On Wayne Waxman's "Kant's Anatomy of the Intelligent Mind"

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WAYNE WAXMAN | Kant's Anatomy of the Intelligent Mind | Oxford UP 2014

By John Callanan

Wayne Waxman's *Kant's Anatomy of the Intelligent Mind* is a typically original—and in many ways compelling—account of Kant's transcendental theory of the mind. I have been reading Waxman's work since the beginning of my graduate studies and have been confident from that first encounter that his work is on the right track and that it constitutes required reading for Kant scholars. Despite that familiarity and enthusiasm however, for many reasons this is a difficult book to assess. For one thing, it is constituted of nearly 600 pages of interlocking exegesis of the first half of the First *Critique*. What's more, the claims of this book really form part of a larger project that includes *Kant's Model of the Mind* (1991) and *Kant and the Empiricists*: *Understanding Understanding* (2005). Together they make around 1500 pages of exploration of Kant's transcendental theory of the mind. Finding an entry point for critical engagement is a daunting task.

Another difficulty is that Waxman also strives in this work to present his account in isolation from secondary literature on Kant's theory of the mind (there are about 10 Kant-related works in the bibliography). Waxman's motivations for this are to keep the reader focused on the already-challenging central task of setting out Kant's position clearly without adding the burden of positioning every claim within the secondary literature (p. ix). Waxman here it seems to me echoes Kant's own apology for the lack of examples in the First *Critique*, claiming that that extra detail can be counter-productive to the ultimate aim of communicating the general idea, and that "many a book would have been much clearer if it had not been made quite so clear" (Axix). But he also claims that since the position argued for here is so orthogonal to current ways of thinking about Kant that it lacks appropriate secondary works with which one can productively engage (p. ix). I'm of the view that we could do with lowering the demand for comprehensive referencing in scholarly writing (in homage, I'm keeping referencing light in this review essay). It can serve a helpful purpose however, not least that of setting out the differences, fundamental or otherwise, between the author and other writers. One can clarify one's position by contrast. In reading the book it would

have been helpful occasionally to have had a sense from Waxman himself as to when and where he took himself to be roughly in line (or not) with claims by Allais, Allison, Ameriks, (to name a few notable *A*s), etc.

The central theme of *Kant's Anatomy of the Intelligent Mind* is that Kant's philosophy is psychological philosophy. This is opposed to the "current philosophical lore" that holds that Kant's philosophy is opposed to psychological explanation (p. vii). I'm not sure who is being referred to with "current philosophical lore" here, or whether there is a scholarly hegemony that Kant's approach is anti-psychological. I certainly do not teach that Kant sought to "set psychological philosophy on the road to extinction" (p. vii) and I suspect this is not a widely repeated mantra in classrooms. Similarly one can find recent readings sympathetic to the same general kind of approach that Waxman's takes (e.g. Edgar's [2010] very interesting and to my mind plausible 'cognitive' interpretation of the Transcendental Deduction). And most Kant scholars are familiar with the work of Brook, Falkenstein, Kitcher, etc. and so familiar with exploration of the idea that we need to take Kant's philosophy of mind, broadly construed, as central to the project of the First *Critique*.

A longed-for footnote does appear where Waxman points to these latter interpreters but claims that as far as "psychological" readings of Kant are concerned "there is nothing beyond the word that unites us" (p. 21, n. 5). Waxman claims that these readers all are committed to the view that Kant opposes Hume's 'psychologism' whereas Waxman argues that Kant's theory of the mind is an "a priori extension" of it. I personally would have found engagement with these interpreters with regard to both these claims illuminating for understanding the contours of Waxman's overall project. The footnote suggests though that Waxman's motivation for neglecting secondary literature is due to a relevance constraint whereby only secondary literature that reads Kant's theory of the mind as an a priori extension of Hume's psychologism passes, which seems overly restrictive to me.

Waxman's central claim in *Kant's Anatomy of the Intelligent Mind* is that apperception is necessary but not sufficient for the categories, whereas the categories are sufficient but not necessary for apperception (p. viii). Colin McLear examines that central claim in his contribution for *Critique*. Here I want to address a few broader questions about Waxman's picture of Kant's project. In general I want to inquire about the relation between Kant's transcendental theory of the mind and his transcendental idealism. In *Kant's Anatomy of the Intelligent Mind* we get a lot of fascinating exegesis regarding the former but less regarding the latter.

It might perhaps be thought unfair to expect that an already very long book might also have detailed responses to these kinds of questions. However, I hope to show that they are importantly related to Waxman's general view of Kant's theory of the mind and so these questions are crucial for further critical engagement with it. For reasons of space I have focused on four specific questions: What is it to be a 'psychologistic' philosopher? Is Kantian space necessarily Euclidean? What is Kant's argument for transcendental idealism? and, What is the status of general logic within this account?

1. What Is It to Be a 'Psychologistic' Philosopher?

Waxman is rightly suspicious of two claims made about Kant, not least for the reason that they point in opposite directions: on the one hand, it is claimed that Kant was inadequately sensitive to the fallacy of basing truths on psychological claims; on the other hand, Kant receives praises for his sensitivity to the poverty of psychological explanation with regard to philosophy, a sensitivity that led to his prioritisation of epistemology over all else. The plausibility of these claims, Waxman notes, depends on what we mean by 'psychological' and 'psychologism'. I think that any coherent account of Kant's 'psychological' claims must be one that interacts closely with other aspects of his philosophy, such that explicating the meaning of the former requires evaluating those latter aspects. Only then would one be in a suitable position to judge that his psychological philosophy "should not be lightly dismissed even today" (p. vii)—though I'm not sure that Kant's psychological theory has been routinely "lightly dismissed", at least not since Bennett (1966) and Strawson (1966). We would also only then be in a position to ascertain that Kant's theory might still be of use to contemporary "sciences of mind" as Waxman hopes (p. 550).

