One particular comment of Kant's is highly revealing in this regard: "We cannot think of a line without drawing it in thought" (*KrV*, B 145). And the same goes for circles, triangles, and so forth. This subtly rich statement, easily overlooked as a trivial remark, is a radical one indeed. The fact that highly abstract 'concepts' like geometrical lines cannot even be *thought* without reference to the extended activity of *drawing* them, is of the essence for Kant. The radicality of Kant's statement lies in the assumption that to *merely think* of a line requires movement and extension as much as drawing or seeing an 'actual' one. From this, one might conclude that Kant attempted, perhaps even unknowingly and

[23] In this regard, one could perhaps wonder, as thankfully suggested by an anonymous reviewer, whether Kant's philosophy of mind presupposes *minds to have minds*. This suggestion could give rise to an interesting avenue of research, although I am much more inclined to speak, with regard to Kant, of *a singular yet divided mind*. The Kantian mind, so it seems, can be set out not only in terms of the different faculties and capacities that seem to give life to it, but also (and perhaps more importantly) in terms of the heterogeneity between these very faculties and capacities, which highlights the internal division of a singular mind rather than a plurality of minds.

undoubtedly still preliminarily, to suggest that the workings of the mind involve extension as much as the activities of bodies. His project seems to be a subtle and largely unnoticed attempt at interweaving what standardly pertains to the mind (thinking, categories, combination) and what standardly pertains to extension (spatial movements, acts, activities).[24] It reveals, in any case, a more fundamental struggle to think through his quite upfront refutation of the sharp Cartesian distinction between mind and world.

With this in mind, I now turn to Andy Clark and David Chalmers' seemingly anti-Cartesian defense of mind extension, arguing that it must not be seen as a continuation of Kant's subtle attempts at showing mind's extension, but rather as a philosophical setback for this emerging project.

2. Andy Clark and David Chalmers

2.1 The Extended Mind Thesis' Cartesian Heritage

For a long time, philosophies of mind and cognition have been committed to the kind of 'internalism' already problematised by Kant, most famously in his 'Refutation of Idealism'.[25] In that sense, the field is a dominantly Cartesian one. When it comes down to it, the mind is still a *res cogitans*. In recent years, however, this Cartesian heritage has been increasingly considered a thorn in the flesh. A certain reflective dissatisfaction reigns the field nowadays. And perhaps the road to philosophical progress must indeed be anti-Cartesian, whatever the implications. A new, embodied, enactive, or extended take on the mind, secretly promising to yield a closing of the gap between *res cogitans* and *res extensa*, is at the horizon.[26]

The proposal of the extended mind thesis (EMT), as put forward by Clark and Chalmers in 1998, can attest to this tendency. Their observation that the mind's (specifically computational or more generally procedural) functions can sometimes be

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[24] Kant does something similar in *Was Heißt: Sich im Denken Orientiren?* (1786), where he attempts to show that the human subject should not only orient itself in the world, but in thinking as well (*WDO*, AA 08: 136).

[25] In general, I construe internalist theories of mind as assuming that, for having a mind, intrinsic capacities are sufficient. Descartes' first two meditations can be read as arguments in favour of internalism. Externalist theories, on the other hand, I construe as assuming that some extrinsic features of the environment are required to have something like intrinsic capacities of the mind to begin with. Thus construed, internalism is a very strict point of view, while externalism is a more open alternative. The former excludes extrinsic features of the environment (in the sense that they are not required to explain intrinsic capacities), while the latter includes intrinsic capacities (in that it tries to give an explanation for these intrinsic capacities). Recently, however, externalist theories of mind are increasingly becoming exclusive. Hutto and Myin's radical enactive approach to mind seems to argue, for instance, that to have a mind, intrinsic capacities are not required *at all*. The mind, then, is a *completely* external (or extensive) capacity (2013, pp. 142–47).

