

A RIDDLE ABOUT REFERENCE

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This article examines whether it is possible to coherently hold the conjunction of a causal theory of reference² – i.e., roughly, the view that what makes an utterance refer to an object is a causal relation between the two – and platonism – i.e., roughly, the view that there are abstract objects, such as numbers or relations.³ The two are apparently in contradiction: The causal theory says that a causal relation between an utterance and an object is necessary in order for that utterance successfully to refer to that object, while platonists standardly hold that we can and do refer to abstract objects, and that abstract objects are incapable of standing in causal relations.

Both platonism and causal theories of reference have been embraced widely, though by no means universally, in recent philosophy,⁴ and so, any apparent contradiction between the two should be of concern for the many philosophers who want to embrace both. For such philosophers, I shall argue, things are neither as bleak as they may seem, nor as good as they could be; while there are at least two possible ways of reconciling platonism and the causal theory, both commit us to controversial metaphysical theses.

1. Causal Theories of Reference

Here I shall neither need nor attempt a complete and precise account of what it is for a theory of reference to be causal. Many such accounts have been formulated, with varying degrees of precision. The picture of the causal theory that Saul Kripke gives in *Naming and Necessity* (1980), for example, is notoriously gnomic. In addition, there are several possible varieties of the causal theory. One can be a *reductive* causal theorist, insisting that for an utterance to stand in an appropriate causal relation to an object just *is* what it is for that utterance to be successfully referring to that object. Or, one can be a *non-reductive* causal theorist, claiming that the reference relation and the appropriate causal relation are distinct, but that the latter grounds, explains, or necessitates the former. Such distinctions, however, are not very relevant to this paper, which relies on only one very plausible assumption about causal theories *that they all entail that, necessarily, if an utterance success-*

*fully refers to an object, then some causal relation obtains between that utterance and that object.*⁵ Call this the *Minimal Requirement*.

An immediate worry might be that the Minimal Requirement seems to commit the causal theorist to a certain, contentious theory about causality. More specifically, with its talk of causal relations between speakers and referents, the Minimal Requirement seems to suggest that objects can be relata of the cause-effect relation (henceforth, C). This view, commonly dubbed *agent causation*, is highly contentious; it is far more common to say that only events (or, alternatively, states of affairs) can be relata of C.⁶

Thankfully, however, this worry is unfounded; the causal theory does not presuppose agent causation. It may well be that the utterance and the reference are not relata of C, but that the relata are rather events in which they are involved. (I will get back to what it means for an object to be involved in an event; for the moment, I take the rough meaning to be intuitively obvious.) In other words, in order to stand in a causal relation, two objects need not literally be relata of *the* causal relation. Rather, two objects stand in a causal relation just in case they are either relata of C or involved in events that are relata of C. This is not to say that the causal theory presupposes event causation either – simply that the causal theory does not (or does not seem) to commit us to any particular theory of causation.

2. Platonism

Here are three theses, the conjunction of which is believed by many philosophers:

Existence: There are abstract objects, such as numbers and relations.

Effeteness: No abstract object can enter into causal relations.

Reference: We can (and often do) make utterances that refer to abstract objects.

The motivation for Existence is too big a topic to cover with the depth it deserves here, but the most common argument in its favor is roughly that there seem to be many indisputably true statements that quantify over abstract

objects, and therefore entail that there are such things.⁷ Thus, the argument goes, one cannot consistently commit oneself to the truth of such statements as “There are infinitely many natural numbers” (whose truth we *are* all committed to) without also committing oneself to (in this case) the existence of natural numbers, and therefore of numbers, period, and therefore, finally, of abstract objects, of which numbers are presumably one kind. This explains why Existence goes hand in hand with Reference: Given not only that abstract objects exist, but that we can and do quantify over them, it seems overwhelmingly likely that we can also refer to them (or at least to many of them). For example, it would be a pretty strange theory which claimed that numbers exist and that statements like “There are infinitely many natural numbers” say (or at least imply) as much, but which also denied that numerals like “5” are proper names of numbers.

