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Russell and the Materialist Principle of Logically Possible Worlds

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In his review in this journal, Martin Vacek knows that the second edition of my *Bertrand Russell on Modality and Logical Relevance* has a difficult mission of revealing hitherto unsuspected major new dimensions in a great thinker whose work has already been investigated for over a century. Vacek has a very fine understanding of the book, and expresses only a few doubts. I am writing to explain away those doubts.

My first topic is a matter of general interest: the core thesis behind Vacek's main doubt. Vacek says, "The core of these [combinatorial] theories [of logically possible worlds] is a construction [out] of some distribution of matter throughout a spacetime region" (Vacek 2017, 264). Vacek unsurprisingly cites Armstrong and Quine, among others, in connection with this thesis. Let us call it the Materialist Principle of Logically Possible Worlds.

The principle is perfectly fine for materialists who hold that matter (or bodies, or physical events) is the only logically possible category, or perhaps even the only intelligible category. But an idealist who holds that minds (or ideas) are the only logically possible category, or perhaps even the only intelligible category, could only hold that possible worlds are

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different distributions of *minds or ideas* in spacetime. The idealist Leibniz, the father of possible worlds logic, does exactly that. And the dualist Descartes, who admits the logical possibility of disembodied minds, surely would hold that there are infinitely many possible worlds distributing *only matter* (I omit God), infinitely many distributing *only minds*, and infinitely many distributing *both*. And neutral monist David Hume finds bodies and minds equally unintelligible. He literally has no idea of them, since he has no impression of them. Surely Hume could only hold that talk of possible worlds is talk of different distributions of *impressions and ideas*. Thus idealists would have an Idealist Principle of Possible Worlds, dualists a Dualist Principle, neutral monists a Neutralist Principle, and so on. Thus the Materialist Principle begs the question against every metaphysic other than materialism. You would have to be a materialist to find it even plausible.

Vacek does not openly state that he is a materialist, or openly state that other categories are not even *logically* possible. But if he is not a materialist in this radical sense, why is he not finding the Materialist Principle obviously false? Why is he not finding even one single logically possible world in which there is no matter, but in which there is something else?

By "other category," I mean category of things that logically can exist even if matter does not. Note that "There is no matter, therefore there are no minds" and "There is no matter, therefore there are no Humean sense-impressions" are logical non sequiturs. Consider also categories such that worlds identical in distribution of matter, including any worlds identical in having *no* matter, logically need not be identical in distribution of those other categories. That is, even if we pretend it is logically necessary that if *something* mental exists, then *something* material exists, a possible world still could not be identified as a certain mere distribution of matter alone. Even an epiphenomenalist who believes that minds logically depend on bodies can admit different minds in possible worlds with identical bodies if the psycho-physical *laws* of causation of epiphenomena are different. And the mind-body supervenience thesis, that minds are identical if bodies are identical, logically can be true within each possible world *consistently with that*. But the supervenience thesis is logically contingent. It is both formally and intuitively a logical non sequitur. Thus

it would not actually be true in every possible world. In fact, it is obviously false for worlds with identical bodies (or no bodies) but different disembodied minds.

Why does Vacek think the Materialist Principle has anything to do with my book? I am not sure. I hope Vacek is not criticizing my metaphysic, because I never state my metaphysic, and I am not a materialist. I hope he is not criticizing Russell, because Russell never was a materialist. Perhaps Vacek could criticize us for failing to hold the Materialist Principle because we fail to be materialists. But to do that, Vacek would first have to prove that materialism is the true philosophy. And I hope he is not criticizing my interpretation for failing to report that Russell held the Materialist Principle, or, in the alternative, for failing to criticize Russell for failing to hold it. For Russell never was a materialist, and would never have held that principle. Thus I am at a loss on what the criticism is even about.—My views? Russell's views? My interpretation of Russell's views?

