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Replies to Critics

NICHOLAS F. STANG
University of Toronto
Email: nick.stang@gmail.com

Let me begin by thanking my critics for their perceptive and probing comments. I have learned a great deal from them. This Author Meets Critics exchange is a special honour for me, because my critics include two scholars, Rae Langton and James Van Cleve, whose books on Kant (Langton 1998, Van Cleve 1999) were principal inspirations for my work, as well as Kris McDaniel, whose recent book *The Fragmentation of Being* (McDaniel 2017) is a model of how to bring the history of metaphysics into dialogue with contemporary thinking. It is thus a great pleasure for me to reply to their detailed critical engagement with *Kant's Modal Metaphysics* (Stang 2016).

Kris McDaniel worries that I have been uncharitable to Descartes in claiming that he is implicitly committed to possibilism, and raises various questions about my interpretation of Kant on real possibility. James Van Cleve worries, conversely, that I have been too charitable to the logicists; he also raises concerns about my treatment of real possibility. Finally, Rae Langton urges me to extend my account of nomic necessity by bringing in the distinction between the intrinsic and relational properties of substances. In a short reply like this I do not have space to respond to every point raised by my astute critics; I will confine myself to replying to what I take to be their most pressing concerns.

1. Reply to McDaniel

Kris McDaniel raises a number of complex issues surrounding my interpretation of Kant on existence and real possibility. In my response I focus on what I take to be the two most pressing for my interpretation: whether ontotheism is truly committed to possibilism (as I argue) and whether Kant is a monist or a pluralist about real possibility. I look forward to responding to McDaniel's other points in future work.

Essence and Existence

In *Kant's Modal Metaphysics* (*KMM*) I argue that the ontotheist, given other background commitments (e.g. that God alone exists essentially,

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that some contingent beings have essential properties, etc.), is committed to possibilism. My claim is not that ontotheism *entails* possibilism. It is of course logically consistent to be an ontotheist while rejecting possibilism. My claim is that early modern ontotheists, given shared background commitments in metaphysics and theology, are committed to possibilism, whether or not they acknowledge this (and whether or not, in other contexts, they reject possibilism).

McDaniel questions whether Descartes in particular, who was an ontotheist (and shared these background commitments), is committed to possibilism. But McDaniel's question is not really about Descartes himself, for the core Cartesian claim he focuses on is this: 'Any essentialist statement is necessarily true, independently of whether the possessor of that essence exists; this is the view that essence precedes existence'. This claim is independent of many of the distinctive features of Descartes' metaphysics or epistemology, so I will take my lead from McDaniel and not try to answer this question through exegesis of Cartesian texts. McDaniel's question is really a much more general one: can the ontotheist exploit the distinction between essentialist truths and necessary truths to avoid commitment to possibilism? McDaniel thinks this is more feasible than I do.

I will follow McDaniel's notation and express the key thesis as:

(1) $\Box_x p \rightarrow \Box p$

McDaniel's idea is that the ontotheist can claim that God essentially exists ($\Box_g Eg$) so God necessarily exists ($\Box Eg$). The issue, as McDaniel recognizes, is what the ontotheist should say about finite beings that have essential properties but do not necessarily, much less essentially, exist. For example, if we admit that Caesar is essentially human ($\Box_c Hc$), given the standard definition of existence in terms of the quantifier, and some basic modal logical principles, it will follow that Caesar necessarily exists.[1] In the book I argue that the ontotheist should block this problem by revising the standard definition of the existence predicate: it applies only to a subset of the objects in the domain of quantification. This has the effect of making existence what Kant calls a 'determination'.

McDaniel proposes something different: rather than introduce a restricted existence predicate, the Descartes-inspired ontotheist might instead embrace a free logic, which would be sufficient to block the inference from Caesar's essential humanity to his necessary existence. That inference crucially relies on an unrestricted use of existential generalization:

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(EG) $Fa \vdash \exists xFx$ (where x replaces every occurrence of a in Fa)[2]

In a free logic the rule of existential generalization (as well as the rule of existential instantiation) fails where 'a' is an 'empty' name, a name without a referent. Free logics typically introduce a one-place predicate, E!a, which can be read to mean: 'a' is not an empty name (the object a exists), and restrict EG accordingly:

(EG*) $Fa \,\&\, E!a \vdash \exists xFx$ (where x replaces every occurrence of a in Fa)[3]

Intuitively, singular sentences (sentences of the form Fa) can be true even if the name 'a' designates no object. For instance, 'Santa has a white beard' is true even if there is no object referred to by 'Santa'. That intuition is the intuition behind free logic.