The motivation for Effeteness is that abstract objects are eternally (or timelessly) and necessarily the way they are.⁸ In other words, at no time do they lose or acquire properties, nor could they have had other properties than the ones they have. For example, the number 5 is necessarily a prime number, and will always be and has always been a prime number. Things could not have turned out so that 5 was not a prime, nor will we wake up tomorrow and discover that 5 ceased to be a prime while we were sleeping, so that we must now update our mathematics accordingly. Now, change at least always involves (and maybe *just is*) the acquisition or loss of properties, and being involved in a causal chain always seems to involve change. Thus, if abstract objects could be involved in causal chains, it seems they could also lose or acquire some of their properties. But this, we have seen, is not possible.

Note that this does not apply to what Peter Geach (1969) has called “mere Cambridge change.” Impressionistically put, “mere Cambridge change” is change that does not involve any *real* intrinsic change to the object that undergoes it, as the properties the object loses or acquires are entirely relational and extrinsic. For example, if Alice, who was previously precisely as tall as Bob, grows seven inches while Bob remains at his previous height, Alice has thereby undergone a true (i.e. not a mere Cambridge) change – viz., that of acquiring the property of being taller than Bob. Bob, on the other hand, who has now acquired the property of being seven inches shorter than Alice, has undergone what is in this context (though certainly not in

all others) a mere Cambridge change. Now, although abstract objects cannot undergo true change, they clearly *can* undergo mere Cambridge change. For example, at some point during my childhood, the number 5 underwent a mere Cambridge change when it acquired the property of being believed by me to be a prime number.

3. The Riddle

As should now be obvious, platonism (as I have defined it) and the causal theory of reference (as I have characterized it) are in contradiction.

If the causal theory is true, then every object to which I can refer is one to which I can bear some causal relation, and every object to which I *do* refer is also one to which I *do* bear some causal

relation. Platonism, on the other hand, states that there are some objects (by Existence) to which we both can and regularly do refer (by Reference) but to which we neither do nor can bear causal relations (by Effeteness). Thus, platonism and the causal theory, as they stand, cannot both be true.

As previously alluded to, I assume that we want to be both causal theorists and platonists, and will therefore consider some possible ways to dissolve this contradiction. Before that, however, I will say a few words about another kind of solution.

4. (Dis)solving the Riddle

4.1 Elimination and Revisionary Solutions

There are at least two broad ways of solving the apparent contradiction between the causal theory and platonism. One is to give up entirely on either platonism or the causal theory. Another is to revise either platonism or the causal theory so that we can keep holding to the spirit (if not the original letter) of both without being inconsistent. Call the first kind of solution *eliminative*, and the second kind *revisionary*.

As mentioned, I will soon consider some possible revisionary solutions to the problem. Before that, however, it is worth saying a few words about eliminative solutions and why I will not be devoting much space to them.

One reason is that this paper is addressed to philosophers who would like to be both platonists and causal theorists. To such philosophers, revisionary solutions are obviously preferable to eliminative ones. However, even if no revisionary solution should be available, forcing us

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to opt for an eliminative one instead, I cannot here take a position on which eliminative solution is to be preferred, for the following reason.

There is a saying that one man's *modus ponens* is another man's *modus tollens*. In other words, given that $A \rightarrow B$, we can assume that A, and validly infer that B, or assume that $\neg B$ and validly infer that $\neg A$. In which of these ways we will and should reason is given by how antecedently plausible A and B are. If we would rather accept B than give up A, we will reason in the first way; but if we would rather give up B than accept A, we will reason in the second way. Now, to say that the causal theory and platonism are inconsistent – i.e., to say “ $\neg(\text{CT} \ \& \ \text{Platonism})$ ” – is just another way of saying “ $\text{CT} \rightarrow \neg\text{Platonism}$ ” (or, equivalently, “ $\text{Platonism} \rightarrow \neg\text{CT}$ ”). Thus, given that $\text{CT} \rightarrow \neg\text{Platonism}$, we can assume the causal theory as a premise and validly infer that platonism is false, or we can assume platonism as a premise and validly infer that the causal theory is false. Again, which of these ways we will and should reason is given by how independent plausible platonism and the causal theory are. Thus, in order to decide which eliminative solution to plump for, we must first adjudicate between platonism and the causal theory, taken in isolation. But that is not a task that can be undertaken in the space of this paper – nor, arguably, is it inside its remit. The purpose of this paper is to examine the relation between the causal theory and platonism, rather than those two positions taken individually.