In the book, I discuss combinatorial theory of possible worlds talk only for the 1914–1918 Russell's logical constructionist / fictionalist phase. Russell eliminates all bodies, and all minds except his own, as logical fictions—as logical combinations of sensed and unsensed sensibilia. Sensibilia are mind-independent (note the unsensed sensibilia) and physically real, meaning they construct the physical world. But they are not tiny packets of matter or small bodies. They are purely phenomenal. Russell uses them precisely to *eliminate* matter and bodies. Thus for the 1914–1918 Russell, possible worlds talk is implicitly talk of combinations (distributions) of mere phenomenal sensibilia (and / or his own mind).

The 1919–1921 neutral monist Russell eliminates all matter and all minds, even his own, as mere logical constructions of noticed and unnoticed phenomenal events. This is the zenith of Russell's logical constructionism.

In both of these constructionist phases, Russell can and would admit constructed minds but no constructed bodies in infinitely many possible worlds consisting of noticed "wild particulars" (physically unlawful, i.e. physically uncorrelated, i.e. random noticed events).

Vacek's two doubts are fear of circularity and fear of incompleteness.

For most Russell scholars, the fear of circularity in Russellian logical constructionism would be the fear that the logical atoms and the logical compositions of things into atoms logically determine each other, and do so in the same way. If they determine each other in *different* ways, there is of course no circularity. But since these are all logical analyses, we may call this fear of mutual logical definability. Note that physical atoms are not percepts given in acquaintance, not even through an atomic microscope, but are themselves deep theoretical constructions, meaning remote from the periphery of observation. And for a consistent materialist, even percepts on the periphery of observation would have to be theoretical constructions out of physical atoms. See Quine (1975 and elsewhere).

Thus that might be a fear for a materialist. But Russell is no materialist. His logical atoms include sense-data (*sensed* sensibilia), and these are not constructions. Nor are they determined or defined by his logical constructions. They are given in acquaintance. Even unsensed sensibilia are not constructions. They are what is *predicted by* his logical constructions. They are the sense-data (sensed sensibilia) we *would* have if we *were* in such and such a location in spacetime, under such and such conditions. Thus there is no circularity of mutual definability in Russell.

There is a way out even for materialists. The problem of mutual definability is a foundationalist problem. But Quine admits a holistic web of scientific theory (Quine 1975 and elsewhere). This is not new. *Word and Object* starts with an epigram from Otto Neurath describing the rebuilt ship of Theseus (rebuilt using its own timbers), and cites Pierre Duhem.

And everyone has another way out: simply choose what to take as primitive. It has been known for over a century that conjunction and disjunction are interdefinable using negation. We can take either to define the other. Or we can take either the Sheffer stroke or the Quine dagger (Peirce arrow) as primitive and use it to define conjunction, disjunction, and negation.

That is what most Russell scholars would consider the fear of circularity in Russellian logical constructionism. But that is not Vacek's fear at all. Vacek says:

> Put even [more strongly], in order to metaphysically explain the goings-on in the actual world (explanandum) by means of recombinations

> (explanans) one has to posit a necessitation relation between the two. Since the relation is modal in nature, we deal with a circular analysis ([which] can be a reason for Russell's scepticism about modality as a fundamental or irreducible concept). (Vacek 2017, 265)

This overlooks a principal feature of Russellian logical analysis. Namely, Russellian analysis is always eliminative. The analysandum is always eliminated as a logical fiction. During his 1914–1921 constructionist phases, Russell expressly defines logical truth, and thereby implicitly analyzes logical necessity away, as merely being purely general truth that is true in virtue of its form. (We know he rejects modal entities, including modal relations.) For the analysis to succeed, the analysandum must be logically equivalent to the analysans. And this logical equivalence must be, in ordinary talk, logically necessary. But does that introduce circularity into Russell's implicit *analysis* of necessity? Does it mean that we must circularly "posit a necessitation relation" here? Not at all. The very analysis eliminates *all* talk of logical necessity*, including talk of its own logical equivalence relation* as logically necessary, and replaces it with talk of purely general truth that is true in virtue of its form. On this eliminative analysis, there is no necessitation relation at all, not even in the implicit analysis of necessity. The relation is just a logical equivalence that is purely general and true in virtue of its analytic form. Indeed, if Vacek's fear were correct, then every logical analysis of Russell's, even an analysis of a tree or stone, would imply a necessitation relation. But they all merely state logical equivalences for him. For his implicit analysis of logical necessity eliminates every logical necessity as a logical fiction.

