

# A Compositionalist's Guide to Predicate-Reference

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In this paper I develop and defend *compositionism*—which is a view about the relationship between our language and the world it represents—and use it to argue for particular account of predicate-reference.

Neither compositionism nor the conception of predicate reference I will argue for are novel views. They have been discussed, in different forms, by Frege, Dummett, Wright and Rosen (amongst others). But I hope my discussion will earn its keep by motivating compositionism in a new way, and by describing the relevant philosophical terrain in more perspicuous terms. (Pouring old wine into a new bottle might be a good idea, if the new bottle allows for a better appreciation of the wine.)

## 1 Language and World

In this section I will introduce compositionism. I will first argue that compositionism fits together with a natural picture of the way language works. I will then argue that it gives rise to a particular conception of reference for singular terms. Later, in section 2, I will argue that it gives rise to an analogous conception of predicate-reference.

### 1.1 The Social Picture of Language

I will start by describing the Social Picture of Language—a picture that strikes me as eminently sensible.

According to the Social Picture, language is a tool for social interaction. More specifically: it is a tool for communication. More specifically still: it is a tool for communicating by making speech acts.

And what is it to make a speech act? I will focus on the special case of assertion to keep things simple. (Speech acts of other kinds are to be modeled along similar lines.) On the Social Picture of Language, to make an assertion is to make a two-part proposal (Stalnaker 1979). First, one proposes that a *distinction* be drawn amongst the possibilities that are being treated as “live options” for the purposes of the conversation. Second, one proposes that the possibilities falling on one side of this distinction be *ruled out*. Suppose, for example, that three possibilities that are being treated as live options for the purposes of our conversation:

1. A democrat wins the election.
2. A republican wins the election.
3. An independent wins the election.

Now suppose I assert “neither of the established parties has a chance this year”. In doing so, I propose, first, that we divide the possibilities into two groups: possibility 3, on the one hand, and possibilities 1 and 2, on the other. I then propose that we rule out possibilities in the latter category. If my proposal is accepted, only possibility 3 will remain as a “live option” for the purposes of our conversation.

If language is (in part) a tool for making assertions, and if making an assertion consists in making a proposal about which of a set of possibilities to rule out, then language is (at least in part) a tool for making proposals about the ruling out of possibilities. How are we to model language, if this result is to be secured? The most natural strategy is to claim that each sentence in the language has a “meaning” of some sort, and that competent speakers are in a position to use sentence-meanings, in context, to decide which of the possibilities that are being treated as live options for the purposes of the conversation to rule out.

The Social Picture of Language therefore gives us some reason to think that sentences

have *meanings*. And, of course, if a language has infinitely many sentences, and if those sentences have meanings, then there is pressure to think that the language has meaningful sub-sentential expressions. For if the language is to be learnable by finite beings such as ourselves, it had better be *compositional*: it had better be such that there is a way of computing the meanings of sentences from the meanings of their constituent parts. So the Social Picture of Language gives us some reason to think that both sentences and sub-sentential expressions have meanings, at least in the special case of infinite languages.

## 1.2 Compositionality and Metaphysicalism

How is our language related to the world it represents? In this section I will consider two rival answers to this question: compositionality and metaphysicalism.

Compositionality and metaphysicalism are the extreme points of a spectrum of possible views, with a lot of space in between. By focusing my attention on the extremes, I hope to clarify the dimension along which positions along the spectrum differ, and show that the Social Picture of Language gives us some reason to prefer views that lie closer to the compositionalist side of the spectrum.

According to compositionality, the relationship between our language and the world it represents is relatively unconstrained. The only constraint on an assignment of *sentential* meanings is that it be generable compositionally from some assignment of sub-sentential meanings, and the only constraint on an assignment of *sub-sentential* meanings is that it allow one to generate one's preferred assignment of sentential meanings compositionally.

The metaphysicalist agrees with the compositionalist that the meanings of sentences should be generable from the meanings of their constituent parts. But she goes beyond compositionality by endorsing the following four claims:

**Facts** If a sentence has been assigned the truth-condition that  $p$ , and if the world is such as to satisfy the condition that  $p$ , then the sentence “describes” a particular feature of the

world: it describes the fact that  $p$ .