The ontotheist, equipped with a free logic, could thus replace the idea of objects existing in some possible worlds but not in others (the idea developed in the book) with the idea that some names are empty in some possible worlds (e.g. 'Caesar') but non-empty in others.

I mentioned this possibility in a footnote in *KMM* but relegated the messy details to a short piece on my website, from which McDaniel quotes. In that piece I focused on the explanation the ontotheist must give of why the name of God ('God') is necessarily non-empty while the name of Caesar ('Caesar') is contingently non-empty. But I now think a stronger response is possible.

The ontotheist owes us an explanation of why 'Caesar is human' is true even in counterfactual situations ('possible worlds') where Caesar does not exist. The common metaphysical background shared by ontotheists is that claims like this are true in virtue of Caesar's essence; this was regimented above as the claim that $\Box_c Hc$ (which entails and explains the fact that $\Box Hc$). Likewise, none of the ontotheists surveyed considers the essence of a being separable from the being of which it is an essence. Descartes takes there to be only a conceptual distinction between a substance and its essence (its principal attribute);[4] while Wolff and Baumgarten take the essence of a substance to be a subset of its determinations, the subset that makes it the possible being it is.[5] Without a substance to inhere in, those determinations would not be, so there would be no essence. This means that neither Descartes, nor Wolff, nor Baumgarten

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accepts a modal distinction between substance and its essence; it is impossible, according to these thinkers, for there to be an essence without a being of which it is the essence. This means that none of them could make sense of a counterfactual situation (possible world) in which there is the essence of Caesar but there is no Caesar. And if the essence of Caesar is not present in a possible world it is not available to make true the claim that Caesar is necessarily human. So if that claim is true in every possible world, Caesar is present in every possible world, including in worlds in which he does not exist. The ontotheist might try to escape by conditionalizing these claims in various ways (e.g. necessarily, if Caesar exists he is human) but, I argue in *KMM* (Stang 2016: 31–6), this will not ultimately help them avoid commitment to possibilism.

The thinker who comes closest to being able to explain the essential (hence necessary) truth of 'Caesar is human', without assuming that Caesar is present in every possible world (counterfactual situation), may be Leibniz. According to Leibniz (1989: 28–30, 30–4), the essential predicates of a substance are a subset of the predicates contained in its complete individual concept (CIC), namely, those that can be uncovered through a finite analysis. Caesar is essentially human, then, because *human* can be demonstrated to pertain to him through a finite analysis of $<Caesar>$. If we take it that CICs of substances are invariant across possible worlds (as Leibniz infamously does), it follows that in every possible world there is an essence of Caesar (his CIC) sufficient to ground various essentialist truths about him, even though Caesar may not 'be' in that world (God's decrees for that world may not involve instantiating $<Caesar>$). The problem with this, as I argue at length in *KMM*, is that the logicist ontotheist à la Leibniz needs a comprehension principle to go from conceptual claims about $<God>$ or $<Caesar>$ to claims about God and Caesar. And, as I argue there, a comprehension principle strong enough to validate the ontological argument will end up committing the logicist ontotheist to possibilism (Stang 2016: 49–56).

Kinds of Real Possibility

First, a clarification is in order. To the (limited) extent I think that 'metaphysical possibility', as this term is used in contemporary metaphysics, picks out a unified modal phenomenon, I think that the closest analogue to metaphysical possibility within Kant's pre-Critical modal metaphysics is real possibility, because it is independent of (at least human) minds. For the Critical Kant real possibility is a much more general notion. Some kinds of real possibility are quite unlike metaphysical possibility in that they depend

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upon our minds (e.g. formal real possibility), but I think that noumenal real possibility is the closest Critical analogue to the contemporary notion.