[26] A notable attempt at getting rid of the Cartesian heritage in philosophy mind, beside the one by Clark and Chalmers, concerns the enactivist movement largely due to work by Francisco Varela, Eleanor Rosch, and Evan Thompson, especially their *The Embodied Mind* in 1991, which has proven to be seminal. More recently, David Hutto and Erik Myin have developed a radical version of enactivism, with publications like *Radicalizing Enactivism: Basic Minds Without Content* in 2013 and *Evolving Enactivism: Basic Minds Meet Content* in 2017.

taken over by mechanisms, features, means, and objects in the environment seems to break with the exclusively internalist take on mind and cognition. Clark and Chalmers' overarching idea seems to be that there are no good reasons for assuming that the mind's computational, intellectual, and contentful procedures must *always* be internal. However, does this mean that EMT sets in motion a wholly new science of the mind, radically doing away with any Cartesian take, in continuation of Kant's radical yet straggled critique? I have reservations.

The aim of this section, then, is to show that EMT still complies with a dualist or Cartesian take on the mind. Sure, the proclaimed philosophical conclusions and scientific consequences of EMT run counter what would be Descartes' own – certainly anachronistic – philosophy of mind. Indeed, in doubting everything he knew so as to lay bare the single point of absolute certainty, Descartes' meditations give rise to a conception of the mind that radically excludes any extension whatsoever. Even more so did his methodology – put forward in the interest of the epistemological and ontological isolation of what pertains to the thinking mind itself (*res cogitans*) – precisely consist in the theoretical elimination of extension (*res extensa*). Superficially speaking, then, EMT seems to be the Cartesian's rightful opponent. The project of Clark and Chalmers is indeed seemingly set to theoretically incorporate thinking, cognition, and mind into extension, allowing them to defuse the alleged historical effect of Descartes' first two meditations. Their take on language as a form of mind extension, for example, is indicative of such an objective:

> Without language, we might be much more akin to discrete Cartesian 'inner' minds, in which high-level cognition relies largely on internal resources. But the advent of language has allowed us to spread this burden into the world. Language, thus construed, is not a mirror of our inner states but a complement to them. It serves as a tool whose role is to extend cognition in ways that on-board devices cannot.[27]

What is really at stake here is the question as to what should and should not pertain to a full-fledged account of a basic mind. That is to say, insofar as we are concerned with the mind's *basic* features, what is it that we are dealing with? Philosophy of mind seems to be driven, above all, by the attempt to stipulate both what is *necessary* and what is *sufficient* in order to account for this mysterious thing called 'the mind'. Let us, then, rephrase the issue as follows: for a Cartesian, the extended environment would be qualified as *neither necessary, nor sufficient* to do the job. Now, a revolutionary thinker, hopeful for a new paradigm, who engages with Clark and Chalmers a bit superficially would perhaps be inclined to read the exact opposite of such Cartesianism into their proposal of mind extension. They do indeed purport to show that "extended cognition is a core cognitive process, not an add-on extra".[28]

Now, does the extended environment play a *sufficient* role so as to account for what is a mind according to EMT? Or is the environment put forward as playing a *necessary*

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[27] Clark & Chalmers 1998, p. 18.
[28] Ibid., p. 12.

role? Generally speaking, I would judge that, according to EMT, extension is perhaps sufficient, but certainly not necessary. This is important: on their terms, whether the mind is extended is a matter of case-to-case comparison. As we will see, their heuristic is role- or function-based. The difference with TI is already quite obvious here. According to TI, it should be easy to do away with such a crooked structure. On Kantian terms, namely, there is mind if there is extension, and vice versa. But if the mind should only *sometimes* be seen as extended into the world, what follows is that at certain other times the mind might not be extended at all. Let me illustrate this by taking a closer look at the precise role of the overarching example that guides their argumentation: the cases of Inga and Otto.

Inga wants to go to the Museum of Modern Art (MoMA). On her way to the exhibition she is interested in, she remembers that the museum is located on 53rd Street. Here, the non-occurrent belief that MoMA is on 53rd Street "was somewhere in memory, waiting to be accessed".[29] Otto, who suffers from Alzheimer's disease, also hearing about the exhibition at MoMA, decides to go as well. Due to his disease, he must consult a notebook – in which he writes down all sorts of information – in order to retrieve the address of the museum. As Clark and Chalmers have it, "it seems reasonable to say that Otto believed the museum was on 53rd Street even before consulting his notebook", because "in relevant respects the cases are entirely analogous: the notebook plays for Otto the same role that memory plays for Inga". In Otto's case, "it just happens that this information lies beyond the skin".[30] This compelling example quite lucidly brings Clark and Chalmers to conclude that in Otto's case, the mind, insofar as it concerns belief, must be seen as extended into the world. But what about Inga? As for her retrieval of information from within her own memory, Clark and Chalmers give the impression that it would be pointless to argue for extension in her case. They contend, namely, that in Otto's case, "it just happens that this information lies beyond the skin",[31] solely giving arguments for the claim that in *his* case what is mindful must extend into the world.