(What is a truth-condition? A sentence's truth-condition is the condition that the world would have to satisfy in order for the sentence to count as true. The truth-condition of "Socrates is wise", for example, is the condition that Socrates be wise. Thus, since the world is such as to satisfy the condition that Socrates be wise, "Socrates is wise" describes a particular feature of reality: it describes the fact that Socrates is wise.)

**Objective Structure** Facts are "objectively structured": they are articulated into components, not by the manner in which *we* happen to represent them, but by the intrinsic character of the relevant feature of the world.

For instance, a metaphysicalist might think that the fact that Socrates is wise is objectively structured into two components: Socrates and the property of wisdom.

**Uniqueness** Each fact has a unique objective structure.

Consider, for example, the fact that Socrates died. Suppose it is objectively structured into two components: Socrates and the property of having died. Then it cannot also be objectively structured into, say, an event of dying, Socrates, and the relation of being an agent.

**Metaphysical Reference** In order for an atomic sentence to succeed in describing a fact, two conditions must be satisfied: (i) the compositional structure of the sentence must be *isomorphic* to the objective structure of the fact, and (ii) the linguistic item at each terminal node of the compositional structure of the sentence must *refer* to the item at the corresponding node of objective structure of the fact.<sup>1</sup>

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<sup>1</sup>Here I am simplifying a bit, to ease the exposition. What [Metaphysical Reference] requires is that the compositional structure of the sentence be isomorphic to a *subtree* of the relevant objective structure, and that the term at each terminal node of the compositional structure of the sentence refer to the item at the corresponding node of the subtree. This is needed to make room for the view that, e.g. " $c$  contains water" might pick out the same way for the world to be as " $c$  contains  $H_2O$ ", even though " $H_2O$ " has compositional structure that "water" lacks.

For instance, the metaphysicist thinks that “Socrates is wise” can only succeed in describing the fact that Socrates is wise if: (i) just like “Socrates is wise” is compositionally structured into a name (“Socrates”) and a predicate (“is wise”), the fact that Socrates is wise is objectively structured into an object (Socrates) and a property (wisdom), and (ii) “Socrates” refers to Socrates and “is wise” refers to the property of wisdom.

The metaphysicist also thinks that “Socrates died” and “Socrates’s death took place” must have different truth-conditions, if they could be true at all. For suppose not: suppose that the two sentences have the same truth-conditions, and suppose there is some world at which these truth-conditions are satisfied. It follows from [Facts] that our sentences describe the same fact at that world; it follows from [Objective Structure] that the fact is objectively structured; and it follows from [Uniqueness] that if it is objectively structured in a way that corresponds to the compositional structure of “Socrates died”, then it cannot also be objectively structured in a way that corresponds to the compositional structure of “Socrates’s death took place”. So it follows from [Metaphysical Reference] that our two sentences don’t describe the same fact after all.

Metaphysicalism parts company with compositionality because it sees reference as imposing a non-trivial constraint on our ability to pair truth-conditions with sentences. The metaphysicist believes that an assignment of truth-conditions to sentences could easily be derailed by the failure of a sub-sentential expression to properly hook up with the world, even if the assignment can be generated compositionally. For suppose we try to assign truth-conditions to an atomic sentence in a way that delivers a mismatch between the compositional structure of the sentence and the objective structure of the fact that the sentence would describe at a world satisfying the proposed truth-conditions. Then the metaphysicist is committed to thinking that the sentence cannot be true at that world even if the proposed truth conditions are satisfied. So she is committed to thinking that the attempt

to assign truth-conditions will be unsuccessful, regardless of whether it could have been generated compositionally.

### 1.3 Lines and Directions

It seems to me that, from the perspective of the Social Picture of Language, there is no obvious motivation for the metaphysicist thought that reference imposes a non-trivial constraint on our ability to pair truth-conditions with sentences. The best way to see this is to consider an example.

Frege famously set forth the doctrine that “a thought can be split up in many ways, so that now one thing, now another, appears as subject or predicate” (Frege 1892, 199). He made use of this doctrine in the *Foundations of Arithmetic* when he suggested that “the direction of line  $a$  is identical with the direction of line  $b$ ” expresses the same content as “line  $a$  is parallel to line  $b$ ”, but we “carve up the content in a way different from the original way, and this yields us a new concept” (§64). In more contemporary terms, one might say that the sentences “line  $a$  is parallel to line  $b$ ” and “the direction of line  $a$  = the direction of line  $b$ ” have the same *truth-conditions*: the way the world must be in order for one of the sentences to be true is precisely the way the world must be in order for the other to be true.