What do we mean, then, by a 'psychological' theory such that it might incur or avoid the charge of 'psychologism'? I couldn't locate a basic definition of psychologism in Waxman's work. Nor could I find a clear argument that when we interpret Kant's psychological theory in this way it clearly does not fall afoul of the charge of psychologism. One rough definition of psychologism might be that it is a position that maintains that the truth-values of some propositions are determined by the cognitive capacity that generates our epistemic access to them. If, say, a philosopher were to hold that a proposition *x* is accessed by rational capacities, whereas proposition *y* is accessed by the imaginational capacities and *thereby concludes* that *x* is true and *y* is false, then those conclusions would surely have been reached in a psychologistic fashion. It is reasonably considered psychologistic because we reasonably consider 'accessed via rational capacities' to be intensionally distinct from 'true' and 'accessed by the imagination' to be intensionally distinct from 'false'. There is an intuitive thought that the thing that determines the truth of the proposition <*the*

cat is on the mat> is not whether that proposition is revealed by reason or imagination, etc.; rather the determiners of the proposition's truth are the cat, the mat, and the spatial relation between them all being as the proposition expresses. So a quick gloss on 'psychologism' is that it is a position that claims that psychological capacities determine the truth-values of propositions judged.

One might support one's psychologism by virtue of one's idealism. But psychologism and idealism are not mutually dependent positions. For Berkeley, the truth of the proposition <*the cat is on the mat*> is ultimately determined by the mind of God, but it might be *my* mind's cognitive capacities that are at least partially necessary for epistemic access to that proposition. Similarly, if Kant thinks there are truths about things in themselves he would have to hold that the *grounds* of these truths is just that they are held to be true by the mind of an intuitive intellect. He may well think this, but there is scope for the reading that his idealism relates only to things grasped by finite minds, and that mind-independent truth exists independently of any mind, finite or infinite. In general the truth-values of existential judgements will be for Kant determined by things in themselves, so his psychologism cannot be a global one.

The psychologistic *fallacy* is when someone infers the truth of a proposition from the fact that a psychological capacity demands its acceptance. A philosopher who was truly psychologistic would be unlikely to commit the fallacy. The psychologistic philosopher explicitly tries to show that—when the conditions are right—truth conditions *are* determined by psychological conditions. Rather, it is only when someone thinks that truth conditions are *not* determined by acts of the mind and *yet* infers the truth of a proposition from a claim, implicit or otherwise, that a mental capacity demands its acceptance, only then would they have performed the psychologistic fallacy. It would be surprising were Kant to have committed the psychologistic fallacy in this sense since he is scathing about what he sees as Crusius's endorsement of the idea that the truth conditions of propositions are influenced by what we can or cannot conceive, or by what we are compelled to accept or what we can resist accepting, etc. (UD, AA 2:293–4).

Some propositions surely do have their truth conditions determined by acts of the mind and those are the propositions that are *about* acts of the mind. If the proposition is <*I imagine that p*>, then arguably my mental act of imagining that *p* contributed to making <*I imagine that p*> true. These propositions appear to us to be propositions *about* acts of the mind. Propositions like <*the cat is on the mat*> or <*2+2=4*> or <*the internal angles of all triangles are necessarily equal to the sum of two right angles*> (Euclid's proposition I.32, about which more below) do not appear to us to be claims *about* acts of the mind. Yet if acts of the mind determine *their* truth conditions, then that is ultimately what they are about.

Waxman does not discuss 'psychologism' in quite these terms, which is surprising given that thinking about the connection between psychological capacities and truth is surely the lens through which Kant's psychologism has been previously considered and often rejected. Waxman's account is clearly related however. It is an account he has pursued at least since the two papers 'Kant's Psychologism, Part I' and 'Kant's Psychologism, Part II' (Waxman 1999, 2000). This line of argument, to my mind crucial to any proper understanding of the First *Critique* and one relatively neglected by other commentators, concerns the objective application conditions of representational contents. Since objectivity relates to truth, we can understand Waxman's claims regarding psychology and truth in terms of psychology and objective content application conditions. Kant's claim, according to Waxman, is that the truth conditions of judgements are given by the application conditions of concepts and that the latter make essential reference to psychological capacities and their operations. That latter reference concerns the original generation of certain discursive representational contents.

Since concepts are mental representations, the idea that the conditions under which such concepts are formed are also at least in part mental is hardly controversial. Why should the conditions under which I have come to form a conceptual content *C*, conditions which might appear contingent, themselves determine the *objective* conditions for the application of *C*? It might be the case that some concept *C* can only be formed as a result of e.g. social interaction and testimony—it wouldn't thereby follow that what the concept is *about* are those social interactions, etc. Similarly, the fact that the necessary enabling conditions under which I form, say, categorial conceptual content is mind-dependent does not in any way entail that the conditions for its application are mind-dependent.

Waxman however focuses upon an important point in Kant's innovative approach (though he does not usually put it in these terms), one that appears at first to make a notable argumentative difference. The conditions for forming a *representational vehicle* can be psychological without of course the *representational content* itself being an expression of those psychological formation conditions. I can take a photograph of a cat on the mat and the conditions for the formation of that representational content are indeed photographic without it being the case that the content itself is photographic in nature—what the photo is *about* is not in this case photography but rather the cat on the mat.

