A Communication Problem for Contingent Concrete Propositions

Abstract

A number of philosophers think that propositions, taken to be the primary bearers of a truth-value, are *contingent concrete* things made of concrete materials, such as ink or neurons. I show that this concretist theory falls prey to an unforeseen mereological puzzle concerning the relationship between a truth-bearer and its possible concrete representations. I then consider certain concretist theories that can avoid the puzzle, and I argue that the most promising solutions require treating propositions as either necessarily existent or (in some sense) a-modal. The argument I give brings to light a certain mereological problem with supposing that communicable propositions are contingent concrete complexes. The argument advances the debate over the nature and structure of things that may be true or false.

A Communication Problem for Contingent Concrete Propositions

> "[It is] uncontroversial that there are propositions. The only question that could arise is 'What are propositions?'" (van Inwagen 1983: 31-32).

Suppose for the sake of argument that there are such things as *truths* and *falsehoods*. Call such things 'propositions'. I leave open at the outset what sort of thing a proposition might be: perhaps they are sentences, thoughts, utterances, or something else. I assume only that *there are* propositions—understood as bearers of a truth-value. (So we may translate "there is a proposition" as "$\exists x$ True(x) $\vee$ False(x).") I also leave to the side important questions about *how* a thing—whether abstract or concrete—might manage to bear a truth-value. I begin with the common conviction that, somehow, there are truths and falsehoods.

My goal is to introduce an argument against the theory that all truth-value bearers are contingent, spatially situated entities of some kind.[1] The argument isn't meant to close off all concretist theories: I leave open the possibility of motivating certain *non-contingentist* concretist theories that do not fall prey to my mereological challenge, as we shall see. I also say nothing in defense of the abstractionist alternative. For all I say, the abstractionist theory may suffer from greater problems of its own. My argument brings to light an unforeseen connection between certain mereological principles and what are perhaps the most popular concretist theories of propositions. Thus, I hope to inspire believers in concrete propositions to go further in developing a theory of the sorts of things that can be true or false—by developing a theory of concrete propositions, perhaps, that can overcome the mereological challenge.

[1] Concretism about propositions is attractive to philosophers who prefer to work with "this-wordly" concrete objects rather than posit "extra-worldly" Platonic objects. David Armstrong (in *A World of States of Affairs*, pp. 131, 188), for example, takes propositions to be classes of mental state tokens, where classes are spatially located. More recently, in *Truth and Truthmakers* (pp. 15—6), he favors the view that propositions are properties of (concrete) intentional objects (such as beliefs or statements), where uninstantiated propositions are "deflated".

The argument I shall give is inspired by our apparent ability to communicate a proposition using *distinct* physical representations. Some philosophers have suggested that communication across different languages is impossible if all propositions are identical to their concrete representations (whether on paper or in brains).[2] Suppose they are right. Even still, it doesn't immediately follow that propositions are not concrete. Perhaps they are identical to some other concrete thing. One idea is that a truth-value bearer is identical to some sort of combination of *all* its physical representations. Tarski, for instance, suggests that truth-value bearers might be treated as "classes" of sentence tokens.[3] And if "classes" are spatially scattered fusions of their members, as some philosophers have suggested,[4] then Tarski's truth-value bearers are still concrete. Of course, one might well wonder how any such aggregate could be a bearer of truth or falsity: could scatted matter of this sort really exemplify *truth*? It's a deep and difficult question, but I will grant, if only for the sake of argument, that even such wildly scattered matter may exemplify a truth-value.[5] Instead, I will pursue a *mereological-based* objection that fills out and extends the "communication-based" argument. My argument raises a problem with treating primary bearers of a truth-value as a contingent concrete thing of any kind.

I will give an argument, then, against the following thesis:

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[2] See, for example, Loux, *Metaphysics: a Contemporary Introduction*, pp. 121–130.

[3] See "The Semantic Conception of Truth and the Foundations of Semantics", p. 342, n. 5. Tarski considers the bearers of truth to be "sentences," and he suggests that a *sentence* is a class of inscriptions of a similar form. Since I stipulate that a "proposition" is whatever bears a truth-value, I take Tarski's suggestion to be that a proposition (truth-value bearer) may be a class of physical inscriptions.

[4] Such as Lewis (in *On the Plurality of Worlds*, p. 83) and Maddy (in *Realism in Mathematics*, p. 59). Cf. Cartwright, "Scattered Objects".