Our example will use a variant of this idea. Suppose we start with a first-order language with variables  $(x, y, \dots)$  and constants  $(a, b, \dots)$  ranging over *lines*. We then enrich the language with variables of a new sort  $(\alpha, \beta, \dots)$  and with a function-letter ‘ $\delta(x)$ ’ (read “the direction of line  $x$ ”). Truth-conditions for sentences containing the new vocabulary are stipulated to be as follows:

- we let the truth-conditions of  $\ulcorner \delta(a) = \delta(b) \urcorner$  (read:  $\ulcorner$  the direction of  $a$  is identical to the direction of  $b \urcorner$ ) consist of the requirement that line  $a$  be *parallel* to line  $b$ .
- we let the truth-conditions of  $\ulcorner \exists \alpha (\alpha = \delta(a)) \urcorner$  (read:  $\ulcorner$  there is a direction which is identical to the direction of  $a \urcorner$ ) consist of the requirement that there exist some line  $x$

such that is  $x$  *parallel* to line  $a$ .

Truth-conditions for other sentences are specified along similar lines.<sup>2</sup>

From the compositionalist's point of view, there is no reason to think that our assignment of truth-conditions is illegitimate, since it is easy to verify that it can be generated compositionally.<sup>3</sup>

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<sup>2</sup>Here are the details. We begin by giving a precise characterization of our language,  $L$ . In addition to the standard logical vocabulary,  $L$  contains a two place predicate ' $\dots || \dots$ ' (read: ' $\dots$  is parallel to  $\dots$ '), and variables of two different sorts: Roman variables ' $x_1, x_2, \dots$ ' and Greek variables ' $\alpha_1, \alpha_2, \dots$ '. The predicate ' $\dots || \dots$ ' is only allowed to take Roman variables as arguments. The identity predicate can take variables of either sort as arguments, but mixed identity statements are disallowed, so that ' $x_i = \alpha_j$ ' and ' $\alpha_i = x_j$ ' are both counted as ill-formed. Finally,  $L$  contains the Roman constants ' $a_1, a_2, \dots$ ', which are allowed to take the place of Roman variables, and the Greek function-letter ' $\delta(\dots)$ ' (read: 'the direction of  $\dots$ '), which is allowed to take the place of Greek variables when its argument-place has been filled with a Roman variable or constant. Accordingly, ' $\delta(x_i) = \alpha_j$ ' and ' $\delta(x_i) = \delta(x_j)$ ' are well-formed formulas, but ' $\delta(\alpha_i) = \alpha_j$ ' and ' $\delta(x_i) = x_j$ ' are not.

Next, we consider an assignment of truth-conditions to sentences in  $L$ . We proceed by specifying, in our metalanguage, what would be required of the world in order for the truth-conditions of a given sentence of  $L$  to be satisfied. In doing so, we will allow ourselves to make reference to the lines  $l_1, l_2, \dots$  in a particular domain, but not to the *directions* of these lines.

If  $\phi$  is a sentence of  $L$ , we shall let the truth-conditions of  $\phi$  be specified by the metalinguistic sentence  $[\phi]^N$ . The function  $[\dots]^N$  is characterized recursively, by way of the following procedure:

