**Times, Worlds, and Locations**

In ‘from times to worlds and back again: a transcendentist theory of persistence’ (henceforth TTP) Alessandro Giordani outlines five competitor views regarding the manner in which objects occupy[[1]](#footnote--1) regions along a dimension. These are: (1) classical uni-location (2) bare uni-location (3) multi-location (4) counterpart presence and (5) transcendent presence. Each view comes in both a temporal and modal version and Giordani argues that one ought to prefer transcendentism (i.e. 5) along both dimensions. According to temporal transcendentism, necessarily, no object is exactly located at any region along the temporal dimension. Instead, any object, O, is derivatively present at some region, R, along the temporal dimension in virtue of bearing certain relations to something (according to TTP an event) that occupies R along that dimension. According to modal transcendentism, no object is exactly located at any region along the modal dimension. Instead, any object, O, is derivatively present at some region, R, along the modal dimension in virtue of bearing certain relations to something (according to TTP an event) that occupies R along that dimension.

Before evaluating transcendentism it is worth distinguishing two different questions one might ask. The first is a *metaphysical question*: if an object occupies a region that is extended along some dimension, D, then in what manner does that object occupy that region? Answers to this question offer a metaphysics of occupation. The second is a *semantic question:* what are the truth conditions for certain ordinary temporal and modal claims about objects? Answers to this question provide a temporal or modal semantics.

This paper has two aims: first, to elucidate transcendentism and, second, to determine whether it offers a novel answer to either the metaphysical or the semantic question. With respect to the first question it will be argued that it does not.With respect to the second, it will be argued that perhaps, if one accepts additional, seemingly controversial, claims about the semantics of ordinary language, transcendentism offers a novel semantics for such claims. It remains, however, unclear whether such ancillary claims ought be accepted and thus unclear whether transcendentism is well motivated.

Let us briefly recap the five views as they are presented in TTP.

Classical uni-location is the view that objects exactly occupy[[2]](#footnote-0) a single region and occupy[[3]](#footnote-1) any proper subregion thereof by having a proper part that exactly occupies that sub-region.

Bare uni-location is the view that objects exactly occupy a single region, but do so without having proper parts that exactly occupy any proper sub-region of that region.

Multi-locationism is the view that (some) objects exactly occupy more than one region along the temporal and modal dimensions.

Counterpart presence is the view that some objects are derivatively present at some regions they do not occupy in virtue of the existence of some entirely distinct objects at those regions such that the former bear certain relations to the latter.

Finally, transcendent presence is the view that objects do not exactly occupy any region along the temporal or modal dimension. Instead, objects are only ever derivatively present at regions, and are so in virtue of bearing certain relations to the things that occupy those regions.

Notice two things. Classical uni-locationism, bare-locationism and multi-locationism are accounts of the metaphysics of occupation. They don’t, in themselves, provide a temporal or modal semantics. Conversely, counterpart presence offers both a temporal and modal semantics, but does not, in itself, provide a metaphysics of occupation. The former three views are, however, most naturally, paired with certain semantic theses, while the latter is most naturally paired with a certain metaphysical view.

Thus the most natural pairings of the metaphysical thesis (MT) with the semantic thesis (ST) are as follows:

Classical uni-locationism:

MT: objects exactly occupy a single region and occupy each proper subregion thereof by having a proper part that exactly occupies that region.

ST: TIME ‘P was (will be) Φ’ uttered at *t,* is true iff P has a proper temporal part, P\*, located earlier (later) than *t*, and P\* is Φ.

ST: MODAL ‘P could be (could not be) Φ’ is true iff P has a (has no) proper modal part, M, located in a counterfactual world, *w*, and M is Φ.

Bare uni-locationism:

MT: objects exactly occupy a single region, but do so without having proper parts that occupy any proper sub-region of that region.

ST: TIME ‘P was (will be) Φ’ uttered at *t*, is true iff there is a region earlier (later) than *t* that is not entirely free of P and such that that region instantiates Φ.

ST: MODAL ‘P could be (could not be) Φ’ is true iff there is (is not) a counterfactual world that contains a region that is not entirely free of P, and such that that region instantiates Φ.

Multi-locationism:

MT: Some objects exactly occupy more than one region along a dimension.