Let us therefore set aside the eliminative solutions and move on to revisionary solutions.

It is hard to see how a theory of reference that does not fit the Minimal Requirement could be considered a true causal theory; platonism is a more promising candidate for revision. Intuitively, we will have salvaged the bare bones of *that* theory if we can continue to hold to Existence, even if we must give up Effeteness or Reference along the way. Suppose now that we *do* want to hold to both Existence and the causal theory; then we must indeed seemingly reject either Reference or Effeteness. Now, denying Reference is an unpromising tack. After all, and as mentioned, most platonists are, in virtue of their grounds for being platonists in the first place, committed to the claim that we can (and regularly do) make statements that refer to such objects (as in, “Five is a prime number”).

This leaves us with Effeteness, which I will now consider two possible motivations for rejecting.

4.2 The Event-Causal Solution

As mentioned, there are several views of what it means

for two objects to be causally related. On agent causation, there is seemingly no reason not to say simply that the objects are literal relata of C. On event causation, on the other hand, the way for objects to be causally related is for them to be involved in *events* that are relata of C. Consider the stock example of a rolling billiard ball bumping into another, stationary ball, causing the second ball to start rolling. An adherent of agent causation would presumably say that what is happening here is exactly what many of our natural-language statements about the event (e.g., “The first billiard ball caused the second to start rolling”) seem to be saying: That C bears between the first billiard ball and the event of the second billiard ball's beginning to roll. An adherent of event causation, on the other hand, would presumably say that the two billiard balls are causally related because they are involved in *events* that are causally related – viz., the first billiard ball's hitting the second, and the second beginning to move.

Now, it seems pretty clear that abstract objects can be involved in events. For example, when two mathematicians discuss Graham's number, Graham's number is intuitively somehow involved in the event of that discussion. But if being involved in an event that is a relatum of C is all it takes to stand in a causal relation to something, it becomes obviously false that abstract objects do not stand in causal relations. After all, they are involved in such events all the time. Thus, on event causation, Effeteness loses its plausibility.

However, surely even an adherent of event causation would have to concede that abstract objects lack some of the causal powers (however he wishes to analyze “causal powers”) that concrete objects have. For example, while Graham's number may be involved in the mathematicians' discussion, it seems absurd to say that Graham's number could ever *cause* a conversation. How can an adherent of event causation do justice to this intuition? One way is to draw a distinction between passive and active involvement in an event. Intuitively, an object is actively involved in an event just in case, in some appropriate and broad sense, it acts upon something else in that event, and passively involved in the event just in case it does not act upon something else, but is merely acted upon (in the same broad sense) in that event.

However, this talk of acting is problematic from an event-causal perspective. It is, after all, a consequence of

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event causation that no agent ever really acts in the strict sense (i.e., in the sense of occupying the first place in C), and that all true statements that appear to say otherwise (e.g. “The first billiard ball caused the movement of the second billiard ball”) can be paraphrased to accord with this. To put the same point in another way, if there is no such thing as agent causation, then we do not strictly *need* to invoke agents to explain why things happen; we need only invoke events. Thus, from the event-causal perspective we are currently toying with, such talk must be regarded as, at most, a convenient *façon de parler* that can be paraphrased into more literally accurate (but also, perhaps, more cumbersome) talk that makes no reference to agents. Do we have a strategy for paraphrasing away agent-talk in this way though? Possibly. I propose the following analysis: An object is passively involved in an event just in case (a) the best and most natural complete description of the event refers to the object and (b) the event causes either no change or a “mere Cambridge change” in the object; while an object is actively involved in an event just in case (a) the best and most natural complete description of the event refers to the object and (c) the event causes a true (i.e. not a “mere Cambridge”) change in the object.