- $[\ulcorner \psi \wedge \theta \urcorner]^N =$  'it is both the case that'  $\ulcorner [\psi]^N \urcorner$  'and that'  $\ulcorner [\theta]^N \urcorner$ .
- $[\ulcorner \neg \psi \urcorner]^N =$  'it is not the case that'  $\ulcorner [\psi]^N \urcorner$ .
- $[\ulcorner \exists x_i(\psi) \urcorner]^N =$  'there is a line  $y_i$  such that'  $\ulcorner [\psi]^N \urcorner$
- $[\ulcorner \exists \alpha_i(\psi) \urcorner]^N =$  'there is a line  $z_i$  such that'  $\ulcorner [\psi]^N \urcorner$
- $[\ulcorner a_i = a_j \urcorner]^N =$  'line  $l_i$  is identical to line  $l_j$ '
- $[\ulcorner x_i = a_j \urcorner]^N =$  ' $y_i$  is identical to line  $l_j$ '
- $[\ulcorner x_i = x_j \urcorner]^N =$  ' $y_i$  is identical to  $y_j$ '
- $[\ulcorner \alpha_i = \alpha_j \urcorner]^N =$  ' $z_i$  is parallel to  $z_j$ '
- $[\ulcorner \delta(a_i) = \alpha_j \urcorner]^N =$  'line  $l_i$  is parallel to  $z_j$ '
- $[\ulcorner \delta(x_i) = \alpha_j \urcorner]^N =$  ' $x_i$  is parallel to  $z_j$ '
- $[\ulcorner a_i || a_j \urcorner]^N =$  'line  $l_i$  is parallel to line  $l_j$ '
- $[\ulcorner x_i || a_j \urcorner]^N =$  ' $y_i$  is parallel to line  $l_j$ '
- $[\ulcorner x_i || x_j \urcorner]^N =$  ' $y_i$  is parallel to  $y_j$ '

(I have omitted a few clauses for the sake of readability.)

It is worth noting that although  $[\phi]^N$  is an open formula of the metalanguage when  $\phi$  is an open formula of  $L$ ,  $[\phi]^N$  is always a sentence of the metalanguage when  $\phi$  is a sentence of  $L$ .

<sup>3</sup>One way to proceed is to let the "meaning" of ' $\delta(a)$ ' consist of a function that assigns to each world  $w$  the set of lines that are parallel to  $a$  at  $w$ . An alternative is to assign "representatives" to sets of parallel lines, and let the "meaning" of ' $\delta(a)$ ' consist of a function that assigns to each world  $w$  one's "representative" for the set

From the metaphysicalist’s point of view, in contrast, our assignment of truth-conditions could well be rendered inadequate by a failure of sub-sentential expressions’ to properly hook up with the world. For suppose, as the metaphysicalist might, that the fact that line  $a$  is parallel to line  $b$  is objectively structured into three components: line  $a$ , line  $b$ , and the relation of being parallel to. Then the metaphysicalist thinks that this fact could not be picked out by the atomic sentence  $\lceil \delta(a) = \delta(b) \rceil$ . For—on the assumption that  $\lceil \delta(a) \rceil$  and  $\lceil \delta(b) \rceil$  are to have directions as their referents, and that ‘=’ is to express identity—the sentence and the fact will be out of sync: there will be a mismatch between the referents of the terminal nodes of the compositional structure of the sentence and the terminal nodes of the objective structure of the fact.

The Social Picture of Language gives us a way of gaining traction on the debate between compositionists and metaphysicalists. For, on the Social Picture, language is simply a tool for communication—and, in particular, a tool for making speech acts. So all it takes for an assignment of truth-conditions to be acceptable is for the resulting sentences to constitute a useful tool for making speech acts. And there is no reason to doubt that our Fregean assignment of truth-conditions could deliver a useful tool for discriminating amongst possibilities in the course of a conversation. So the Social Picture supplies no obvious motivation for the metaphysicalist idea that the assignment could fail to be adequate because of a failure of sub-sentential expressions’ to properly “hook up” with the world.

I do not mean to suggest that the Social Picture of Language gives us decisive reason to reject metaphysicalism. For the metaphysicalist might argue that her constraints on reference are to be motivated on the basis of *metaphysical* rather than linguistic grounds. All the

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of lines that are parallel to  $a$  at  $w$ . Either way, one sets forth the following semantic clause:  $\lceil \delta(a) = \delta(b) \rceil$  is true at a world  $w$  just in case the meaning of  $\lceil \delta(a) \rceil$  and the meaning of  $\lceil \delta(b) \rceil$  assign the same value to  $w$ .

This semantic clause does not immediately deliver an assignment of truth-conditions to “mixed” identity statements, such as “ $\delta(a) = b$ ”. But one has the option of setting forth a more general clause that does cover mixed identities:  $\lceil t_1 = t_2 \rceil$  is true at a world  $w$  just in case the meaning of  $t_1$  and the meaning of  $t_2$  assign the same value to  $w$ . It is worth noting, however, that the more general clause will deliver different results depending on which of the two procedures above is used to assign meanings to terms. Since neither of these procedures is uniquely motivated by our initial assignment of truth-conditions to sentences, it is not clear that any particular assignment of truth-conditions to mixed identities is motivated by our initial assignment.

argument in this section is meant to bring out is that if the Social Picture of Language is correct, then it is not clear that the metaphysicalist's constraints on reference can be justified by reflecting on the way we use language to communicate with each other. The additional constraints must be justified on independent grounds.