McDaniel distinguishes two different ways of understanding the relations among different kinds of real possibility:

> *Monism*: they are restrictions of a single notion of real possibility. Using the contemporary heuristic of possible worlds, we could think of this option this way: there is a single domain of really possible worlds, and each of the 'kinds' of real possibility is a quantifier that ranges over a different subset of the total space of worlds.
>
> *Pluralism*: there are several irreducibly different kinds of real possibility, which are unified in virtue of sharing schematic/structural features.

I opt for Pluralism. I discuss my reasons in the book (pp. 224–7) and more extensively in Stang 2011.

Assume, with Monism, that there is a common domain of all really possible worlds ('worlds' is just a heuristic here; Kant does not have a possible-worlds account of modality); call that real possibility *überhaupt*. Different kinds of real possibility are then simply defined as real possibility *überhaupt* restricted to some subset of worlds; e.g. it is formally possible that p just in case there is a formally possible world at which p. This means that if it is really possible in some restricted sense that *p* (there is a p-world in the relevant subset) then it is really possible *überhaupt* that p (there is a p-world in the wider domain); and if it is really necessary *überhaupt* that p (every world in the wider domain is a p-world), then for any restricted kind of real possibility it is not really possible that ¬p (no world in any sub-set is a p-world).

But consider something that is formally possible – e.g. that I omit an immoral action that I actually commit. On the Monist view, it follows that the omission of my action is really possible *überhaupt*. But that is precisely *not* how Kant thinks about the possibility of my doing otherwise (a necessary condition on freedom). The mere fact that I could experience the omission of the act does not entail that in the relevant sense of possibility I could have done otherwise. Otherwise Kant's resolution of the Third Antinomy (as well as the entire second *Critique*) would have been much shorter. Here's another way to see the same point,

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in terms of necessity rather than possibility. I think formal necessity entails *a priori* knowability: if it is true solely in virtue of our forms of experience that p then we can know *a priori* that p (see Stang 2011). But on the Monist view, if it is really necessary *überhaupt* that p then it is formally necessary that p, so it is *a priori* knowable that p. But we want to leave room for the thought that there are unknowable real necessities, e.g. the existence of God (which is unknowable at least on theoretical grounds). What kinds of unknowable real necessities must we leave room for? Real necessities that are not about objects of experience and hence are not grounded in the forms of experience. So, I think, we need to reject Monism and endorse Pluralism, as I do in *KMM*. My responses to the other issues McDaniel raises will have to await a further occasion.

2. Reply to Van Cleve

James Van Cleve raises a worry about whether two different characterizations I give of logicism are equivalent, and offers his own objections to logicism. He then raises a series of critical questions about my characterization of Kant's notion of formal real necessity (the 'dual' of formal real possibility). I address them in turn.

Logicism

Consider the first characterization I give of the logicist view of necessity:

> (L1) For any proposition p, it is necessary that p if and only if ¬p entails a contradiction. (Necessity$_p$; Stang 2016: 16)

Van Cleve asks: what does it mean for p to entail q? One candidate contemporary answer he considers – necessarily, if p then q – is not going to work, because the role of this principle is to state a logicist view about necessity. It would thus be unhelpful for the logicist to appeal to necessity in the very statement of their view. I address this issue briefly in the book, where I indicate that, in contemporary terms, the relevant entailment relation is syntactic (provability) rather than semantic (truth-preservation). It is a matter of there being a finite demonstration from ¬p to ⊥ (where ⊥ is an arbitrary contradiction). We could thus reformulate (L1) as:

> (L1*) For any proposition p, it is necessary that p if and only if there is a finite demonstration from ¬p to the conclusion that ⊥.

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This relates to the second issue Van Cleve raises, the alleged equivalence of (L1) with another characterization I give of the logicist view of necessity:

> (L2) For any proposition p it is necessary that p if and only if there is a finite demonstration of p from identities and definitions of the constituents of p. (Necessity$_{Dem}$; Stang 2016: 20)

Van Cleve points out that these are equivalent only if we assume that their right-hand sides are equivalent. But the appearance of a problem here arises from the fact that I originally stated (L1) before making clear that these were accounts of what is necessary '*in se*' or 'in its own nature' and thus introducing the underlined qualification in (L2). If we make the appropriate modification to (L1) we get:

> (L1†) For any proposition p, it is necessary that p if and only if there is a finite demonstration from ¬p and identities and definitions of the constituents of p to the conclusion that ⊥.