Things are different for Kant, Waxman maintains, with regard to the mind's primitive categorial conceptual vocabulary. Here the representational vehicle that is formed essentially contains *content* that itself refers to the mind's operations in forming that vehicle. Therefore it makes sense to say that what the mental

manifestation of the concept <*cause*>, say, is *about* just *is* the activity of the mind that led to the formation of that concept. This is the consequence of it being the case that "the psychological operations responsible for *forming* those representations also contribute essential elements of their *content*" (p. 7). It is this content contribution claim that makes Kant's approach psychologistic. If the essential content of a concept is at least partially made up of reference to psychological operations, then it is hard to see how the application conditions, and hence the truth conditions, for that concept could very well eschew those very psychological facts entirely.

Yet it is also surely obvious that we cannot just conclude here with a claim that Kant's theory of the mind is therefore 'psychologistic' in a pejorative sense or 'psychological' in some new laudable sense of the term. Rather, in order to reach either of those conclusions we would have to have some further philosophical reflections upon the relation between psychological operations and the notions of truth, justification and reality. We can see this with regard to the position of nativism plus pre-established harmony (B167–8) that Kant considers as a potentially adequate account of *a priori* cognition. Were—thanks to some divine foresight—subjects born with a concept *C* and a compulsion to deploy it on certain occasions that in fact correctly described the structure of the world, this would not, Kant claims, put one in a position to claim a priori cognition of the world in terms of *C*. Why not? Possessing a reliable, world-oriented, and truth-tracking disposition to judge that *C* necessarily obtains of things is not a terrible affliction.

One might respond that this is the point of Kant's invocation of a *quæstio juris*. Although I would produce a true (indeed, necessarily true) judgement I would lack the normative justification for that judgement such that would make me a genuinely responsible agent capable of giving and taking reasons within an epistemic community. Waxman is I think rightly sceptical that such scant textual evidence might point to Kant's proto-Sellarsian commitment to a *sui generis* space of reasons. Yet it is still the case, as Waxman is aware, that Kant clearly thought that the nativist possession conditions for *C* would be inadequate—it would in fact be a scenario that the "skeptic wishes most" (B168), despite it being a scenario that presents an account of the possession conditions for a priori content alongside its objective application conditions.

It is worthwhile, then, for the interpreter of Kant as a psychological / psychologistic philosopher to ask why Kant thought this sceptical conclusion would obtain in this scenario. Perhaps it is because on this scenario every subject has the impression that *C* obtains because they are compelled to judge that *C* obtains and in this scenario the subject is *right*, i.e. on this account the

correct explanation of *why we ought to judge that C obtains* is something about one's own dispositions to judge; but the explanation as to *why C obtains* is something else entirely, i.e. pre-established harmony between dispositions and the world. So in this scenario, we possess reliable dispositions to judge, etc, but there is also a sense in which the theory is radically error-theoretic: *what we ought to do* in order to make judgements that are true and are regarded by the subject as true has nothing to do with *why those judgements are true* (i.e. God having set things up thus and so). Kant finds this intolerable—his minimally internalist frame of mind insists that there should not be such a radical cleave between the intelligibility of our best judging practices and the truth-conditions of those same judgements. This is what the sceptic wants most: a notion of truth-conditions disassociated from the subject's demand for rational intelligibility.

Waxman's project promises to say something more about Kant's opposition to nativism and related positions. For Waxman, Kant's theory of the mind is directed at drawing our attention away from the achievement of *justifying* and more towards the achievement of *thinking*. Furthermore, he wants to claim that when this is grasped it can also be grasped how crucial transcendental idealism is to Kant's theory of the mind. He states that "idealism enters the picture only when one […] asks how it is possible even to *conceive* sensible appearances as independent objects with their own nature and existence […]" (p. 193). I think this is exactly the right way to frame Kant's approach in the First *Critique*. One might be tempted, then, to see Kant's argument as ultimately showing that transcendental idealism's truth makes possible even conceiving of appearances in these ways. Yet one can still ask of this argument: why should the necessary conditions of *conceiving* of appearances determine the nature of physical reality itself? One could say that it is a necessary condition of conceiving of appearances that a concept *C* applies to them and yet still deny that appearances should be identified with physical reality. Establishing that *C* is a necessary condition of experience therefore does not answer the question as to why one should think of appearances *as* physical reality.

If this is right, how then are Kant's claims regarding *C* supposed to be established in a way that is superior to the nativist story? Presumably, if the account above of the relevance of the *quæstio juris* is correct, they are established by including a story about the objective application conditions as part of the same story as the story about how it is that we are even able *to think* in accordance with such concepts. With such an account one might then in dialogue confront a sceptic who claimed firstly that they possessed concept *C* though secondly denied that *C* referred. Kant could do so by arguing that the former claim entails the negation of the latter. Again, even if we say that such a

strategy, that of the dialectical silencing of the sceptic, is possible on this account one might still raise a different sceptical thought, which is whether the referent of *C* is to be identified with *physical reality* rather than some mere aspect of mind.

A sceptic might agree that it refers, might agree that its referring is part of the transcendental structure of the mind of any finite agent, but deny that the relevant referent ought to be identified with physical reality. There is a mental reality, a mind-independent reality, and—they might claim—there is an open question as to which ought to be identified with physical reality. The sceptic might insist that physical reality ought to be identified with mind-independent reality, insist that truth-conditions worth caring about ought to be identified with physical reality, and then claim that Kant's arguments prove that we cannot know physical reality and whether our judgements meet truth-conditions worth caring about. On reflection and having now been offered this original new theory of how and to what a priori concepts refer, the sceptic might change their mind and say that *this* is the conclusion they wish for most.