[5] Note also that if there is a significant problem here with explaining how a fusion of inscriptions could bear a truth-value, there may be an equally significant challenge of explaining how an *abstract* entity could bear a truth-value. The question of how something could have a truth-value is a general question that afflicts concretists and abstractionists alike. I'd like to investigate instead a problem that uniquely targets the concretist conception of propositions. But for one account of how an abstract thing could bear a truth-value, see Rasmussen's "How Truth Relates to Reality".

CONCRETE: All propositions are spatially situated, contingent concrete particulars (such as sentence tokens, physical utterances, brain states, or classes of such entities).

My argument draws out a surprising consequence of supposing that any truth-value bearer is communicable. For fun, I will run the argument in terms of our apparent ability to communicate CONCRETE. But there is nothing special about CONCRETE: we may run a similar argument for any proposition that one might communicate. The outline of the argument, then, is as follows:

1. CONCRETE is something that people can communicate.

2. If CONCRETE is something that people can communicate, then possibly, *multiple* spatial particulars express (i.e., represent or help bring to mind) CONCRETE.

3. Necessarily, if multiple spatial particulars express CONCRETE, then CONCRETE would still be expressed if any *one* of those expressers of CONCRETE were eliminated.

4. Therefore, possibly, there is exactly one expresser of CONCRETE. (1–3)

5. Necessarily, if CONCRETE is true, and if exactly one thing *O* expresses CONCRETE, then CONCRETE is identical to *O*.

6. Therefore, if CONCRETE is true, then it's possible that CONCRETE is identical to *O*. (4, 5)

7. If it's possible that CONCRETE is identical to *O*, then it's not possible that CONCRETE is *not* identical to *O*.

8. Therefore, if CONCRETE is true, then it's not possible that CONCRETE is not identical to *O*. (6, 7)

9. It is possible that CONCRETE is not identical to *O*.

10. Therefore, CONCRETE is not true. (8, 9)

Let us consider each premise in turn. Start with (1): CONCRETE is something that people can communicate. I don't expect this premise to generate much controversy. If CONCRETE cannot be communicated to anyone, then it's hard to see how there could be any genuine *disagreement*

over whether or not CONCRETE is true. People plainly do disagree about CONCRETE. Therefore, it seems that CONCRETE can be communicated—in some way, somehow.

Of course, the first premise assumes that CONCRETE actually *exists*. One may reject that assumption if one denies that there are *things that are true*. But the premise that there are true things is a preliminary assumption that orients us to the debates over the nature of truth-value bearers. So, I take it to be dialectically appropriate in the present context to work with the assumption that there are true things.[6] If there are true things, then it is undeniable that there is such a thing as CONCRETE, especially if CONCRETE is *true*. (If CONCRETE exists but is *not* true, then our destination is already reached—for then it is not true that all propositions are spatial.)

Consider, next, (2): if CONCRETE is something that people can communicate, then possibly, *multiple* spatial particulars (sentence tokens, brain states, etc.) express CONCRETE. The idea here is that in order to communicate something to someone, one must *represent* it in some way. To draw this out, suppose you have an objection to one of George Bealer's arguments for abstract propositions. Then in order for you to communicate that objection to someone, you've got to somehow represent it in words or with speech (or by some other means): you've got to do *something* to the physical world to display or express the objection you have in mind. That is necessary for communication as we know it.

Now I do not claim that CONCRETE *must* be expressed by multiple things in order for it to be communicated. A single expresser will do: for example, I could carve a sentence token in some sand and then invite my friends to have a look at the carving in the sand. What I claim, rather, is that CONCRETE is the sort of thing that *can* be expressed by multiple things.

[6] By 'thing' I mean *whatever* is included in our widest domain of quantification. So, for example, if there is the number 7 (if $\exists x$ (x is the number 7)), then the number 7 counts as a "thing".

Why think that CONCRETE can be expressed by multiple things? My answer is that CONCRETE apparently *has been* expressed by multiple things. Suppose there is right now just one object somewhere that expresses CONCRETE. Where might it be? Is it on a page in front of you? Is it on a page in front of *me*? Truth be told, the first token of 'All propositions are spatially situated, concrete particulars' was typed onto a computer screen that has long since vanished—since I have put my computer into hibernation mode since then. (Technically, the pixels "making up" the initial sentence token were refreshed multiple times before I even finished typing it out.)