(L1†) and (L2) are equivalent if we assume further that:

> (L3) There is a finite demonstration from the premise that ¬p and identities and definitions of the constituents of p to the conclusion that ⊥ iff there is a finite demonstration of p from identities and definitions of the constituents of p.

Let Γ be the set of all identities and definitions of the constituents of p. Then this principle says that there is a finite demonstration from ¬p & Γ that ⊥ if and only if there is a finite demonstration from Γ that p. But that follows in any system which allows proofs by *reductio*, so the logicist is in the clear. Van Cleve complains that (L1) and (L2) are equivalent only if one introduces a special sense of entailment much narrower than the usual one, but whether the logicist's notion of entailment is the one 'usual' in contemporary philosophy is not really the issue. The issue is whether the sense of entailment the logicists had in mind for their philosophical project will do the work it needs to do, and I think it will.

More generally, Van Cleve thinks I pull my punches with logicism, for there are much bigger problems with it than how it handles divine necessity (my focus in the first two chapters). In particular, he points to

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difficulties the logicists will have in proving mathematical truths merely from definitions and identities. First of all, the definitions in question are 'real definitions' of these concepts, not merely nominal definitions. This is important, for the real definitions of these concepts may be far more intricate than one would expect, as well as unfamiliar to ordinary users of the concepts. Secondly, the logicists have a powerful move available to them: they can claim that the axioms of geometry are part of the real definitions of the relevant concepts. For instance, part of what it is to be a point is to be such that between two distinct points there is always a line segment; likewise for line segment, etc. This makes the logicist 'real definitions' of these concepts much more powerful than the definitions Van Cleve considers. Thirdly, Van Cleve is probably right that, given the logic available in the eighteenth century, it is hard to see how a logicist account of mathematics could get off the ground, even given these very rich definitions. But in the twenty-first century we know that much of mathematics can be reconstructed as logical consequences of appropriate axiomatizations. Logicism, far from being a 'dead dog' or an antiquated doctrine, is a powerful and deeply plausible view about modality. This is why Kant needs an especially powerful objection to it, which I attempted to articulate in *KMM*.

Formal Necessity

Van Cleve raises a series of questions about my account of formal necessity. I address them in order. For reasons of space, some of my responses will have to be quite brief.

First, he expresses dissatisfaction with my account, on which formal necessity is groundedness in our forms of experience. He would prefer a view on which 'theorems could … be said to be *explained* by the fact that their truth is grounded in our forms [of experience], rather than consisting in this fact'. But I do not see why this is an improvement over saying that mathematical theorems are (formally) necessary and their (formal) necessity *just is* the fact that they are grounded in our forms of experience.

Regarding Van Cleve's second question, namely, his puzzlement regarding my reasoning in a passage that he quotes (Stang 2016: 207), here is a reconstruction:

(P1) The forms of experience are logical grounds of formally necessary truths. [Assumption for reduction]
(P2) Mathematical theorems are formally necessary.

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(C1) ∴ The forms of experience are logical grounds of mathematical theorems.
(P3) We can state principles that express the forms of experience. [Assumption; verified by the *CPR* itself]
(C2) ∴ We can state principles which are logical grounds of mathematical theorems.
(P4) If we can state principles which are logical grounds of mathematical theorems then we can in principle derive those theorems purely logically from said principles. [By definition of logical grounds]
(P5) We cannot even in principle derive mathematical theorems purely logically from such principles. Mathematical theorems irreducibly require construction of their objects in pure intuition.
(C3) ∴ The forms of experience are not logical grounds of formally necessary truths.