At this point, then, Kant's idealism becomes crucial to his psychologism. Kantian psychologism tries to supply that account by claiming that our true judgements are in some sense truths about the mind. Yet now we can surely ask the *quæstio juris* question one more time: why should we think that *these* truths also afford us truths about reality? Unless we think that this move somehow moves us closer to reality, then we will have lost ground with regard to our initial aspiration.

The concern can also be framed differently, as a variant of familiar metacritical trilemmas. Appeal to psychological capacities as affording the truth conditions of judgements regarding physical reality demands some further philosophical grounds to explain why and how those psychological conditions are connected to those truth-conditions. If there are no further grounds, then the position is unmotivated. If the grounds are more mere appeals to psychological capacities, the motivation is circular. If there are appeals and they are non-psychological appeals, then Kant's theory of mind is not really psychological. Rather the psychologism must be buttressed with appeals establishing idealism or norms of epistemic rationality, and so on. Waxman details at impressive length how psychological conditions are crucial to Kant's claims. Yet when it comes to assessing whether Kant's view is meritoriously or egregiously *psychologistic*, it seems to me that this question can only be assessed with regard to considerations of how his psychologism relates to his idealism and theory of empirical truth. Here I found less to go on. Waxman does seem to me to be constructing such an account, however, and I shall try to suggest a reconstruction in Section 3.

2. Is Kantian Space Necessarily Euclidean?

Transcendental idealism is the means to show that Kantian psychologism can generate an account of our knowledge of empirical reality. *Kant's Anatomy of the Intelligent Mind* is striking for claiming that Kant's transcendental theory of the mind must be understood as part and parcel of his transcendental idealism (with which I agree) and equally striking in that it lacks a sustained discussion of where Waxman thinks this commitment to transcendental idealism comes from. For the reasons outlined in the previous section however, this aspect of Waxman's picture is crucial. Kant famously says that he can prove transcendental idealism 'directly' in the Transcendental Aesthetic and 'indirectly' in the Antinomies (Allais 2010). Waxman does not discuss these proofs but does start to present an account of where Kant's transcendental idealism comes from. I shall turn to the first issue first, i.e. the absence of the discussion of the direct proof of transcendental idealism, the so-called 'Argument from Geometry'.

Perhaps it is the case that discussion of the direct argument is left out because Waxman accepts that this argument depends upon Kant's own commitment to the necessary truth of Euclidean geometry as an accurate characterisation of the structure of physical reality, and for that reason best left untouched. Waxman seems to think otherwise however and says that

> Kant's theory of experience is beset by misunderstanding. It is almost universally taken for granted that it introduces elements of Euclidean geometry and Newtonian physics into the innate endowment of the human psyche. (p. 560)

It is not that surprising that so many might have formed this notion. Kant says at the start of the *Critique* that mathematics and physics are two "sciences whose grounds are well laid" (Axvi note). He starts from the thought that synthetic a priori judgements are possible. He is entitled to this thought, Kant asserts, because such judgements are actual, and actuality entails possibility. Thus he thinks that we are really in possession of such judgements in the form of mathematical judgements. The vast majority of his examples are geometrical, and these clearly find expression in Euclidean space; the formulation of the principle of the First Analogy is rephrased in the B-edition to make clear that it supports Lavoisier's principle of the conservation of matter; the *Metaphysical Foundations of Natural Science* are a deeply sympathetic exploration of Newtonian physics, and so on.

Kant was explicit, then, that he took mathematical and physics examples as crucial for his project and he was unhesitant in indicating the kind of propositions that he meant. He claims that it is the assumption of this security that points the

way for analysing the possibility of a priori cognition:

> Mathematics and physics are the two theoretical cognitions of reason that are supposed to determine their objects a priori, the former entirely purely, the latter at least in part purely but also following the standards of sources of cognition other than reason. (B*x*)
>
> Mathematics gives us a splendid example of how far we can go with *a priori* cognition independently of experience. (A4)
>
> Now it is easy to show that in human cognition there actually are such necessary in the strictest sense universal, thus pure *a priori* judgments. If one wants an example from the sciences, one need only look at all the propositions of mathematics […]. (B4)

Kant's rhetoric explicitly claims that looking to cases of genuine a priori cognition in the form of mathematics and physics points the way with regard to the question as to how synthetic a priori judgements are possible in general. Furthermore, Kant's examples are frequently Euclidean (e.g. A47/B65).

When he set out to show how synthetic *a priori* propositions are possible, it is hardly unsurprising that many read him as thinking about how propositions such as these ones mentioned above are possible. What's more, when Kant sets out to prove the transcendental idealism around which everything turns in the Transcendental Exposition of Space, his argument infamously appears to turn on the security of Euclidean geometrical propositions.