It is also worth emphasizing that compositionism and metaphysicalism represent extreme positions on a spectrum. So a friend of the Social Picture could reject metaphysicalism without moving all the way to compositionism. One way to do so is to accept a "moderate" version of metaphysicalism according to which the metaphysicalist's constraints on reference apply in some cases but not others. (One might claim, for example, that the constraints apply only to sentences which are uttered in a "metaphysically serious" spirit.) Such a view would not be in tension with the Social Picture of Language.

#### 1.4 A Compositionalist Conception of Reference

How should one think of reference, if one rejects the metaphysicalist's constraints?

The compositionist disagrees with the metaphysicalist about the need for any sort of connection between the compositional structure of a sentence and the objective structure of the fact that the sentence describes—if she is even prepared to speak of "objective structure", which she may well not be. It is important to be clear, however, that this is *not* because the compositionist believes that sub-sentential expressions lack reference. She would insist, for example, that the singular term  $\ulcorner \delta(a) \urcorner$  refers: it refers to the direction of line  $a$ .

This might seem paradoxical. The compositionist is, after all, committed to the following two claims:

1. The singular terms  $\ulcorner \delta(a) \urcorner$  and  $\ulcorner \delta(b) \urcorner$  refer: they refer, respectively, to the direction of line  $a$  and the direction of line  $b$ .
2. all that is required of the world for  $\ulcorner \delta(a) = \delta(b) \urcorner$  to be true is for line  $a$  to be parallel to line  $b$ .

But how could these claims possibly be true *at the same time*? In accepting (1), the compositionalist is committed to thinking that  $\lceil \delta(a) = \delta(b) \rceil$  is a sentence “about” directions, since it is a sentence containing singular terms that refer to directions. And in accepting (2), she is committed to thinking that  $\lceil \delta(a) = \delta(b) \rceil$  can be made true by a feature of the world that is entirely to do with whether certain *lines* are parallel to one another. How could this be right? How could a sentence “about” directions be made true by a feature of the world that is entirely to do with lines?

The compositionalist escapes paradox by endorsing the following ‘just is’-statement:

[DIRECTIONS]

For the direction of *a* to be identical to the direction of *b* *just is* for *a* to be parallel to *b*.

The compositionalist would claim, in other words, that there is *no difference* between the direction of *a* being identical to the direction of *b* and *a* being parallel to *b*. (More colorfully: when God created the world and made it the case that line *a* was parallel to line *b*, she *thereby* made it the case that the direction of *a* was identical to the direction of *b*; there was nothing *extra* God needed to do or refrain from doing. Conversely: when God created the world and made it the case that the direction of *a* was identical to the direction of *b*, she *thereby* made it the case that line *a* was parallel to line *b*; there was nothing *extra* God needed to do or refrain from doing.)

In endorsing [Directions], the compositionalist follows Frege in thinking that a single feature of reality can be carved up—or structured—in different ways. When we use the sentence “the direction of *a* is identical to the direction” to describe the relevant feature of reality we structure it one way; when use the sentence “*a* is parallel to *b*”, we structure it in a different way.

The metaphysicalist, on the other hand, is committed to [Objective Structure] and [Uniqueness]. So she would insist that—even if the compositionalist is right to think that a given fea-

ture of reality could in principle be structured in different ways—at most one of these structurings is metaphysically significant: at most one of them is rendered salient independently of the particular way in which we choose to represent it. And because the metaphysicist is also committed to [Metaphysical Reference], she would go on to insist that  $\ulcorner \delta(a) = \delta(b) \urcorner$  can only succeed in describing a particular feature of reality if it is objectively structured in a way that yields as components the direction of  $a$  and the direction of  $b$ .

The compositionalist need not disagree with the metaphysicist about [Objective Structure] or [Uniqueness]. For compositionism is *neutral* on the question of whether reality is objectively structured, on the question of whether such structure is unique, and, indeed, on the question of whether there is sense to be made of the notion of objective structure. The compositionalist will, however, disagree with the metaphysicist about [Metaphysical Reference]. For she sees no reason to think that objective structure—if it makes sense to speak of such a thing—is a *constraint* on reference.