Third, Van Cleve worries that if it is formally necessary that we have the forms of experience we actually do, as I claim, then these forms are self-grounding. The motivation behind my claim that this is formally necessary is that any description of a scenario in which we have non-actual forms of experience is a description of a scenario we cannot experience. In the terms of the 'possible worlds' heuristic, no world in which we have different forms is an experienceable world. The definition of formal necessity Van Cleve quotes (Stang 2016: 203) does entail that, if it is formally necessary that we have these forms, the forms of experience ground the fact that they are the forms of experience, and this seems wrong to me. (The ground that explains why we have these forms of experience, Kant consistently maintains, is unknowable by us.) My inclination is to amend the definition of formal necessity as follows:

> (*Formal necessity*) It is *formally necessary* that p if and only if the fact that p is wholly grounded in *facts* about the actual intuitional form (space and time) and conceptual form (categories) of experience or p is the fact that we have the intuitional and conceptual forms we actually do.

While this may seem unacceptably disjunctive, I would note that, just as with the first point, there is a natural sense in which identity, while not an explanatory relation *sensu stricto*, can play the role that an explanation does: answering a 'why' question. If we ask 'Why is it that in every formally possible (experienceable) world it is the case that p?' it

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does answer our question to be told: because formal possibility is consistency with our actual forms of experience and p just is the fact that we have those forms.

Regarding Van Cleve's fourth question, as to whether Non-logicality and Groundedness are independent of each other: they are logically independent. Non-logicality says nothing about a ground, hence cannot entail Groundedness. And Groundedness says nothing about logical possibility, so it cannot entail Non-logicality. However, it is possible I have missed his point here.

The fifth question, as formulated by Van Cleve, admits of an easy answer: the phenomena/noumena distinction is a distinction between two kinds of object (those that can be sensibly intuited, and those that cannot), but the forms of experience are not objects (A254/B310). However, the spirit of Van Cleve's question remains: are claims about my forms of experience claims about how I am in myself, or claims about how I appear to myself? My own answer is 'neither' but articulating what that means, and how it is compatible with Kant's doctrine of noumenal ignorance, lies outside the scope of *KMM* and this reply.

Sixth, Van Cleve expresses puzzlement about how the forms of experience can ground various determinable facts (e.g. that every alteration has a cause) without grounding more determinate instances of them (e.g. that alteration e has cause c). I am not sure exactly what the problem is meant to be. We are all (I assume) comfortable with the idea that it is essential to a body to be extended and thus have a size and shape; but it is not essential for that body to have the fully determinate size and shape it does. To take a more relevant example, the form of an Aristotelian substance determines certain features of the substance; the substantial form of Socrates, for instance, determines that he is a rational animal and thus has the shape and life of such an animal. It does not determine how tall he is, whether he is pale or how much he weighs. Likewise, the forms of experience ground certain determinable features of objects (e.g. that their alterations have causes) but the matter of experience, given to the mind by affection by things in themselves, grounds the more determinate features of these objects (e.g. which alterations have which causes).

Seventh, Van Cleve invokes a problem originally posed by Russell and Moore for Kant's account of necessity, and significantly sharpened in Van Cleve (1999). That problem, and that work in general, has been a

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guiding influence on my work on Kant's modal theory so I too would be disappointed if Kant's solution were merely a contrived success. But nor do I think it is a spectacular failure!

Van Cleve astutely anticipates my response to Russell/Moore: it is noumenally possible that we have different forms of experience but this does not undermine the formal necessity of formally necessary truths. His worry is that it does, for all I have shown, undermine their noumenal necessity, and this is supposed to be why Kant (on my reading) has reached only a contrived success: if it is noumenally possible that we have different forms of experience – and if we had different forms of experience triangles would have different properties – then the Pythagorean theorem does not have the kind of robust necessity we (intuitively) want it to have.

In the space remaining I can only sketch my response. Distinguish two different concepts of triangle: a 'broader' concept (a figure formed by three intersecting straight lines) and a 'narrower' concept (a figure formed by three intersecting straight lines in a flat Euclidean space). Now apply a version of my strategy for explaining nomic necessity (chapter 8): it is part of the real essence of triangles in the narrower sense that they are objects of our actual Euclidean form of intuition. Thus, while it is noumenally contingent that we have this form of intuition, or that we experience anything at all (see my response to Langton below), there is no possibility whatsoever that we intuit triangles in the narrower sense that violate the Pythagorean theorem. The Pythagorean theorem, as a claim about flat Euclidean triangles, is strictly necessary. However, the Pythagoream theorem about triangles in the broader sense, while formally necessary, may be noumenally contingent; it may be that God could have created us with a non-Euclidean (e.g. Riemannian) form of intuition in which we would be given a space in which triangles violate it.