So therefore the impression that Kant (a) has a commitment to the security of Euclidean and Newtonian propositions and (b) that he makes dialectical use of this very security for the project of the First *Critique*, is reasonable. Waxman thinks this is an important mistake however. One of the claims is that Kant was in fact not concerned with the result that mathematical truths might be merely contingent truths. For Waxman, Kant was concerned only by the idea that conclusions regarding the contingency of mathematics had been reached by way of an incorrect and broadly empiricist theory of cognition. Commenting on Kant's claims at B41 that space has three dimensions is a necessary truth, Waxman argues that this claim is misconstrued when taken out of this anti-empiricist context:

> Thus statements like that at B41 should be read as intended to immunize Euclidean propositions not against contingency of every kind, least of all against future **mathematical** developments, but solely against the sort of contingency that pertains to propositions that are dependent in any way, shape, or form on **empirical** consciousness. (p. 161)

This is a peculiar reading of Kant's rhetoric, since in many places he seems to complain not that mathematical contingency is bad when reached by empiricist means, but rather complains conversely that empiricism must be rejected simply because it renders mathematical truths contingent. For Kant, Hume's claim of deriving necessity from habit was

> an assertion, destructive of all pure philosophy, on which he would never have fallen if he had had our problem in its generality before his eyes, since then he would have comprehended that according to his argument there could also be no pure mathematics, since this certainly contains synthetic *a priori* propositions […]. (B20)

Moreover, Kant suggests that the absurdity of denying the necessary truth of propositions such as these was such that even the most hardened sceptic, David Hume, *would not do so* (KpV, AA 5:13–14; Prol, AA 4:272–3). The problem, Kant seems to say explicitly, is with *any* account that has the consequence that propositions like <*space has three dimensions*> emerge as falsehoods or as merely contingent truths. When defining necessary truth, Kant also says explicitly that it can be understood as *strict* universality, i.e. an unrestricted universal generalisation, and that this kind of universality can be contrasted with the merely comparative type:

> Experience never gives its judgments true or strict but only assumed and comparative **universality** (through induction), so properly it must be said: as far as we have yet perceived, there is no exception to this or that rule. Thus if a judgment is thought in strict universality, i.e., in such a way that no exception at all is allowed to be possible, then it is not derived from experience, but is rather valid absolutely *a priori*. (B3–4)

Kant's complaint here about 'experience' is that it never generates judgements with the correct modal features, modal features that he takes it we do in fact see in true judgements we make. Our consciousness of geometrical truths manifests "apodictic certainty" (A24/B39), which means that we grasp their truth "combined with consciousness of their necessity" (B41). The problem with empiricist accounts of mathematics is that they render our judgements error-theoretic in

that—Kant thinks—we *do* judge that <*space has three dimensions*> is a necessary truth and, if empiricism is correct, we are fundamentally wrong about *that* aspect of our judgement.

Waxman thinks that this would not trouble Kant however, and that what matters is who is telling us that we are wrong about such judgements:

> In the eighteenth century, when the only constructible concepts of space were Euclidean, Kant's theory of space as a pure intuition of sensibility could only assure the necessity of propositions of Euclidean geometry. But **that guarantee was always in principle extendable**: provided geometers could devise ostensibly or symbolically constructible non-Euclidean concepts of space, the purity of space could preserve the necessity of the resulting axioms, definitions, etc. against empiricist skepticism as well. (p. 161, emphasis in original)

Waxman has it that Kant's problem is with empiricism *per se*, and that he would be sanguine if it emerged that <*space has three dimensions*> turned out to be a contingent truth. Waxman continues that if it emerged that <*space has three dimensions*> is false, then "it would pose a serious problem for Kant's theory", but that our current understanding of geometry does not have this implication:

> But since non-Euclidean geometry is most plausibly construed not as falsifying Euclidean geometry but as subsuming it as a special case, the necessity and universality ascribed to the latter under Kant's principle is simply transferred to the former (and from it to any subsequent geometry that may subsume today's). (p. 163)

I am unclear as to how this is to be understood. If an alternative geometry reveals that some triangles might sum to 179 degrees, etc. then the 'apodictic consciousness' that accompanies the grasping that three angles of a triangle *must* sum to 180 degrees is false. If the claim that the internal angles of all triangles sum to 180 degrees is not a truth about all triangles without exception, then I cannot see how it qualifies as a generalisation possessing strict universality; if it lacks strict universality, it lacks necessity; if it lacks necessity then it cannot be reached as a result of a priori cognition, and the apodictic consciousness that Kant claims accompanies such thoughts are error-theoretic in character.

Waxman claims that the same result regarding the non-constraining nature of Kant's Euclidean commitments can be reached in a different way:

> The charge that Kant was a dogmatic Euclidean can be made to stick only by showing that he held the propositions of geometry—axioms, definitions, postulates, demonstrations, and theorems—to be derivable analytically from the concept of space at the focus of the metaphysical and transcendental expositions of the Transcendental Aesthetic. But if this were true, construction (synthesis) would not then be needed to cognize the connections between geometrical concepts, and geometry would be analytic, contrary to Kant's iterated insistence that it is synthetic. (p. 161)

The reasoning is a little opaque to me but it seems to go like this:

1. In order for Kant to be theoretically committed to Euclidean claims it would have to be the case that he thought that Euclidean propositions were analytically derivable from the pure concept of Space exclusively;

2. Kant thought that Euclidean propositions were not analytically derivable from the concept of Space secured in the Transcendental Aesthetic (but are rather derived through acts of construction, etc.);

Therefore,

3. Kant is not theoretically committed to Euclidean claims.

I am of the view that Kant's strategy in the First *Critique* is committed to Euclidean claims and that this is evident from the Argument from Geometry in the Transcendental Aesthetic. I take the structure of the argument to be that the Metaphysical Exposition establishes that Space is originally an a priori intuition and that the Transcendental Exposition established that when this conclusion is added to the assumed necessary truth of claims such as Euclid's I.32, transcendental idealism follows (for this account see Guyer 1987 and Shabel 2004). However, on this familiar reading at no point does Kant claim that Euclidean propositions are *derivable* from the notion of Space articulated in the Metaphysical Exposition. Even those who contest this reading of Kant's derivation of transcendental idealism in the Transcendental Aesthetic do not make this claim (e.g. Allison 2004 and Allais 2010). Rather the claim is that they are real and are exogenous commitments.