This analysis has the virtue that it illustrates how the distinction between active and passive involvement is tied up with the distinction between mere Cambridge change and true change. It thereby also does justice to the intuition that abstract objects can be caused to undergo mere Cambridge change, but can neither cause anything themselves, nor be caused to undergo true change. Thus, event causation seems to give us one way of resolving the apparent contradiction between platonism and the causal theory. However, event causation, while fairly widely accepted, is by no means an uncontroversial view. The solution therefore does not come at a negligible cost.

4.3 The (Divine) Conceptualist Solution

The kind of platonism I have characterized here is what Øystein Linnebo (2013: sct. 5) calls “lightweight platonism.” In other words, while it says that there are abstract objects (hence “platonism”), it does *not* say that they are mind-independent (hence “lightweight”): They need not, for all our version of platonism says, reside in a supermundane “Third Realm,” but could just as well be thoughts, ideas, or other mental states or properties

(henceforth simply “thoughts”). The view that abstract objects are indeed thoughts is known as *conceptualism*, and may provide us with another motivation for rejecting Effeteness. The idea, roughly, is this: thoughts are not (most philosophers would say) causally effete. Thus, if abstract objects are thoughts, abstract objects are not causally effete, rendering Effeteness false and dissolving the riddle.

However, conceptualism is a notoriously problematic view. One difficulty with conceptualism can be brought out by distinguishing between *thought-types* and *thought-tokens*. The distinction should, to those already acquainted with the type-token distinction, be fairly obvious and intuitive; thought-types are kinds or categories of thoughts, and can be shared by several subjects, while thought-tokens are the particular, concrete thoughts of particular subjects. Thus, for example, if Bob and I share the belief that snow is white, we have between us one thought-type (viz., the belief that snow is white) and two thought-tokens (viz., *Bob’s* belief that snow is white and *my* belief that snow is white). We can now ask whether the conceptualist’s abstract objects are thought-types or thought-tokens. Call the view that abstract objects are thought-types *type conceptualism*, and the view that abstract objects are thought-tokens *token conceptualism*.

There are several problems with type conceptualism. Firstly, it is not clear that it is a kind of conceptualism at all. We can easily tell a story in which thought-types are mind-independent, in the sense that they exist regardless of whether or not they are instantiated in thought-tokens, and so do not depend for their existence or properties on the thoughts of any subject. Indeed,

on this view, thought-types would exist even if there were no subjects at all – they would just be universally un-instantiated. To adopt type conceptualism could therefore, it seems, simply be to accept that all (mind-independent) abstract objects are reducible to one kind of (mind-independent) abstract object. While such a venture is by no means worthless (many philosophers, for example, have tried to reduce properties, numbers, and the like to sets), it will not solve the problem we want to solve here. After all, if thought-types could be mind-independent abstract objects, then they could also be as incapable of standing in causal relations as other mind-independent abstract objects are usually held to be. In other words, type conceptualism could, given its possible commitment to the mind-independent existence of abstract thought-types,

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easily qualify as a form of “heavyweight platonism” (and thus not as a form of “lightweight platonism”). But the idea that a theory could be both conceptualist and heavyweight platonist at once seems hard to swallow. If conceptualism qualifies as a kind of platonism at all, it is surely of the lightweight variety. Besides, regardless of whether or not thought-types depend on thought-tokens for their existence, it seems undeniable that thought-tokens have causal powers, while it is far less clear that this is true of thought-types. For example, it is *my* particular intention to go for a Sunday stroll that causes me to go for a Sunday stroll, not *the* general intention to go for a Sunday stroll. Thus, type conceptualism might not be a conceptualist theory at all – and even if it is, it might not give us a reason to reject Effeteness. Thus, it is hard to see how type conceptualism could furnish us with a solution to our riddle.