But perhaps Inga's mindful activities can be seen as extended by considering what Clark and Chalmers say about the role of *language*. Language, they say, is not a mirror of our inner states but a tool that allows for extending high-level cognition into the world. Where the endeavours of the inner mind fail (or are plainly less useful), language comes to the rescue, extending the processes of the mind into the world. Language is, in their words, a *complement* to our inner resources.[32] But this does not solve the problem: precisely because language is put forward here as a *complement* to our inner resources, the mind is herewith only *partially* extended. On these terms, some of my internal activities might not involve language at all. Some of my internal activities, then, might very well be fully independent of the *occasional* extensions of

[29] Ibid.
[30] Ibid., p. 13.
[31] Ibid.
[32] Ibid., p. 18.

my mind. In that sense, Clark and Chalmers fail to present extension (e.g., pertaining to language, or other tools like notebooks) as *necessarily* constitutive of the mind.[33]

Clark and Chalmers seem to be operating with a kind of 'leftover' internalist conception of the mind. Therefore, I take EMT *not* to be the antipode of a Cartesian philosophy of mind. The internalist leftover (cf. Inga, or 'the mind insofar as it does not involve language') is treated, moreover, as in no way theoretically *influenced* or *affected* by the proposed cases of mind extension (cf. Otto, or 'the mind insofar as it *does* involve language). Their comparison of Inga with Otto thus allows for the sharp delineation between *res cogitans* and *res extensa* to be maintained in philosophy of mind, although sometimes the latter is seen to portray the same cognitive role as the former.

This is crucial: what counts for Clark and Chalmers with regard to conceptualising minds are cognitive *roles* or *functions* (not in the Fregean sense). And sometimes a specific role that is otherwise organised internally (that is to say, within the confinements of the skull), like memory, can be taken over by a specific feature of the extended environment – your phone, for instance, or a notebook. In some instances, something extended like a phone is nothing but mindful. To develop this thought, which is indeed quite revolutionary and not without scientific effect, Clark and Chalmers need not bypass the substantivist distinction between inner and outer, between internal processes and environments, *between mind and extension*. If their thinking is radical, it is perhaps only so in the sense that what is radicalised is the role- or function-oriented philosophy of mind they admittedly adhere to.[34]

I am not hesitant to say that their thesis of mind extension promises interesting insights. It has, in fact, generated undeniably stimulating discussion in the field. Enactivism, for instance, seems to find inspiration in EMT. The broad enactivist idea that the environment in which the subject is situated is vital for enacting what is mindful and what counts as cognition owes much to their suggestion of occasional extension. The radical enactivist wish to conceive of the mind not only as extended, but as intrinsically *extensive*, also clearly originates in Clark and Chalmers' proposal.[35] As opposed to enactivism, however, the question as to what is proper to the 'basic mind' is left quite implicit by Clark and Chalmers. On many levels, EMT is on par with the age-old Cartesian take on minds, be it hidden under a role- and function-oriented methodology.

In that regard, the fact that extension is only defended as an *occasional* feature of the mind cannot be stressed enough. Seemingly, said occasionality is much more symptomatic than it is methodological. By *occasionally* incorporating the mind into extension, EMT testifies to the stubborn attempt to extend minds which are – or can

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[33] Mark Rowlands develops a similar argument, noting quite correctly that "the extended mind is perfectly compatible with the existence of a brain in a vat" (2009, p. 631).

[34] In this regard, it seems that EMT shows solidarity with computationalism. In trying to get a scientific hold on the human mind, computationalists find inspiration in Turing machines. According to them, the mind is a machine that 'computes' – governed by specific *functional* rules and scripts, the mind manipulates symbols that count as inputs so as to generate certain outputs.