Premise 1 is therefore false. It might be true that no particular commitment to a Euclidean geometry is entailed by the results of the Metaphysical Exposition; it is not thereby true that Kant himself was not crucially committed to Euclidean claims in the Transcendental Aesthetic's argument for idealism. Kant's *theory of mind* considered in isolation from his transcendental idealism perhaps involves

no claim upon the Euclidean nature of Space; however, Kant's *transcendental idealism* is presented as being proved on the basis of just those claims. Since Waxman too is insistent that we cannot understand Kant's theory of mind without its relation to transcendental idealism, however, Kant's Euclidean commitments then become relevant.

The importance of Kant's Euclidean commitments to his theory of mind becomes if anything more notable later in the Transcendental Doctrine of Method. The proof of I.32 that he describes is an attack on the very idea mentioned above, namely that any particular mathematical propositions might be analytically derivable from the mere concept <*Space*> (A716–17/B744–5). He argues that mathematicians only achieve such results when they engage in construction and reasoning via diagrams, the latter which exploit non-conceptual aspects of the representation of Space. Kant argues that there are crucial inferential steps in the proof procedure that only follow because they are performed upon a spatial manifold with a certain structure (for discussion see Callanan 2014). As such the formal intuition of Space underwrites those specifically Euclidean inferences. It is therefore only because the formal intuition of Space has the properties that it does that the steps involved in the proof of I.32 follow as they do.

If Kant was not wedded to a Euclidean conception of Space then it is hard to see how diagrammatic proof would function as a proof at all, since it would be hard to see how those specific conclusions reached are necessary truths. One could respond to this concern by denying that the inferences follow as a matter of necessity, which I take it would be to deny their a priori status. Alternatively, one might deny that the intuition of space is underwriting these inferences, which would be in effect to deny that the conclusions are synthetic propositions.

A different strategy might accept that they *are* a priori *and* synthetic but claim they are synthetic a priori conclusions about a mere portion of space. Were one to claim this then one would in effect forsake the a priori status of these claims again, for it ~~is~~ would be more accurate to say that they possess a comparative rather than strict universality, i.e. they are strictly necessary truths about a spatial domain that does not characterise the entire domain of space *per se*. Alternatively one might claim that one can extract different and opposed necessary truths (e.g. about how many degrees the internal angles of a triangle amount to) from different diagrammatic proof procedures performed upon the *same* formal intuition of Space. I take it that (even if this were possible) it would be undesirable for Kant if it emerges that whether the internal angles of a triangle necessarily summed to 180 degrees or 181 degrees depended on an elective gestalt-shift upon the non-conceptual representation of space.

This view also seems to me to underplay quite seriously Kant's ambitions to secure *empirical realism*. Kant is surely committed to some version of the Galilean claim that the book of the (phenomenal) physical world is written in the language of mathematics. The limits of the domain of the mathematical strictly demarcate the limits of empirical reality. To say that there are multiple mathematical models from which to choose that are equally compatible with Kant's theory of the mind would be to say that there are different scopes of the domain of empirical reality to choose from, some in which empirically real triangles have internal angles that sum to 180 degrees as a matter of strict necessity, and others in which those empirically real triangles that sum to 180 degrees are just a subset of triangles in general. What we mean by 'the domain of empirical reality' and indeed 'true of empirical reality' would be relative to our current mathematical aims and interests.

Kant's Copernican strategy involves what he acknowledges first looks like a counter-intuitive relativisation claim regarding the relation between knowledge and human minds (Bxv–xvi). It is plausibly the case that the supposed payoff for the transcendental relativisation of knowledge to the minds of finite intelligences was that it secured a robust empirical realism, one consonant with what Kant took to be our default realist conception of the world that makes sense both of our perceptual experience and our sense of scientific discovery (A28/B44, A370). Yet without a firm grasp of genuinely necessary truths, i.e. truths that strictly characterise an *entire* domain and thereby define the extent of that domain, 'empirically real' means just 'true within a model'. But in such a scenario Kant would have not secured the empirical benefits from the transcendental costs and ended up with a relativisation of empirical truth as well. Furthermore, were Kant to have held that all that he secured was truth-relative-to-a-model, he would surely have been aware of the next thought, then there must be criteria that govern theory-change from past to successor models, norms for model-choice and adequacy within a model, etc. So far as I am familiar with Kant's scientific writings there is no sense that he was attuned to such considerations. For Kant the goal was scientific contact with empirical reality *überhaupt*.

3. What is Kant's Argument for Transcendental Idealism?

In the previous section I concentrated upon Waxman's neglect of the argument from geometry because I think it brings into focus the way in which he is interpreting the relationship between Kant's transcendental theory of the mind and his transcendental idealism. Whatever one makes of the argument from geometry, one can begin to see how its conclusion, had it only been reached soundly, would have entailed the claim Kant makes immediately after the presentation of that argument, namely that space "represents no property at all of any things in themselves" (A26/B42). As mentioned above, Waxman does not

appear to be relying on either this argument, nor the one from the Antinomies, yet does claim that Kant's theory of mind is deeply interconnected with his transcendental idealism. If Waxman thinks that Kant's commitment to transcendental idealism can be articulated and evaluated without appeal to the direct and indirect proofs, then what does he think *is* the argument for that commitment?