We are thus left with token conceptualism. While it is nearly universally accepted that thought-tokens are not causally effete, token conceptualism has some other startling consequences. Here are two very plausible claims about thought-tokens: (a) they must be the thoughts of some (not necessarily human) subject; and (b) any thought-token is essentially the thought of this or that particular subject. In other words, a thought-token must be the thought-token of the same subject at every time and in every possible world in which it exists. The plausibility of (a) is brought out by the fact that I have defined thought-tokens precisely by saying that they can only be had by one subject, and not shared by many. Thus, it is not clear that a thought that is not had by at least one subject is a thought-token at all. The plausibility of (b) is brought out by the fact that it is natural to denote thought-tokens with definite descriptions of the form “S’s thought that p,” as I have already done. In other words, a thought-token is defined by – and thus, plausibly, has as a necessary identity condition – being a’s thought and not someone else’s.

Now, most abstract objects, if they exist at all, are necessary and eternal entities. Thus, token conceptualism entails that some thought-tokens (viz., those that are abstract objects) are necessary and eternal beings. Since the foregoing observations tell us that these thoughts must always (in both the temporal and the modal sense) be the thoughts of the same subject, this entails that there exists a necessary, eternal, and thinking being. Further, the mind of this being must be vastly different from and much more complex than our minds, for otherwise it would not be able to keep every abstract object in mind

at once.⁹ Given that the number of abstract objects is infinite, it also seems that this being must itself be in some sense infinite. And, it must possess immense causal powers, for otherwise it would not be capable of standing in causal relations to every utterance that has ever successfully referred to an abstract object. Finally, it must arguably be immaterial, since it is difficult to see how a being with the aforementioned features (particularly infinity and necessary existence) could be a material entity.

As the reader may have sussed out, this is starting to sound a lot like an argument for the existence of God. This is not meant as an insult. The view that abstract objects are thoughts or ideas in the mind of God, known as *divine conceptualism*, has a storied history as well as many current defenders, and is the view of abstract objects that I am myself most sympathetic to. However, accepting divine conceptualism obviously also commits us to theism. Thus, this solution, even more so than the first, commits us to a contentious metaphysical thesis.

Conclusion

As we have seen, there are at least two possible revisionary solutions to the apparent contradiction between platonism and the causal theory. However, both require us to adopt contentious metaphysical theses: event causation and divine conceptualism. This will not trouble those who find event causation or divine conceptualism independently plausible: *they* will simply take it as another piece of evidence for their theory. However, it should give pause to those philosophers who are inclined to accept both platonism and the causal theory, but who are inclined to reject

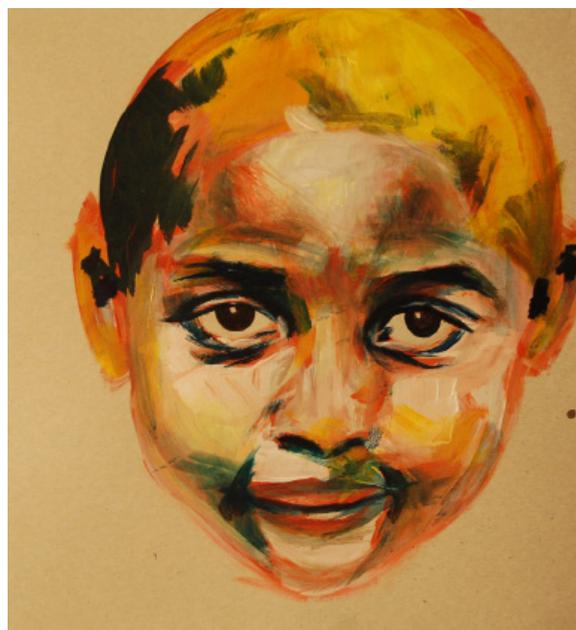


Illustration: Martina Mercellora

both event causation and divine conceptualism.