3. Reply to Langton

Rae Langton suggests some extensions of the framework I develop in *Kant's Modal Metaphysics*: that the real essence of matter is relational rather than intrinsic, and that things in themselves are substances in which the real essence of matter inheres. I fully endorse the first point but have my reservations about the second. Langton sets aside the real essence of other 'empirical natural kinds' (my term, not Kant's), about which she is more sceptical than I am, and I will follow suit for the purposes of this response.

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Relational vs. Intrinsic

Consider two claims that Kant makes about 'real essence': (a) it 'is the first inner ground of all that belongs to the thing itself (*was der Sache selbst zukommt*)' (V-Met-L2/Pölitz, 28: 553), and (b) it is in principle unknowable by us. One might therefore expect that the real essence of matter will correspond somehow to the noumenal ground of matter and that the really essential properties of matter will be the noumenal character of what appears to us as matter. However, this clearly cannot be Kant's view, for in the very same passage he claims that bodies essentially attract one another, which is manifestly an empirical, experienceable feature of objects.[6] Likewise, while Kant denies that we can know the entire real essence of matter he admits that we can know certain features of it: 'the real essence of things is inscrutable to us, although we cognize many essential aspects' (V-Met-L2/Pölitz, 28: 553). So the real essence of matter is not on the noumenal half of the noumenal/phenomenal divide. The real essence of matter is the real essence of matter qua phenomenon: the inner ground of phenomenal matter as such. The 'inner' character of this real ground does not contrast with the relational (it is not what Kant calls 'absolutely inner' at A283/B389) for it includes relational-dispositional properties, e.g. attractive and repulsive forces. It is inner in the sense that it explains the manifest character of matter and in the sense that it is essential to matter. But the real essence of matter does not consist in intrinsic properties. On this point I agree entirely with Langton. I did not emphasize this point in the book, because I did not want to get involved in the complex issue of how to define 'absolutely intrinsic' properties, which Kant denies to phenomena, and how to distinguish them from the relational properties that constitute phenomena.[7]

Langton also raises the issue of the noumenal modal status of the real essence of matter and the laws grounded in it. She argues that they are noumenally contingent because they are not grounded in the essences of noumenal substances. I agree. The Critical Kant maintains his pre-Critical view that finite noumenal substances interact in virtue of a divine act, not in virtue of their mere existence. Consequently, it is not essential to finite noumenal substances to interact.[8] Since noumenal affection is required for experience, without noumenal interaction there is no experience.[9] So, given only the essences of finite noumenal substances, it remains contingent whether they interact, and thus contingent whether we experience anything at all, much less that we experience a world in which there is matter with its real essence. Since the laws of motion of

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matter, I argue in *KMM*, are grounded in the real essence of matter, it is noumenally contingent that these laws obtain. However, these laws are essential to matter, so it is impossible for there to be matter that fails to obey them; if God did not put finite noumenal substances in interaction, or we were affected in a different way, we would experience nothing, or experience something other than matter. Given the real definition of matter, it is impossible for there to be matter that does not obey these laws. The counterfactual situations we are considering are ones in which these laws *do not obtain*, because there is no matter; they are *not* situations in which these laws are *violated*.

Noumena as Substrata

The real essence of matter contains exclusively relational properties and no 'absolutely intrinsic' properties. Does the real essence of matter have a further ground? Langton and I agree that, as with everything phenomenal, the real essence of matter has a noumenal ground in the things in themselves that appear as matter with this real essence. Langton argues that this noumenal ground is a substrate of phenomena, and I agree. Where we differ is on how to understand the nature of this substrate. This is a very large issue, directly connected to the argument of her groundbreaking book (Langton 1998), so I can only scratch the surface here.