It is tempting, but ultimately unhelpful, to describe the disagreement between compositionists and metaphysicists by saying that only metaphysicists think of reference as a “genuine relation”. The reason it would be unhelpful to do so is that it would beg the question against the compositionist, who would insist that reference genuinely relates expressions with the world. The compositionist would claim, for example, that in asserting:

$\ulcorner \delta(a) \urcorner$  refers to the direction of  $a$ .

one is relating the expression  $\ulcorner \delta(a) \urcorner$  with the direction of  $a$ —and that relations don’t get any more “genuine” than that.

The real difference between compositionist and metaphysicist conceptions of reference is to do with the particular way in which the world is taken to *constrain* reference. To put the point in slogan form, the compositionist thinks that our language only makes contact with the world at the level of *sentences*, and therefore that the only constraints on reference are constraints that emerge from one’s assignment of meanings to *sentences*.

A bit more precisely, the compositionalist sees the situation as follows. To render a language meaningful is to decide which ways for the world to be—which truth-conditions—are to be associated with which sentences in which contexts. The world determines which sentences are true in which contexts, by determining which truth-conditions are satisfied. But there is no need for the world to be, in some sense, “responsive” to a sentence’s compositional structure in order to make the sentence true.

Compositional structure matters to truth, but only insofar as it places constraints on how one’s decision to associate truth-conditions with some sentences can coexist with one’s decision to associate other truth-conditions with other sentences. (If, for example, one chooses to associate the truth-condition that Alice run with the first-order sentence ‘ $R(a)$ ’, then considerations of compositionality would allow one to associate with ‘ $R(b)$ ’ the truth-condition that Bruno run—or the truth-condition that Julius Caesar run—but not the truth-condition that Bruno *walk*.)

The compositionalist thinks that what it is for a singular term to refer is for the world to be such as to satisfy the truth-conditions that have been associated with some atomic sentence involving the relevant term. She would claim, for example, that all it takes for the singular term “Neptune” to be non-empty is for the world to be such as to satisfy the truth-conditions that have been assigned to an atomic sentence like “Neptune is a planet”.<sup>4</sup>

Taken in isolation, the compositionalist thought that all it takes for “Neptune” to refer is for the world to be such as to satisfy the truth-conditions of “Neptune is a planet” is not especially controversial. But keep in mind that the compositionalist *also* thinks that in order

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<sup>4</sup>Is the compositionalist committed to the view that “Sherlock Holmes” refers—and therefore to the view that Sherlock Holmes exists—on the grounds that, e.g. “Sherlock Holmes is a fictional detective” is a true atomic sentence? Not without controversial auxiliary assumptions. For there is no easy inference from the (uncontroversial) observation that “Sherlock Holmes is a fictional detective” can be properly asserted to the claim that “Sherlock Holmes is a fictional detective” is true. There is room for the view that although “Sherlock Holmes is a fictional detective” is untrue, it is used to communicate the true thought that, according to a suitable fiction, Holmes is a detective. Such a transition might be explained as a pragmatic repair mechanism, in which the communicative intent of an assertion is taken to be something other than the proposition expressed by the asserted sentence, so as to ensure that the assertion makes sensible contribution to the conversation. (For more on pragmatic repair mechanisms, see Stalnaker 1979.)

for the truth-conditions of “Neptune is a planet” to be satisfied there is no need for the “objective structure” of the fact that Neptune is a planet to be in sync with the syntactic structure of “Neptune is a planet”. So she thinks that what it takes for “Neptune” to refer has nothing to do with whether it has been mapped on to an item carved by the world’s objective structure. It is simply to do with which truth-conditions have been assigned to which sentences, and with which of these conditions happen to be satisfied.

As I mentioned earlier, I’m not the first to articulate this sort of view. Variants of this idea have been developed by Frege, Dummett, Wright and Rosen (amongst many others), and, in a different sort of way, by Quine and Davidson.<sup>5</sup> (My own brand of compositionism, including a response to the so-called “bad company objection”, is spelled out in greater detail in [text removed for blind refereeing].)