ST: TIME ‘P was (will be) Φ’ uttered at *t*, is true iff (i) P exactly occupies region R and (ii) R is earlier (later) than *t* along the temporal dimension and (iii) P at R is Φ.

ST: MODAL ‘P could be (could not be) Φ’ is true iff there is a (is no) counterfactual world, *w*, that contains a region, R\*, such that P exactly occupies R\* and P is Φ.

Likewise, though counterpart presence offers us the following two semantic theses it is more naturally paired with the metaphysical thesis below.

Counterpart presence:

ST: TIME ‘P was (will be) Φ’ uttered at *t* is true iff (i) P exactly occupies spatio-temporal region R, and (ii) P\* exactly occupies spatio-temporal region R\* and (iii) R and R\* are disjoint and (iv) R is later (earlier) than R\* along the temporal dimension and (v) P\* is Φ and (vi) P and P\* bear some (temporal counterpart) relation to one another.

ST: MODAL ‘P could be (could not be) Φ’ is true iff (i) there is (is not) a counterfactual world that contains a region and (ii) P\* exactly occupies that region and (iii) P\* is Φ and (iv) P and P\* are disjoint and (vi) P and P\* bear some (modal counterpart) relation to one another.

MT: Objects exactly occupy a single, non-extended region along the temporal and modal dimensions.

Though these are very natural pairings of the metaphysical with the semantic there is no necessary connection between the two. To see why I will focus on the modal dimension, though this is purely for illustrative purposes.

Consider, first, the classical uni-locationist. She might couple commitment to her version of MT with a rejection of the claim that ordinary singular referring terms such as ‘dog’ pick out modally extended objects. Instead, perhaps she holds that some such terms pick out an actual world-bound object (i.e a modal part of a modally extended object). Then if O is a modally extended object and P is an actual world-bound modal part of O and P\* is a non-actual world-bound part of O, she holds that:

ST: MODAL ‘P could be Φ’ is true iff there exists a modally extended object, O, and (i) P is part of O (ii) P\* is part of O and (iii) P\* is Φ.

Or she might hold that:

ST: MODAL ‘P could be Φ’ is true iff (i) there is a counterfactual world that contains a region, R, and (ii) P\* exactly occupies R and (iii) P\* is Φ and (iv) P and P\* are disjoint and (v) P and P\* bear some (modal counterpart) relation to one another.

That is, she might hold that there exist five-dimensional objects—objects that are modally and temporally extended by having temporal and modal parts—but that at least some singular referring terms pick out proper parts of said objects.

Likewise, the bare uni-locationist might endorse her metaphysical thesis but hold that some singular referring terms do not pick out modally extended simples. Instead, she might suggest, wherever there is a modally extended simple, S, that occupies a region, R, at a world, *w*, there exists a further simple, S\*, that exactly occupies R and is thus co-located with S in *w*. Sometimes ordinary talk picks out S\* not S. Thus she might suggest the following alternative semantic thesis:

ST: MODAL ‘P could be (could not be) Φ’ is true iff (i) there is a modally extended simple object, S, that occupies R in *w* and R\* in *w*\* and (ii) there is a simple object, P that exactly occupies R in *w* and (iii) there is a simple object, P\*, that exactly occupies R\* in *w*\* and (iv) P\* is Φ.

Finally, consider the semantic thesis endorsed by counterpart presence. It need not be paired with MT. We have just seen that the classical uni-locationist could accept the semantics associated with counterpart theory, and thus, clearly, the defender of counterpart presence could accept the metaphysical thesis of classical uni-locationism. One could even pair counterpart presence with multi-locationism. On such a view modal extension occurs when objects are multi-located across worlds. But suppose that identity is brute; whether what it is that exactly occupies some region, R, is identical to what exactly occupies some region, R\*, has nothing to do with the qualitative features of what it is that occupies R and R\*. Then one might hold that modal claims made of some object, O, are made true by the existence of objects numerically distinct from O that bear similarity relations to O: for it is similarity, not identity, relations that our modal judgements track.