Vacek's second and main doubt is fear of incompleteness. For most Russell scholars, the fear of incompleteness in Russellian constructionism would be the fear of incomplete analysis. Russell came to see the problem, and it led him to abandon constructionism. For while his constructions can be described in general terms, as temporal series of classes of sensed and unsensed sensibilia, they can never be specific logical analyses that can be true or false, since they can never even be completely stated. For each would have to describe infinitely many classes of infinitely many sensibilia, so as to analyze all the infinitely many ways the

ordinary thing in question logically could be ordinarily perceived. See my (2003, 177).

But even if Russell could have provided finite specific analyses, or alternatively, if we were satisfied that Russell's general logical analysis of the world is correct, and that it is a mere finite human limitation that we can never completely state a specific logical analysis since it would be infinitely long, a second and very different problem of incompleteness would remain. Quine calls it underdetermination.

Every scientific philosopher faces the problem of underdetermination regardless of her metaphysics or her logical analysis of the world, not just Russell. The later Russell, who anticipates Quine in epistemic holism, though not in holist theory of truth, is aware of it. In fact, the later Russell describes *two* problems: every empirical theory is logically consistent with infinitely many arbitrarily different interpretations of experience, such as that Venus is real only on Mondays, Wednesdays, and Fridays; and infinitely many theories predicting different future observations are equally compatible with any given finite set of past observations (my 1995, 175). Thus underdetermination is not a bad *consequence* of scientific theory to be avoided, but an ordinary, *pre*-philosophical fact that we must admit as given, and provide an account of, in our theory. If our account is adequate, then all is well. The later Russell and Quine use their respective sorts of holism to do this. If their accounts are inadequate, that is criticism, not scholarship. Thus this fear is criticism of Russell, not criticism of my Russell scholarship. It takes us away from my logic book and into philosophy of science (see my 1995; 2006). Here I think Russell is better than Quine. It is our evidence taken as a whole that makes it likely that Venus is real every day of the week, and that the future will be like the past, as opposed to the infinitely many arbitrary alternatives to those two statements, and regardless of whether truth is holistic. (I think Russell has good arguments against instrumentalist / coherence truth holism in the *Inquiry*, and I think they apply just as well to Quine.) But even an epistemic foundationalist can simply admit that underdetermination is an ordinary fact, and simply dismiss the arbitrary Venus and future alternatives as arbitrary.

That is what most Russell scholars would consider the fear of incompleteness in Russell. But that is not Vacek's fear at all. Vacek says:

> The worry from incompleteness arises as far as we recombine actual atoms only and omit possibilities of the[re] being merely possible atoms. Although I am not sure how strong the intuition 'there could be worlds with more matter' is, one can still back it up with a simple (transcendental) consideration: a world to which no individuals, worlds, or properties are alien would be an especially rich world. There is no reason to think we are privileged to inhabit such a world. Therefore any acceptable account of possibility must make provision for alien possibilities [cite omitted]. Dejnožka discusses alien individuals and alien properties in several places (pp. 52, 81, 166, 182) yet he, in my opinion, does not square MDL {1, 2, 3} with this (again, maybe disputable) possibility properly. (Vacek 2017, 265)

I have several comments.