## 1.5 Causation and Reference

It is tempting to think that the Social Picture of Language—and the compositionist conception of reference that it helps motivate—are incompatible with causal theories of reference. I think that would be a mistake, and in this section I will try to explain why.

A causal theory of reference is a *metasemantic* theory: it is a view about how the words of a linguistic community come to mean what they mean in light of facts about the community’s linguistic usage and environmental circumstance. Compositionism and metaphysicalism, in contrast, are views about the nature of the relationship between our language and the world. As such, they address the question of what it takes for an assignment of meanings to count as an instance of genuine linguistic representation. But they are not metasemantic theories: they have no particular story to tell about how the words of a linguistic community come to mean what they mean in light of facts about the community’s linguistic usage and environmental circumstance.

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<sup>5</sup>Frege, *Die Grundlagen der Arithmetik*; Dummett, *Frege: Philosophy of Language*; Wright, *Frege’s Conception of Numbers*; Rosen, ‘The Refutation of Nominalism (?)’; Quine, *Word and Object* (chapter 2), and Davidson “Truth and Meaning”.

Suppose, for example, that one thinks that part of the reason “Saul Kripke” refers to Saul Kripke, rather than some other object, is to do with Kripke’s role in causing the mental attitudes of users of “Saul Kripke”. To fix ideas, suppose that Kripke’s role consisted in being the focus of attention during an initial “baptismal” use of the term. A metaphysicist could embrace this story, but only by making supplementary assumptions. For unless she is prepared to count an atomic sentence like “Saul Kripke is a philosopher” as false, she will be committed to the claim that Kripke is one of the items carved out by the world’s metaphysical structure. A compositionalist can also embrace the causal story, but, unlike the metaphysicist, she need not make any additional assumptions. She can simply agree that part of the reason “Saul Kripke” refers to Kripke, rather than some other object, is that Kripke, rather than some other object, was the focus of attention at a particular baptismal event.

If there’s anything distinctive about the compositionalist’s take on the matter it is that she would insist that nothing of substance turns on whether one’s causal theory is developed by focusing on singular terms or by focusing on sentences. So, for instance, nothing of substance turns on whether one puts the view by saying that part of the reason “Saul Kripke” refers to Saul Kripke is to do with Kripke’s role in causing the mental attitudes of users of “Saul Kripke”, or by saying that part of the reason *sentences* involving “Saul Kripke” concern Saul Kripke is to do with with Kripke’s role in causing the mental attitudes of users of such sentences.

## 1.6 The Generality Constraint

Some regions of our language are highly interconnected. They are made up from sentences satisfying the following constraint:<sup>6</sup>

[Generality Constraint]

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<sup>6</sup>Evans (1982) famously set forth a version of this constraint, though he conceived of it as a condition on the *thoughts* we ought to be able to understand.

Whenever one takes sentences with well-defined truth-conditions and uses their constituent parts to build a new string, the result will have well-defined truth-conditions, so long as its syntax is that of a sentence.

An important consequence of compositionality is that it allows for failures of the Generality Constraint. Notice, in particular, that although our assignment of truth-conditions to direction-sentences in section 1.3 delivers well-defined truth-conditions to both “ $\delta(a) = \delta(a)$ ” and “ $a = a$ ”, it does not deliver well-defined truth-conditions to mixed identity-statements like “ $\delta(a) = a$ ”.

The metaphysicalist sees things very differently. It follows from the truth of “ $\delta(a) = \delta(a)$ ” and “ $a = a$ ” that “ $\delta(a)$ ” and “ $a$ ” must each be paired with one of the objects that gets carved out by the world’s objective structure. So there had better be a fact of the matter as to whether these objects in question are one and the same. If they are, then “ $\delta(a) = a$ ” is true; if they aren’t, then “ $\delta(a) = a$ ” is false. Either way, “ $\delta(a) = a$ ” has well-defined truth-conditions.

From the compositionalist’s perspective, in contrast, an assignment of truth-conditions to “ $\delta(a) = \delta(a)$ ” and “ $a = a$ ” can be in good order even if no truth-conditions have been associated with “ $\delta(a) = a$ ”. For the compositionalist thinks that all it takes for an assignment of truth-conditions to “ $\delta(a) = \delta(a)$ ” and “ $a = a$ ” to be in good order is that it be generable compositionally, and—as noted in footnote 3—one can easily define a compositional assignment of truth-conditions for “ $\delta(a) = \delta(a)$ ” and “ $a = a$ ” without thereby assigning truth-conditions to mixed identity statements.