It is tempting to see Waxman as presenting Kant as primarily committed to what Ameriks has called a "short argument to idealism" (Ameriks 2000), whereby one argued to idealist conclusions from premises regarding the very nature of the notion of representation or mind, rather than from any convoluted claim about the interaction between mind, geometry, physics, space, freedom and so on. A bad short argument to idealism might run as follows:

1. We have epistemic contact with physical reality;

2. Our only epistemic contact with physical reality is insofar as it is represented;

Therefore,

3. Our only immediate contact with physical reality is with representation of it;

4. Representations are mental entities;

Therefore,

5. Our only epistemic contact is with mental entities;

Therefore,

6. Physical reality is constituted by mental entities.

If things in themselves are defined as 'things without the mind', and if the only thing we know is what is delivered by mental representations, then—the argument might go—we cannot know things in themselves. The argument is flawed in many ways. One of its flaws is that it does not follow that even if representations are merely mental entities, the only things we can know are claims *about* the mind. The *vehicles* of representation might be mental in nature, but the *content* conveyed by those representations need not be.

A more sophisticated version of this argument might hold though that when we look to the essential content of certain representations, we see that the *referents* of those contents are in fact mental in nature. If this were the argument, then a not-quite-so-short argument to idealism might be in the offing. If the concept

<*cause*> that was the original target of our investigations is ultimately revealed to include <*necessary connection of spatiotemporal representations*> as its *essential* content, does it then follow that things in themselves do not bear causal relations to each other? It certainly seems open now to ask "what do you mean?" to someone who would claim that noumenal entities can bear causal relations. This argument is not one of Kant's explicit arguments to idealism, since it does not trade on geometry or the Antinomies; it is not a brutally short argument to idealism like the one above either, since it hinges on sensitivity rather than insensitivity to the vehicle/content distinction. However it is a short argument to idealism in the sense that it sees idealism as somehow following from the very nature of discursive representation.

This longer-short argument to idealism seems to be the one that Waxman thinks Kant is in the end offering in the First *Critique*. If this is correct, then it would have been helpful to have the claim situated with regard to other arguments that attempt to avoid commitment to Euclidean geometry such as Allais (2010) and Allison (2004). It would also have been helpful to have Kant's argument compared and contrasted to Kant's own apparent short arguments to idealism, e.g. Kant's claim that noumenal ignorance follows from the passivity of our representational experience in the *Groundwork* (GMS, AA 4:451).

Waxman addresses the question of the relationship between Kant's theory of mind and the negative thesis of transcendental idealism as follows. He does not claim that transcendental idealism is secured in the way Kant says it is secured, i.e. from the direct argument, etc., but rather that it follows by virtue of a *conceivability* claim that is supported by the truth of Kantian psychologism:

> If the psychological operations responsible for forming a representation can be shown to contribute **contents** essential to that representation, it becomes inconceivable that the representation could correspond to anything in mind-independent transcendental reality. (p. 198)

I'm not convinced that this conceivability claim follows, as I shall discuss below. It is noteworthy first of all that if transcendental idealism follows from Kantian psychologism, then Kant's confessed *need* for proofs from the actuality of synthetic a priori judgement and from the Antinomies was in fact deeply misleading. On this account the very capacity to form spatiotemporal representations of objects, etc. *entails* that mind-independent reality is not spatiotemporal. Secondly, to repeat a concern already raised, it is not clear to me how these kinds of concerns alone, even if successful, would allow us to infer that a spatiotemporal, law-governed mind-dependent reality ought to be considered physical reality above mind-independent reality.

What is the reasoning operating here? It would be disappointing if the reasoning Kant employed at the meta-psychological level was that if we cannot *conceive* of a concept as corresponding to mind-independent reality, then it does not correspond to mind-independent reality. It would be disappointing in that it assumed a principle that (i) assumes idealism so as to argue for it; (ii) is exactly the kind of principle Kant bemoaned Crusius for relying upon and (iii) is most likely false.

A further concern with this reading regards the Kantian distinction between cognising and thinking. Kant seems clear that we can at least (indeed, must) *think* such claims about things in themselves (Bxvii). How does this occur though on Waxman's account? The story is important for several reasons. It seems that Kant thought that the very idea of noumenal causality, etc. *was* conceivable. The scenario at B167–8, where things in themselves are causal as well as it being the case that the concept of cause is a priori, is dismissed not because it is inconceivable but because it allows for a kind of scepticism. The sceptical scenario that threatens is threatening because it is surely a *conceivable* sceptical threat. More notably perhaps, Kant requires that noumenal causality is conceivable in the form of free action that underwrites the *Groundwork*'s account of the possibility of the Moral Law.

Waxman objects to nativist accounts of content because they do not take account of Kant's 'sensibilism', which is

> the thesis that the **contents** of thought **themselves** all either originate in sensibility, are produced (synthesized) from contents originating in sensibility, or are essentially preceded and made possible by such productions. (p. 50)

Waxman here claims that the nativist has a story about "the origin of the contents of thoughts *in the mind*" but not an adequate account of "the origin of the *contents themselves*—how they come to be *tout court*" (p. 50). I'm not sure what the claim is here—if it is that a nativist lacks an account of how content itself originates *exclusively* in the mind, then it is true that a nativist lacks *that* claim, since that is exactly what the nativist denies. The nativist claims that the same content innate in the mind is manifested in physical reality too. The nativist plus pre-established harmony theorist claims that the same divine source explains the origin of the contents in the mind and how they come to be *tout court*. I'm also not clear as to how the possibility that content originates exclusively in the mind is entailed by adding sensibilism into the mix. It seems to me that it can only do so by virtue of a (philosophical, not psychological) principle that the exclusive

referents of a concept are the elements from which those concepts are formed. I could not find an argument for how this principle is justified for Waxman, if it is indeed in play in the argument.