First, why does Vacek assume that merely possible atoms must be literally nonexistent objects? Given that the existence of ordinary minds and bodies is logically contingent to begin with, why is it not enough to be able to *describe* mere possibilia in possible worlds *talk*? And why cannot Russell use his actual but unsensed sensibilia? We need to see not only arguments that there *are* nonexistent objects, but also arguments why they are *needed* to explain how there logically could have been more matter (or minds).

Second, can there be a "world to which no…*worlds*…are alien"? Can possible worlds contain other possible worlds? Certainly a possible world can include all the objects that are in some other possible world, but that is not the same thing.

Third, there can be no alien properties for Russell. His universals are in the realm of timeless being as opposed to possible worlds of existents. There can only be alien instantiations.

Fourth, by definition the actual world can contain no alien objects at all. An alien object is defined as one that is in at least one possible world but not in the actual world. That is, an alien object is defined as a merely possible object.

Fifth, no one possible world can include all alien objects, since infinitely many alien objects have contrary or even contradictory properties. The apple that could be in my hand cannot be both the purple one from

possible world 1 and the nonpurple one from possible world 2. Thus a world to which no object is alien is a logically impossible world. Thus we can "inhabit such a world" if and only if we can inhabit a logically impossible world. We can be and often are mentioned in *talk* of possible worlds, and in *talk* of impossible worlds, including ones that we both inhabit and do not inhabit. But for Russell, the only world is the actual world. For Russell, there are no merely possible worlds and no merely possible objects, but only talk of them.

Sixth, it is important to note that the unsensed sensibilia that are almost all of Russell's logical atoms are just as real or actual as the very few sensed ones. No sensibile is a merely possible object. Russell is very clear that they are all actual. It is just that we sense only a very few of them. Thus when we construct how we could have seen a certain apple under other circumstances, no merely possible sensibilia are involved. A different actual sensibile would be sensed. Sensibilia are not potential beings. They are actual beings that can be potentially sensed. Thus they are mind-independent. In fact, they are prior to and construct minds.

There are no alien sensibilia. Russell admits actual sensibilia of every possible sort everywhere at all times, in infinitely many different phenomenal "private perspectives" or "private worlds" that jointly construct the public world, to account for how we logically can perceive any ordinary thing anywhere in ordinary spacetime. This logically includes accounting for how we can perceive any logically possible *new* ordinary thing anywhere in ordinary spacetime. Sensibilia construct both existing and possible new ordinary things alike, with no need to admit alien sensibilia or nonexistent objects of any kind. We may call this "phenomenal plenum theory." Russell suggests this is like Leibnizian monadology, but without the monads, and with mind-independently real phenomena. See *External World*. This sixth comment also applies to unnoticed events in Russell's neutral monist phase.

Seventh, we must not be bewitched by the picture that a nonexistent object could somehow move out of a merely possible world and enter the actual one. For Russell that is not possible, not even as a mere change or reclassification of ontological status, since for him there is no such thing as a nonexistent object in the first place. And for Russell, following Leibniz,

no object can *move* from any possible world to any other possible world, not even in possible worlds *talk*. For possible worlds are *defined* by which objects are in them, and by their interrelationships. But one object can *be* in many worlds.

Eighth, however, new bodies logically can just pop into being. After all, bodies are logically contingent. Of course, they would have to be logically possible bodies. Thus, to use possible worlds talk, they would have to *have been* alien objects. They would still be in whatever merely possible worlds they were, but they would no longer be alien to ours. But that is only one way the world logically can increase in matter. Already existing bodies and their existing constituents logically can expand or contract in volume without increasing or decreasing in number. They logically can even pop out of being, thereby becoming alien objects. As Kant says, things can just fade away. Nor need an expansion involve adding alien "filler matter." Inverting Kant, the existing matter can just gain in intensity (mass) and / or just expand in volume. This shows that adding alien matter is unnecessary for the amount of matter to increase. It also shows that Vacek's argument is a non sequitur. For it is logically possible that when a new body comes into being, an existing body shrinks in volume, fades in intensity, or even passes away from being, transferring its matter to form the new body so that the total amount of matter remains the same, or even decreases. As Quine might say, there logically can be compensatory adjustments. (That could even be kept up indefinitely, if there is an infinite amount of matter.) But for Russell, there is no matter in the first place. He would construct material expansion as replacement of smaller actual sensibilia with larger actual sensibilia, material contraction as the reverse, and new bodies in terms of new sensings of actual sensibilia.