I recognize, of course, that most philosophers would regard the second solution as much more costly than the first. For one thing, the divine conceptualist solution burdens us with a certain ontological commitment, while the event-causal solution does not. For another, though both theism and event causality are contentious theses in the sense that they do not command total or near-total consensus, theism is far more controversial; most philosophers accept event causation, but reject theism. However, I still prefer the divine conceptualist solution, for two reasons. Firstly, I think we have good independent reasons to accept both theism and divine conceptualism. Secondly, I see several problems with the event-causal solution. At the heart of these problems lies the intuition that if our causal interaction with abstracts

objects amounts to nothing but mere Cambridge change and passive participation, there is an important sense in which we do not *really* causally interact with abstract objects at all. And while one could no doubt formulate causal theories of reference on which such “thin” causal interaction is enough to secure successful reference, I have serious doubts about whether any of them would be all that plausible.

Alternatively, it could well be that the problem has a less metaphysically contentious solution. Or, it may be that either platonism or the causal theory is not all that independently plausible after all, and that the correct solution is an eliminative one. Even if this should be the case, however, I hope to have shown the deep and often surprising ways in which metaphysics interacts with the philosophy of language.

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NOTES

¹My thanks to Ludvig Fæhn Fuglestad, Sebastian Salinas Thoresen, and Dag Dramer for their editorial assistance. This would have been a very different – and much poorer – paper without their help. Any remaining errors or shortcomings are, of course, mine.

²A note on terminology: As we shall shortly see, there is more than one way to be a causal theorist about reference. Thus, there are many different causal theories of reference. It is to these (or to an arbitrary one of these) that I refer when I speak of “a causal theory of reference,” “some causal theory,” “causal theories,” etc. I will also speak of the causal theory of reference, which I simply take to be the view that one of the causal theories is correct.

³Note the difference between this lowercase-“p” platonism, which has only the faintest relation to Plato’s doctrines, and uppercase-“P” Platonism, which consists precisely in adherence to those doctrines.

⁴See e.g. the PhilPapers Survey, whose results are summarized in Bourget & Chalmers (2014). 39.3% of the respondents in that survey reported that they were platonists about abstract objects. While the survey does not ask directly about the causal theory, it does feature the item “Proper names: Fregean or Millian?”. 34.5% of respondents reported Millianism about proper names, which it is reasonable to assume is strongly correlated with adherence to the causal theory.

⁵I am, of course, not claiming that any kind of causal relation between utterance and referent is sufficient to ensure successful reference. As far as I know, all causal theorists hold that the causal relation needs to be of a certain, special kind, though they differ on what kind. Rather, I claim that, according to causal theorists, some causal relation or other is always (and indeed necessarily) a necessary condition of successful reference.

⁶I take it that agents, states of affairs, and events are the three plausible candidates for being relata of C; see e.g. Lowe (2002: pts. III & IV), which seems to operate on this same assumption. Though I will henceforth restrict myself to discussing event causation and agent causation, everything I say about event causation also applies to state-of-affairs causation as far as I can see.

⁷See, e.g., Colyvan (2014) for a survey of “indispensability arguments” for the existence of numbers, which work along these lines, and van Inwagen (2004) for a similarly premised case for the existence of properties.

⁸There are some possible exceptions to this principle, notably works of fiction. For convenience, however, these will harmlessly be overlooked here. The omission is harmless because, as we will see, all we need in order for there to be a problem is for the conjunction of Effeteness and Reference to be true of some abstract objects, not necessarily of all abstract objects.

⁹For all I have said so far, it could be that there are several necessary and eternal beings, each of which has just some abstract objects in mind. But since one such being will do, Occam’s razor discourages us from entertaining this possibility.