The point here is not to defend non-standard combinations of metaphysical and semantic views. Rather, the aim is to show that care should be taken to separate out the metaphysical from the semantic question. Once we do so we see that, setting transcendentism aside for the moment, we have three distinct views about the metaphysics of occupation and one view about the semantics of modal and temporal talk. That puts us in a position to ask: is transcendentism a view about the metaphysics of occupation, the semantics of modal and temporal claims, or both?

According to transcendentism no object exactly occupies any region along the temporal or modal dimensions. That leaves open the possibility, though not, I think, one intended by Giordani, that there is some further dimension, D\*, such that objects are exactly located at some region along *that* dimension. Objects are then derivatively located at regions along the temporal and modal dimensions by bearing relations to whatever it is (i.e. events) that occupy regions along those dimensions. Consider this in the light of the metaphysical question. The version of transcendentism just articulated tells us that objects *don’t* exactly occupy regions along certain dimensions; but it doesn’t tell us in what manner they *do* occupy regions along D\*. There appear to be just three options—classical uni-location, bare-location and multi-location—none of which offers us a novel account of the manner in which objects exactly occupy regions. Rather, the novelty would come via the claim that it is regions along dimension D\* that are exactly occupied by objects and not regions along the temporal or modal dimensions. But that claim, even without knowing what D\* is, does not look overly promising. One would not expect the exact occupants of non spatio-temporal non-modal dimensions to be good candidates to be objects, as least in the way that we typically use the term.

More likely transcendentism is intended as the claim that objects do not exactly occupy any region along *any* dimension. Then the relevant metaphysical question now needs to be directed at the manner in which whatever it is that *does* exactly occupy regions along the temporal and modal dimension (events) do so. Again, though, we find only three possible answers: classical uni-location, bare-location and multi-location of regions by events. Giordani holds that events are classically uni-located, though nothing about their view commits them to that. Whatever they say about how events occupy regions, however, transcendentism fails to offer a novel metaphysics of occupation.

Suppose, then, that transcendentism is like counterpart presence: it offers a semantics for temporal and modal claims but not a new metaphysics of occupation. On the face of it one might find the transcendentist’s combination of metaphysical and semantic claims puzzling. For, according to transcendentism, claims about objects, at, and across, time and modal space, are made true by the existence of certain events. One might, then, think it natural to say that an object is composed of, or grounded by, or supervenes on, the events that are the truthmakers for claims about that object at, and across, times and worlds. Since supervenience is the weakest of these notions I will henceforth speak of objects supervening on sets of events. Then given the metaphysical thesis to which the transcendentist is committed she needs to say that although object, O, supervenes on some set, S, of events, it does not follow that O exactly occupies region, R, the region that is jointly occupied by the members of S. Notice that the analogous claim becomes much more difficult to sustain if we put it in terms of grounding or composition. For it is difficult to see why if O were grounded in the occurrence of some set of events, S, it would fail to exactly occupy the region jointly occupied by those events, and it is impossible to see how if O were composed of those events it would fail to exactly occupy the region jointly occupied by them.

So why think that if O supervenes on set, S, of events, that O fails to exactly occupy any region? One reason to think so would be if one also thought that events themselves do not exactly occupy regions. In favour of such a view one might point to general worries about the spatio-temporal borders of events to suggest that they do not exactly occupy regions. But Giordani holds that events are classically uni-located, so they, at least, are not motivated but such concerns. Moreover, even if one’s concern were that events, and hence also objects, have vague borders one could come up with analogous notions of occupation—vague occupation, vague exact occupation (if that’s not a contradiction in terms) to play the same roles as those played by the current precise notions of occupation[[4]](#footnote-2). So in what follows I assume, with Giordani, that events are classically uni-located.

If events are classically uni-located (or more generally, if they exactly occupy some region) we know that for some set, S, of events there is a fusion, F, of those events and that F exactly occupies region, R. The transcendentist must, then, make two claims. First, she must hold that F is not an object: otherwise objects turn out to be composed of events and, therefore, are exactly located where the fusion of those events is exactly located. Second, she must maintain that there is no object, O, that occupies R (either by being classically uni-located at each sub-region of R, or by being barely located across R, or by being multi-located across R) in virtue of supervening on the set of events in S that jointly occupy R.