Vacek seems to think that if there is no alien matter, then the law of conservation, that matter (mass-energy) can be neither created nor destroyed, is a *logically* necessary truth. Most people think it is a logically contingent physical law at best. Vacek is implicitly wondering how Russell can admit alien bodies in different possible worlds, as if for Russell, the very same amount of matter must be in all logically possible worlds. (And even if the amount could not change, even the ancient atomists could admit

recombinations of atoms into different bodies.) Perhaps Vacek is mistaking actual matter for Aristotelian potential matter, or even for Parmenidean being. If so, there go two more questions begged.

If there is no alien matter, so that for Vacek the amount of matter cannot change, so that for Vacek the amount of matter is logically fixed, exactly how much matter does Vacek think it is logically necessary for there to be? The actual amount in the actual world? How convenient! But what amount is that, and why is it exactly that amount? Why not 1% occupation of spacetime? Why not 25%, or 50%? The only answer that makes any sense would be 100% or total occupation of spacetime (material plenum theory). But is not empty space logically possible? Can there not be even a single vacuum, even for a moment? Cannot some possible worlds have more empty space than others?

Could there not have been one more apple, or even just one more electron, than there is? Russell's answer would be a hearty yes, spacetime logically could have been filled with many more things. And it logically could have been filled with many less, or even with nothing. But for Russell, all that is mere *talk* of what is possible. There are no alien objects out there in other possible worlds, objects that could somehow become real. Kripke for one would heartily agree. Here we may ask once again if Vacek is criticizing Russell or my scholarship of Russell.

Russell accepts the law of conservation, but only as a logically contingent law of physics, that is, as a law that is *not* true (and that is also not false) in all possible worlds. Russell does not even accept it as *causally* necessary. Russell is Humean and rejects causation. For Russell, a scientific law is no more than a uniformity of nature. Thus for him the law of conservation would merely assert a uniformity of the amount of matter across time in the actual world. Whether the universe is expanding or shrinking, or will eventually shrink, and the roles of entropy and of conservation of mass-energy in this, are scientific issues beyond the scope of this paper. I think we simply do not know. But surely all the rival scientific theories are at least logically possible. And Russell always kept up on the latest science. If he had lived longer, he might well have come to question or reject the law of conservation on purely scientific grounds.

Vacek does not openly state that the existence of matter must be logically necessary for Russell, much less that the exact same amount of matter must be in all possible worlds for Russell (the latter thesis implies the former), if Russell does not admit genuine "merely possible atoms" (Vacek 2017, 265). But it sounds for all the world like he thinks that this non sequitur is valid. And if he does not, then why he would criticize Russell on alien objects like this? And if Vacek does hold those views, then he must think that Russell cannot even admit a possible world with no matter. Of course, the view that one possible world has no matter and all the rest logically must have exactly the same amount of matter is, if anything, even more absurd, since the empty world would show that matter is logically contingent.

The 1914–1918 Russell has no problem of alien matter. He admits no matter at all. His sensibilia are logically contingent (MDL {1}, the level of logical atoms). Thus his constructions of minds and bodies are logically contingent (MDL {2}, the level of constructions). Thus he implicitly holds a logical constructionist version of the Dualist Principle for descriptive talk of possible worlds including some with only constructed bodies, some with only constructed minds, and some with both, and can talk of an empty world as well (MDL {3}, the level of language). Matter is eliminated as a logical fiction. All logical atoms are already there in the actual world, whether they are sensed or not. The actual world logically could not be richer in phenomenal logical atoms (sensibilia). It is a phenomenal plenum. Existing bodies, new bodies that come into being, and bodies that pass away from being are all logical constructions based on which logical atoms we sense. And while two material apples cannot both exist in the same spacetime region, infinitely many sensibilia can and do exist in the same constructed spacetime region as different sensible aspects of infinitely many constructible apples.