Perhaps the one and only expresser of CONCRETE is located in a region in someone's brain—*my* brain, perhaps. Wherever it is, we could find it and destroy it—at least in principle. So suppose, for example, that the expresser of CONCRETE is located in my brain. Next, someone destroys my brain. Then the one and only expresser of CONCRETE no longer exists—a sad day, indeed. As a result, the debate over CONCRETE is effectively terminated, since *nothing* expresses CONCRETE. Moreover, the only way to begin debating CONCRETE again is to somehow reassemble the part of my brain that had expressed CONCRETE. But that's absurd: surely the debate over CONCRETE does not depend upon whether *my* brain exists. (Now perhaps if *everyone's* brains were destroyed, *then* the debate would end; but that's an entirely different matter.) The debate over CONCRETE doesn't depend upon me. All of this suggests that things other than parts of my brain can express CONCRETE. In summary, the observation that CONCRETE can be communicated to different people in different places strongly supports the premise that many things can express CONCRETE. Concretists may accept this much.

Turn, next, to (3): necessarily, if multiple spatial particulars express CONCRETE, then CONCRETE would still be expressed if any *one* of those expressers of CONCRETE were eliminated. Here is a subtraction argument in support of this premise. Suppose there are at present 55 things

that in fact express CONCRETE. Say that exactly one of those expressers is on my chalkboard. Suppose I erase my chalkboard. Now there are only 54 things that express CONCRETE, since one of the expressers has been destroyed, and no others have been added. So, CONCRETE is still expressed. (Those who think that past objects *exist* [tenselessly] may consider instead the counterfactual that if exactly one of 55 expressers of CONCRETE were to have not existed, then there would have been 54 expressers of CONCRETE.) There is nothing special about the number 54, of course: the same reasoning applies if there are 53 expressers, 52, 51, and so on. As long as there is more than one expresser, it seems we can subtract one of the expressers without causing any of the *others* to stop expressing CONCRETE. (In case someone is worried about a scenario in which one expresser is somehow contained within another, let us restrict our focus to expressers that don't mereologically overlap others. Nothing in the argument turns on this restriction.)

Moreover, the debate over CONCRETE is not be terminated merely by erasing a chalkboard or destroying a particular sentence token. As long as *someone* can entertain CONCRETE (perhaps by having a brain state that represents it), it seems that CONCRETE would still be open for debate—and so would still exist. Anyone who denies this premise faces the challenge of accounting for the sense in which people could seemingly continue to debate CONCRETE. (The nominalist strategy of accounting for "sameness" in terms of *exact similarity* won't help us here, since the spatial expressers of CONCRETE are manifestly not all exactly similar; indeed, there seems to be no limit to how different the geometries of the expressers may be.)

The next step is (4): therefore, possibly, there is exactly one expresser of CONCRETE. This conclusion follows from the subtraction argument we've just seen: expressers of CONCRETE can

be deleted one by one until there is just one expresser of CONCRETE. Moreover, (4) seems plausible in its own right: it seems that any proposition *could* be expressed by just one expresser.

I should emphasize that although the steps in the argument so far may be acceptable to many concretists, I do not insist that the pathway is unavoidable for all possible concretists. A concretist who is a *necessitist*, for example, will think that everything necessarily exists and that therefore a proposition cannot have different expressers than the ones it in fact has.[7] She will reject premise (3). Alternatively, a concretist who is a modal realist may analyze propositions as fusions of all their *possible* token representations, where merely possible objects are concrete things scattered across various concrete Lewis worlds.[8] Such propositions span across multiple worlds: no proposition fully exists *within* a possible world. Thus, one might say that these propositions are "a-modal" in that their (full) existence doesn't depend upon which world is actual. On this framework, every expresser of CONCRETE must exist somewhere—i.e. in some spatial-temporal universe—and the subtraction argument for (3) fails.[9] So, there are escape routes.

Even still, many concretists think of truth-value bearers as contingently existing things, such as sentence tokens or brains states that occupy space *within* a single world.[10] So, if we learn that *these* theories fall prey to the mereological puzzle, then we have learned something valuable. And if we learn that the best way to solve the puzzle is to treat propositions as necessarily

[7] For a defense of necessitism, see Williamson, "Necessary Existents." Note, though, that on Williamson's view concrete objects are *contingently* concrete: so, for example, there are sentences tokens that have not been written, and they are non-concrete. So, Williamson's version of necessitism doesn't help concretists.