Notice that nothing about the semantics offered by transcendentism rules out either of these options as being the case. After all, one can agree that the truth-makers for talk about objects across times and worlds are sets of events, without ruling out that some fusions of events are objects, and without ruling out that objects supervene on sets of events and thereby exactly occupy the regions jointly occupied by those events. Insofar as the transcendentist thinks that both of these claims are false she needs to marshal an independent argument for the claim.

What kind of argument might that be? Plausibly, it will need to appeal to further features of our ordinary semantics. In effect the transcendentist needs to argue that it is part of the folk meanings of ordinary terms that although talk about objects across times and worlds can be made *true* by the occurrence of certain events at times and worlds, talk about objects (exactly) *occupying* the regions jointly occupied by those events cannot thereby also be made true. This is a contentious claim, and is not defended in TPP.

But let us take a stab at defending the claim. Consider a bank (financial institution not river). Take the set of events, S\*, that jointly make true all of the claims about that bank at and across times and worlds. Suppose that the fusion, F\*, of the members of S\* exactly occupies R\*.

The objector to transcendentism asks why we shouldn’t think that objects exactly occupy regions jointly occupied by the events upon which those objects supervene. As such, the objector holds that the bank occupies R\* and that it either exactly occupies R\* or exactly occupies some set of proper sub-regions of R\*. If the objector is right, then transcendentism is false.

But now perhaps it turns out that R\* is a region very different to the one we would intuitively have supposed to be occupied by the bank. That is not so implausible given the various events whose occurrence makes true all of the claims about the bank.

What are we to say? We could deny that the bank occupies R\*. Then since the bank does not occupy R\*, then the object which is the bank does not occupy R\*. Of course, we haven’t shown that there is no region that the bank fails to exactly occupy. But we have shown that that region is not R\*. Given that we thought that the bank would occupy the region jointly occupied by the events upon which the bank supervenes, we now have good reason to think that the bank fails to exactly occupy any region.

Then if all of our singular referring terms are like ‘bank’ in this respect, ordinary objects fail to exactly occupy any region. Thus the transcendentism is vindicated.

The alternative is to hold that the bank exactly occupies R\* and it turns out to be an interesting discovery that it occupies a somewhat different region than we supposed.

Does transcendentism, then, offer us a novel semantic thesis? We have seen that even granting that objects supervene on events, or more generally, granting that ordinary temporal and modal claims are made true by the occurrence of events at regions, it is an open question whether we should conclude that ‘objects exactly occupy regions’ is false. For two different views are consistent with the transcendentist semantics. The first is the view that since sets of events are what make true our talk about ordinary objects, and since those events exactly occupy regions, we should think that the objects of which we talk exactly occupy those regions. The alternative claim is that although the sets of events make true our ordinary claims about objects exactly occupy regions, and although our talk is true, nevertheless the objects themselves do not exactly occupy any regions. Which of these we accept will depend on whether many singular referring terms are like ‘bank’ in that the fusion of the relevant set of events is a poor candidate to be the location of the thing we intend to pick out by ‘bank’. It will also depend on the extent to which ordinary folk are wedded to the idea that objects are exactly located somewhere, and thus are willing to say that they are, sometimes, exactly located in surprising regions.

What we can say is that transcendentism does not offer us a new account of the metaphysics of occupation. Moreover, the semantics it offers for talk about objects across times and worlds is consistent with the view that objects *do* exactly occupy regions and that they do so in one of the three standard ways.

**References**

Parsons, J. (2007). “Theories of location.” Oxford studies in metaphysics, 3. 201-232.

TPP (full reference to come)

1. Occupation, in this context, is the same as location. The authors TTP frequently talk of objects being located (exactly or not) at regions. This paper will more frequently talk about objects occupying (exactly or not) regions since this language is a little more familiar. [↑](#footnote-ref--1)
2. Exact occupation is analogous to exact location in TTP. Namely, X exactly occupies R iff none of X falls outside of R, and none of R is entirely free of X. Here, the authors of TPP follows Parsons (2007). [↑](#footnote-ref-0)
3. An object, X, occupies (as opposes to exactly occupies) a region, R, iff none of R is free of X. [↑](#footnote-ref-1)
4. To wit, for example, x occupies r iff r is not entirely, determinately, free of x. x exactly occupies r iff x occupies r, and there is no sub-region of R that is determinately free of x. [↑](#footnote-ref-2)