The 1919–1921 Russell implicitly holds the Neutral Monist Principle. His phenomenal but real events, some noticed (i.e. members of some set-constructed mind) and some not, are logically contingent (MDL {1}). Thus his constructions of minds and bodies are logically contingent (MDL {2}). Thus he can in principle describe infinitely many worlds that construct (1) only bodies, (2) only minds, (3) both, or (4) neither (if the events are too

few and / or too wild); and he can describe a world with no events as well (MDL {3}). Thus he also implicitly holds a constructionist version of the Dualist Principle. All worlds of type (2) and infinitely many of type (3) will have disembodied minds. But Russell believes our evidence is that the actual world has only embodied minds, i.e. only constructed minds that constructionally overlap with constructed bodies in the right way.

Vacek knows I explain several ways in which Russell can admit talk of alien objects. Vacek doubts these ways. I am perfectly satisfied with all the ways I list, and invite the reader to look up "alien objects" in the index. Of course, all the ways use *descriptions*. Russell is already using descriptions of nonexistents in his famous 1905 "On Denoting."

Thus it is very easy to "square MDL {1, 2, 3} with" alien possibilities (Vacek 2017, 265). Talk of alien objects is always done by descriptions. Descriptions always belong to MDL {3}, the level of language. And all statements via descriptions that alien objects exist are *false* general statements. This is clear as early as "On Denoting." There Russell analyzes "The present King of France is bald" as a false complex general statement. Talk of the present King of France is *talk of an alien object*. For the present King of France logically could exist, but does not. All such statements are false for Russell because for him there are no merely possible objects. That is because of his famous "robust sense of reality." That robust sense of reality is why Russell says "in some places" that possible worlds talk is "mere 'phraseology'" (Vacek 2017, 262). Phraseology, of course, belongs to MDL {3}, the level of language.

If Vacek doubts that Russell can talk about the present King of France using his theory of descriptions, or that a main point of the theory is to refute Meinong's admission of nonexistent objects (including both alien objects and logically impossible objects), or that Russell can legitimately assert that the actual world logically could have had more or less matter than it does (constructed or not), that is criticism of Russell, and not of any Russell scholarship I know of. But if I may humorously paraphrase Russell's famous scope distinction example of the yacht in "On Denoting," where a guest said he had thought the yacht was larger than it was, and the owner replied that no, his yacht was not larger than it was, even Russell would agree that if we use the owner's scope, then the actual world could

not have more matter than it does. But scope distinctions concern propositional attitudes, not metaphysics.

Vacek has produced a basically perfect description of my book, and expresses only a few doubts. Unfortunately, the Materialist Principle has nothing to do with Russell, and does not even seem to be true. And Vacek's doubts seem to be about Russell, not about my book. Certainly they have nothing to do with the book's success in revealing that there *are* major modal and relevantist dimensions in Russell's philosophy, regardless of whether his views are *correct*. Quite the opposite. Insofar as Vacek is doubting that Russell's modal views are correct, he is agreeing with me that Russell does have modal views.

The Materialist Principle logically entails neither constructional circularity, nor constructional incompleteness, nor even the law of conservation of matter (neither as a law of logic nor as a law of physics). Those are all non sequiturs. And except for materialists who reject even the logical possibility of other categories, the Materialist Principle is obviously false in the first place. Russell never held it, and would reject it. And (so) it has nothing to do with his logical constructionism. In fact, Russell rejects materialism throughout his career. He admits at least probable physical objects both before and after his constructionist phases, but he never admits physical objects alone.

I thank Vacek for a very fair-minded, kind, and even generous review.

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