[8] See Lewis, *On the Plurality of Worlds*, pp. 81–85. I'm grateful to an anonymous referee for drawing my attention to this escape path.

[9] That is, if we interpret "subtraction" as elimination from every corner and region of reality.

[10] Mark Balaguer, for example, indicated in conversation that he thinks there are truth-value bearers, such as sentence tokens, and that all truth-value bearers are contingently existing concrete things. See also notes 1 & 3.

existent or as world-spanners, then we have learned another valuable lesson. Recall that my aim is to expose a problem with the usual *contingent* concretist theories of propositions. Thus, I aim to significantly clarify what's at stake in developing a concretist theory of propositions. Some major concretist theories are more expensive than we thought.

Premise (5) is next: necessarily, if CONCRETE is true, and if exactly one expresser *O* expresses CONCRETE, then CONCRETE is identical to *O*. Here is the reason. Suppose CONCRETE is true. Then CONCRETE itself is located somewhere in space. Where? Presumably CONCRETE is located where its expressers are located. *O* is the only expresser. So, CONCRETE has no place to be other than at *O*'s place. In other words, CONCRETE and *O* are co-located. For some philosophers, co-location may be bad enough. But some philosophers are willing to tolerate instances of co-location. One may think, for example, that a statue is an arrangement of the clay that constitutes it, even though the *clay* is not an arrangement of that very clay.[11] However, when it comes to CONCRETE and *O*, there is a more serious problem. The *O*'s arrangement is *exactly the same* as CONCRETE's arrangement. *O* is an arrangement of bits of ink (say) bearing certain spatial and semantic relations to things. And CONCRETE is an arrangement of those *same* ink bits bearing those *same* relations to those *same* things.

It is important to see how the situation involving the statue and the clay is different. Those who take the clay to be distinct from the statue take the clay to *constitute* the statue. We may say, then, that the statue is the clay *arranged a certain way*. In a sense, the clay is a proper part of the statue. By contrast, *O* doesn't constitute CONCRETE; and *O* isn't a proper part of CONCRETE. Object *O* is not something that is itself *arranged* to form CONCRETE. Rather, *O* is

[11] One might think of the statue as an arrangement defined by certain particles bearing certain, specific spatial relations to each other, whereas the clay is an arrangement defined by particles bearing different, more general (determinable) spatial relations to each other.

defined by certain spatial and semantic relations between certain concrete materials. The resulting arrangement looks like this: 'All propositions are spatially situated, concrete particulars'.[12] If propositions are indeed concrete, then it would seem that such semantically connected bits of matter would itself count as a proposition. But there is only one serious candidate for the proposition that *O* might be—namely CONCRETE. In other words, if CONCRETE is concrete, then *O* is one and the same arrangement as CONCRETE (in the case where *O* is the only expresser).[13]

Moreover, if we deny that *O* is identical to CONCRETE, then we face the problem of *too many arrangements*. The simplest identity condition for arrangements is that if arrangements *A* and *B* essentially consist of (are constituted by) the same things related in the same way, then *A* is identical to *B*. If, instead, we can have multiple arrangements consisting of the same things arranged in the same way, then it is impossible to *pick out* any particular arrangement among the indefinitely many duplicates. So, for example, there may be potentially infinitely many arrangements described by "the couch being two meters from the armchair". So how do we pick out one over the others? It makes more sense, I think, to suppose that arrangements of the same things related in the same way are simply one and the same. If we instead suppose that CONCRETE differs from *O*, then we face the challenge of explaining the way in which the

[12] Or maybe the arrangement (also) consists of "representational" bits of someone's brain.

[13] You might wonder why I am concerned with the case in which there is just one expresser of CONCRETE. Why not instead focus on the general case in which CONCRETE has any number of expressers? So, for instance, one might argue that CONCRETE, if true, should be identical to the *fusion* of its expressers, no matter how many expressers it has. Then to complete the argument against CONCRETE, one might argue that the fusion can't have different expressers, whereas CONCRETE can have different expressers. But this way of completing the argument requires the insecure premise that fusions cannot change their parts. (See van Inwagen, "Can Mereological Sums Change Their Parts?" for a reason to think that some fusions might well be able to change their parts.) The argument I give depends instead upon the much more secure premise that *O* is not necessarily identical to CONCRETE (because *O* is not something that must itself be *expressed* by whatever expresses CONCRETE). So, I focus on the case of *O* in hopes of giving a stronger argument.

arrangements differ.[14] Fewer arrangements are preferable. (Note that the statue may still be distinct from the clay, for although the statue is constituted by the clay, the clay isn't constituted by itself.)