Even if we grant Kantian psychologism's central sensibilist claim regarding the content of <*cause*>, it is not clear to me that noumenal causality, etc. turns out to be inconceivable. Let's grant that the first and original grasp of the concept <*cause*> that we possess is such that it essentially includes the content <*necessary connection of sensible spatiotemporal representations*>. Consider the following scenario analogous to the one Kant raised at B167–8. For some peculiar reason human beings have been set up such that the genuine causal relations found in mind-independent reality are not directly registered by our receptive capacities. Rather the human mind has evolved in a way that its reliable causation-tracking responses are generated indirectly and only make their first appearance in our consciousness *as* a mind-originated form of necessary connection between sensible representations.

It would follow in this case that the first full grasp we have of the concept <*cause*> would be in terms of the mind's necessary connection of sensible representations. It would follow in this case that I cannot fully articulate how that content obtains in mind-independent reality. It would still be the case though that causal relations *analogous* to the ones we *can* conceive of nevertheless do obtain in mind-independent reality. It is true it would be difficult to articulate the relation between *our* concept of cause and the mind-independent causal features of the world. But this complaint would seem to come down to little more than the thought that we cannot represent content non-representationally. There is a sense in which, insofar as our access to that content is necessarily shaped by the originating conditions of our representational capacity, we cannot properly characterise that content in terms other than via its representational manifestation. Yet in the scenario envisaged this would be true even if causation was transcendentally real.

4. What is the Status of General Logic within this Account?

My final query also concerns how Waxman's picture of Kant's theory of the mind relates to transcendental idealism. This query concerns how radical Kant's idealism is supposed to be. In Chapter 9 Waxman outlines a fascinating account of Kant's story regarding the origin of logical universality. In brief, the claim is that the original contentful grasp of <*universality*> is generated by virtue of a subject's grasp of the 'I think':

> Kant's explication of logical universality in terms of mentation is part and parcel of his unflinching commitment to the theory of ideas and its principle that discourse must be grounded in mentation in order to be accorded objective sense and signification. Since this principle is now almost universally rejected, his commitment creates an all but unbridgeable gulf in relation to contemporary philosophy. (p. 255)

It would have been interesting to hear some gesture as to how this might be thought to relate to the representational status of logical operators. More pertinently perhaps, it would have been helpful to hear how this account relates to the principles of identity and of non-contradiction. For example, when explicating the role of the 'I think' in generating the notion of logical universality Waxman says the following:

> To represent something as **my** representation is to represent it as accompanied by a consciousness that can be represented equipollently as accompanying every other possible consciousness of the contents present in outer and inner sense and so as identical with respect to all the other representations united in sensibility. This, indeed, is what defines it as **my** sensibility and the representations contained in its unity as **my** representations. (p. 244)

I struggle to understand how to define possession of a representation unless this account is making tacit appeal to the principle of identity, for it seems in order to give content to the very idea of first-personal possession of a representation *p* I have to explicate *that* notion in terms of the further notion it is the *same* consciousness that is in play in possession of any other representation *x*. It is quite likely I have not followed Waxman's reasoning here, but it looks like it can only make sense if it presupposes the principle that *A*=*A*, and therefore cannot be used to generate that principle.

Similarly, although the issue is a typically vexed one, there are grounds for thinking that Kant held that the principle of non-contradiction restricts the extension of possible thinkable contents. Waxman's opening claim is that we must understand Kant's project as one of psychologising the notion of *thought* itself (p. 3) rather than—as Frege might say—mere *thinking*. It is one thing to say that logical universality is generated by acts of understanding; it would be quite another to say that the law of non-contradiction is itself generated by acts of understanding.

One might think (many might hope) that the distinction between general and transcendental logic is sustained at least by the thought that the former is governed by the law of non-contradiction and that this is not generated *by* an act of the mind. One might also hope that the processes through which particular categories are generated are themselves constrained by the principle of non-contradiction. But if the principle itself is generated by acts of the mind, then it is hard to see how category-formation is constrained in any relevant sense. The claim that the principle of non-contradiction is mind-generated (one is tempted to say self-legislated) also suffers from the disadvantage that it is for many simply incredible.

I make these comments not to contest the interpretative accuracy of Waxman's reading, however, but rather as an invitation for him to say more on whether Kant is a thoroughgoing psychologist about logic, and whether the notions of truth, validity, logical operators and the like must all be explained in terms of transcendental psychology. I think that there is a need to discuss what kind of status 'merely' logical laws must have for Kant. There is no shortage of scholarly interest in the relationship between transcendental and general logic for Kant. A natural way of thinking of the relationship between these two is that transcendental logic is a special case of general logic. Yet if I have understood Waxman correctly, the opposite must be the case. The primary and original form of logic is the logic that is generated by the conditions of the finite subject's acts of thinking about objects; the general logic must be understood as an abstraction from that primary and original form of logic.

I raise this and the preceding questions because I hope they are perspicuous ways of ascertaining how radical Waxman's compelling account of Kant's psychologism just is. It is also hopefully another way of ascertaining whether one wants to affirm a *modus ponens* or *modus tollens* with regard to the merits of Kant's theory of the mind to contemporary inquirers into the mind. If, as I think Waxman is committed to saying, that a theory of the mind is only non-circularly recommended through the addition of non-psychological philosophical commitments and that it entails a thoroughgoing psychologising of logic in its most general sense, then this would put under pressure the idea that the transcendental theory of mind *per se* has much to offer contemporary scientists of mind. At the very least the cost of the entry ticket should be made clear to them at the door.

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