[35] Hutto & Myin 2013, pp. xviii–xix.

easily be seen as – essentially non-extended. Take a look at the central question Clark and Chalmers aim to tackle: "Where does the mind stop and the rest of the world begin?".[36] Such an objective holds dear to an assumption that can easily be ascribed to the Cartesian project, namely that 'mind' (*res cogitans*) and 'world' (*res extensa*) are to be seen as *a priori* given terms, representing two classes of objects that must be accurately described and distinguished before their exchange of roles can even be conceived. EMT insinuates, in that regard, that the mind is in fact comprehensible in separation of extension, although for the sake of completeness both terms must at times be seen as intertwined or as exchanging roles and functions.

In Kant's work, to the contrary, a take on the mind was found that is much more revolutionary *vis-à-vis* such Cartesianism, as well as much more radical *vis-à-vis* the issue of mind extension. On Kantian grounds, and I refer to epigenesis here, terms such as 'mind' and 'world' could be seen as *resulting* from the activities of a subject, rather than as the *a priori* given elements of said activities.

2.2 A Note on Action, Thought, and Computation

According to Clark and Chalmers, the exemplars of mind extension they put forward play an *active* role. By taking away, for instance, Otto's notebook, one takes away a whole cognitive process, because the "external features here are just as causally relevant as typical internal features of the brain".[37] Although this externalist take on the mind is still compliant with a Cartesian, internalist, and computationalist one, as I have argued, Clark and Chalmers also portray an attempt to move things to a slightly more radical philosophical point. With regard to a Scrabble game, for example, which involves the physical rearrangement of tiles, they ask themselves whether an internal computationalist account in terms of inputs and actions is really that fruitful. Eventually, they come to the conclusion, somehow reminiscent of Kant's example of the necessity of *drawing a line in thought*, that in "a very real sense, the re-arrangement of tiles on the tray is not part of action; it is part of *thought*".[38] Seemingly, what is 'action' (and would accordingly be extended) is in fact 'thought' (and would accordingly be mindful).

But is there really opposition here? My Kantian suggestion that thoughts *are* actions, that the mind *is* an activity, seems to break with this opposition in a significant way. It allows for the conclusion that thought and extension are different sides of the same coin, and by no means contradictory predicates of the term 'mind'. To say, as Clark and Chalmers do, that physical interventions in the world (like rearranging tiles on a board) might not be actions but thoughts, is one thing. To say that thoughts *are* actions, as I do on Kantian terms, is quite different.[39]

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[36] Clark & Chalmers 1998, p. 7.
[37] Ibid., p. 9.
[38] Ibid., p. 10.
[39] As rightfully stipulated by an anonymous referee, it should be noted that in philosophy of mind and cognitive science, scholars are already preoccupied with similar problems. The issue of 'mental

That the Kantian mind essentially involves activity is, as I have argued, tied to the epigenetic foundation of its discursive capacities. These discursive capacities must involve formal rules and categories, according to Kant, so as to make a difference with regard to sensibility. These categories are not to be found in our heads, waiting to exhibit certain rules with regard to an information-carrying environment. To the contrary: precisely because the environment is *not* information-carrying, unification and combination are requested activities. Hereby, a formal system of categories is installed, or perhaps more accurately, revealed to have been 'operative' or active all along.[40]

In this regard, and perhaps a bit surprisingly for some readers familiar with the history of philosophy, a Kantian philosophy of mind diverges significantly from computationalism, although both do indeed hold on to minds as consisting of formal rules and procedures. For computationalism, however, said formal rules and procedures are more like scenarios with presupposed outputs as end results, seemingly waiting to be applied to a world made up of information-carrying inputs. From a transcendental idealist perspective, then, computation is an undesired variety of formalism of the mind. Firstly, computation neglects the constitution of the object. Objects, namely, are given to the mind as information-carrying inputs, suitable for internal (or external, in the case of EMT) processing according to formal rules. Second, these same formal rules are grounded from *outside of the system*. A computational system's formal rules, namely, appear to be 'put in' (say, by a human). In Kant's terminology, computation is like preformation: the formality of its systematicity is