In the passages which Langton cites, and others, Kant describes noumena as 'substrata' of phenomena (e.g. A359, A399, A724/B752). The question is what 'substratum' means in this context. Now of course, in pre-Kantian metaphysics, one primary use of the term 'substratum' is to refer to substances in which accidents inhere. But Kant does not always use the term 'substratum' to refer to substances, bearers of inhering accidents. For instance, he refers to space as 'the substratum that cannot be cognized through mere concepts' (A284/B340) and time as a 'substratum' in which 'both simultaneity and succession can be represented' (A181/B224; see also A182–3/B226, A185/B228, A284/B340). Since space and time are not substances, 'substratum' here does not mean substance.

But what does it mean? In his metaphysics lectures, Kant frequently complains of metaphysicians (primarily Spinoza) who conflate two different metaphysical relations: inherence (of accidents in substances) and a more general relation of grounding, in which a being owes its very possibility to some ground, but in which it does not inhere. Conflation of the two, Kant alleges, led Spinoza from the correct doctrine that God is the ground of all possible beings to the mistaken conclusion that God is the substance in which all possible beings inhere as accidents (see 28: 562, 779, 638–9,

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1041, 1104, 1308). Kant was no Spinozist, but in some contexts he does describe God as a substratum (A575/B603, A578/B606, A697/B725).[10]

Space and time are substrata in virtue of grounding the formal real possibility of what is in space and time (bodies and their alterations), but what is in space and time does not *inhere* in space and time (space and time are not substances). God is a substratum in virtue of grounding all real noumenal possibility, but not all real noumenal possibilities inhere in God. So there is prima facie evidence for reading Kant's descriptions of noumena as substrata of phenomena as claiming that noumena are grounds of the (noumenal) real possibility of phenomena, rather than as substances in which phenomena inhere.[11] But determining whether this reading is ultimately correct will have to await a further occasion.

Notes

1 I use this example for the sake of continuity with the book. Descartes may have preferred a different example, e.g. that I am essentially thinking, or that the wax is essentially extended. The proof is as follows:
(1) $\Box_c Hc$ [Assumption]
(2) $\Box_x p \rightarrow \Box p$ [Principle (1) in main text]
(3) $\Box Hc$ [Modus ponens]
(4) $\Box \exists x(x=c)$ [EG within the box]
(5) $Ey =_{def} \exists y(y=x)$ [Standard definition of existence predicate]
(6) $\Box Ec$ [From (4) and (5) by substitution]

2 At line (4) in the proof in note 1.

3 Similar restrictions must be made on EI, the rule of existential instantiation.

4 *Principles of Philosophy* §62 (Descartes 1984–91: vol. 2, p. 30).

5 Wolff, *Verunünftige Gedancken von Gott, der Welt und der Seele des Menschen, auch allen Dingen überhaupt*, §35 (in Wolff 1965– : Abt. I, Bd. 2), *Philosophia prima sive Ontologia*, §143 (in Wolff 1965– : Abt. 2, Bd. 3); Baumgarten 1757: §§39–40, 195 (repr. in Kant Akademie 17: 1–226).

6 Cf. Kant's claim that both attractive and repulsive force belong to the essence of matter, MFNS, 4: 511.

7 Both are topics on which Langton has written extensively. See Langton and Lewis 1998 and Langton 1998.

8 Lec-Met/Mron, 29: 866–8. I want to emphasize that, while Kant appears to retain this Critical doctrine, he accords it a very different epistemic status than he did in *Nova dilucidatio*. Neither knowledge nor cognition, it amounts to something like the most rationally satisfactory way to think about noumena. For my account of a similar case of the Critical Kant retaining a doctrine while downgrading its epistemic status, see Stang 2016: chapter 9.

9 For what I regard as the definitive defence of noumenal affection see Adickes 1924.

10 Some readers might take the first two passages (in the Transcendental Ideal) to be references to a specifically Spinozist conception of God; I disagree, for reasons given in Stang 2016: chapter 9.6.

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11 I agree with Langton that (some) noumena are substantial; we differ on whether phenomena inhere in them.

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