Someone might wonder if "qua" objects can help. Suppose *O* is some concrete particular, and suppose CONCRETE is that same spatial particular *qua-proposition*. Then CONCRETE would be dependent upon, but distinct from *O*. But even if we can make sense of "qua" objects, this proposal contradicts our previous observation (in support of premise (3)) that CONCRETE can exist *independently* of any particular expresser, including *O*, since there can be other expressers instead. The problem applies *mutatis mutandis* for any qua object—and any set, for that matter—that is dependent upon particular expressers of CONCRETE.

From the premises so far, it follows that if CONCRETE is true, then it is possible that CONCRETE is identical to *O*. The next premise is (7): if it's possible that CONCRETE is identical to *O*, then it's not possible that CONCRETE is *not* identical to *O*. This premise is motivated by the *necessity of identity*: for any *x* and *y*, if $x = y$, then necessarily, $x = y$ (if *x* exists). For example, suppose Clark Kent is the same individual as Superman in some possible world *w*. Then in any other world *w** where Clark Kent exists, the individual who is Superman in *w* is the very same individual in *w** as the one who is Clark Kent in *w**. My impression is that many (though certainly not all[15]) analytic metaphysicians accept the principle. One might try to motivate the principle with an argument, such as the following: assume that for some *x* and some *y*,

7.1. Possibly, $x \neq y$ (while *x* exists).

7.2. Then there is a possible world *w*, such that $x \neq y$ (while *x* exists).

[14] Of course, there is good reason to think they *do* differ: after all, *O* expresses CONCRETE, whereas CONCRETE doesn't express *O*. But the point is that it is difficult to see *how O* and CONCRETE can be distinct *if CONCRETE is itself concrete*.

[15] See, for example, Gibbard's, "Contingent Identity".

7.3. Therefore, the following is *not* a feature of *y*: *being identical to x at w*.

7.4. The following is a feature of *x*: *being identical to x at w*.

7.5. Therefore, $x \neq y$. (by Leibniz's law)

7.5. Therefore, if $x = y$, then it's *not* possible that $x \neq y$ (while *x* exists). (7.1, 7.5)

7.6. Therefore, if $x = y$, then necessarily, $x = y$ (if *x* exists).

To complete the argument for (7) we add modal axiom **S5**, which licenses the inference from (a) *possibly*, necessarily, CONCRETE = *O* (if *O* exists), to (b) necessarily, CONCRETE = *O* (if *O* exists).[16]

On the other hand, advocates of *contingent* identity may object that arguments like these invariably contain a questionable premise or inference. Fortunately, there is an alternative route for those who may resist the necessity of identity. Suppose *O* is the only expresser of CONCRETE. And consider instead *this* premise: CONCRETE has the property of *possibly having O as a proper part*. The next premise is that *O* does not have that same property, since *O* cannot be a proper part of itself. From these two premises it follows that CONCRETE isn't the same thing as *O* (since CONCRETE has a property that *O* lacks). Notice that this result conflicts with premise (5), which concludes that CONCRETE, if true, is the same as *O* (since both are arrangements of the same materials related in the same way). It follows, therefore, that if *O* is the only expresser of CONCRETE, then CONCRETE is not true. And if CONCRETE fails to be true when expressed by just *O*, then it surely also fails to be true when it has multiple expressers.

So far, I have argued that *if CONCRETE is true*, then it is not possible that CONCRETE is not identical to *O*. The final premise, (9), denies the consequent: it says it *is* possible that CONCRETE is not identical to *O*. My reason for the premise is simple: CONCRETE in fact has multiple

[16] Alternatively, there is Kripke's argument for the necessity of identity based upon the concept of rigid designation. See "Identity and Necessity".

expressers—and *O*, if it exists, is just *one* of them. Since CONCRETE doesn't depend upon any one of its expressers (premise (3)), it follows that CONCRETE doesn't depend upon *O* and so is not identical to *O*. *A fortiori*, it is *possible* that CONCRETE is not identical to *O*. So, the consequent is false. The conclusion follows: CONCRETE is not true.