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action' especially comes to mind. As Thomas Metzinger has it, it must be recognised that "[m]ental actions are a large and relevant subset of the domain of mental events" (2017, p. 1). Particularly striking for my purposes is the manner in which mental action has been an issue for predictive processing (PP), the computationalist theory that is perhaps closest to Kant (see Swanson 2016 for a defense of this claim). PP presupposes formal systems to *predict* (or, more generally, *anticipate*) the kinds of input the system will need to process. That is, mental systems are not merely receptive, but *spontaneous* as well – they are spontaneous in their reception. Yet, it remains an open question whether 'mental action' is in any theoretical way compatible with the Kantian idea preliminarily hinted at and developed in this paper, that the mind *is* an activity. At first glance, conceptual points of convergence are hard to find: mental action involves, for example, the attempt to retrieve images from memory (Metzinger 2017, p. 1), or just focusing on some mental tasks like arithmetical operations. Therefore, "[i]n mental action there is no motor output to be controlled and no sensory input vector that could be manipulated by bodily movement" (Metzinger 2017, p. 1). Thus, it is hard to relate the idea of mental action to the one that assumes that the mind *is* an activity, as the former is seemingly compatible with the Cartesian assumption that there is a realm of extension (involving motor and bodily activity) on the one hand and a realm of mentality on the other hand, and that both are ontologically independent (see Levy 2019 for a discussion of this problem).

Perhaps, then, the idea of the mind as an activity is closer to mental *behaviour* than to mental *action*. The latter involves consciousness and volition, while the former is devoid of conscious goal-representation but can still be seen as cognitively and epistemologically purposeful (Metzinger 2017, p. 3). It seems that, not unlike Kant's system of categories and functions of judgement, mental behaviour is much more *formal* than mental action. I think that Metzinger is on the right track when he argues that unconscious, non-volitional or unintentional mental behaviour helps *constitute* mental action (2017, p. 3). Yet the idea of mental behaviour does not necessarily show theoretical kinship with the idea that the mind is an activity *either*. So, a lot of conceptual work lies ahead of me if I want to bring this quite Kantian idea of 'mind as activity' to contemporary debates.

[40] In order to explain why there are objects, we must *presuppose* certain capacities to be operative or in action. Epigenesis, then, involves the *retrospective* deduction of certain capacities (and the fact that objectivity is subject to them).

devoid of any necessity.[41] Now, in comparison to my Kantian take on mind extension, Clark and Chalmers' thesis has a hard time detaching itself not only from Cartesianism, but also from this inherited 'burden' of computationalism. Unlike my Kantian proposal, their view of extension is loaded with content and information. And the same goes for their view of formality.

3. Concluding Remarks

I developed an analysis of Clark and Chalmers' seminal extended mind thesis from the viewpoint of what would be a Kantian take on mind extension. My analysis has been conducted on two levels. Firstly, and most importantly, I mapped both theories' respective relations to the Cartesian distinction between mind and world. Whereas Kant clearly works with the Cartesian paradigm yet thoroughly exposes its blind spots from a transcendental idealist perspective, EMT is superficially far from but fundamentally close to it. If there is a Kantian version of mind extension, then it applies *a priori* to all minds equally. Such a Kantian perspective turns down Clark and Chalmers' case for the occasional instances of mind extension and the examples they give to substantiate it. For Kant, I argue, there would be no fundamental difference between Otto and Inga.

Secondly, as an aside, I highlighted that Clark and Chalmers, although they simultaneously criticise it, operate within the realm of computation. The latter involves a certain formality of the mind that is predicated on the *processing* of objects as information-carrying inputs. Kant, however, takes the mind's formality to be *constitutive* of the object – of information, content, and representation. So, if Clark and Chalmers' influential proposal has given way to the increasingly supported disavowal of a formalism of the mind (as 'intellectualism'), paving the way for naturalisation and embodied cognition,[42] then this does not rule out a *Kantian* formalism of the mind, which is centred around constitution (and must not be construed as 'intellectualist'). Leaving behind computation's take on formality might be a rightful course of direction, but it does not justify leaving behind formality *altogether*.

[41] But see also Henk Vandaele's interesting (Kantian, but also Fichtean) analysis of computation from within a transcendental idealist viewpoint (2010).

[42] See Hutto & Myin 2013, 2017.

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