Notice, moreover, that the Social Picture of Language gives us no reason to expect the Generality Constraint to hold unrestrictedly. For one can have a useful communicative practice based on “unmixed” sentences like “ $\delta(a) = \delta(b)$ ” and “ $a = b$ ”, without taking mixed sentences like “ $\delta(a) = b$ ” to have a communicative role. And the Social Picture of Language gives us no immediate reason to think that sentences without a communicative role should have well-defined truth-conditions. For if language is a tool for communication,

there is no obvious reason to assign meanings to strings without communicative purposes, unless such an assignment is a consequence of compositionality.

## 1.7 A Parochial Conception of Singulartermhood

The compositionalist thinks that the notion of singulartermhood is a *parochial* notion: although it can be made sense of in the case of particular languages, it cannot be defined in a *language-transcendent* sense—a sense that would allow for application in arbitrary languages. Let me explain.

The best place to start is to see things from the perspective of the metaphysicalist. By making use of the metaphysicalist's ideology, let us say that the *objective constituents* of a fact are the “components” into which the fact gets carved out by its objective structure. (Suppose, for example, that the fact that Socrates is wise is objectively structured into Socrates and the property of wisdom. Then the “objective constituents” of the fact are Socrates and the property of wisdom.) The metaphysicalist might think, in particular, that the objective constituents of a fact can be classified in accordance with their “ontological character”. She might think that whereas some objective constituents have a “saturated” ontological character—constituents like Socrates, or like the planet Neptune—others have an “unsaturated” ontological character—constituents like the property of wisdom, or the property of being a planet. This puts the metaphysicalist in a position to give a language-transcendent notion of singulartermhood. She can claim that for an expression to be a singular term is for it to have a particular function: the function of picking out an “entity” of *saturated* ontological character. She can then go on to claim that for the singular term to be non-empty is for it to be successful in carrying out this function.

From a compositionalist's point of view, this is all wrong. To begin with, the compositionalist need not accept the metaphysicalist's ideology. As we have seen, she need not grant that it makes sense to talk about objective structure. Similarly, she need not grant that it makes sense to talk about the ontological character of an “entity” carved out by objective

structure—and, indeed, she need not grant that it makes sense to speak of an “entity” in the general sense that the metaphysicalist requires.

More importantly, the compositionalist would claim that the metaphysicalist’s ideology is *irrelevant* to the notion of reference. It is simply a mistake to think that singular terms have the function of picking out from amongst the “entities” carved out by the world’s objective structure one with “saturated” ontological character. The compositionalist would claim instead that to be a singular term of English is simply to be an expression with the same sort of compositional behavior as expressions like “Plato” or “London”—and she would emphasize that there is no need to add anything about purporting to pick out “entities” with the right kind of ontological character. If she wished to project this understanding of singular terms beyond English, the compositionalist might claim that to be a singular term of, say, Spanish is simply to be an expression with the same sort of compositional behavior as expressions like “Platón” and “Londres”—expressions which we regard as natural translations of “Plato” and “London”, respectively. And she might claim that to be a singular term of a *first-order* language is simply to be an expression with the same sort of compositional behavior as the first-order expressions that we would naturally use to translate English expressions like “Plato” and “London”. Given a language with sufficiently alien compositional structures, however, the compositionalist would claim that she has no principled way of extending her parochial, language-relative understanding of singular termhood to the new language.

Similarly, the compositionalist would claim that the metaphysicalist’s ideology is irrelevant to the question of whether a given singular term *refers*. She would claim, instead, that for a singular term to refer is simply for it to figure in an atomic sentence with truth-conditions that turn out to be satisfied. She would insist that there is no need to make any claims about whether the term is successful in carrying out its function of “picking out a suitable entity from amongst those carved out by the world’s objective structure”. The compositionalist would therefore claim that it is a mistake to think that a singular term could fail to refer because of a lack of a suitable referent amongst the “entities” carved out by the

world's objective structure. As long as some atomic sentence containing the term has been assigned truth-conditions that turn out to be actualized, the term will refer.

## 1.8 Two Notions of Objecthood

We have seen that metaphysicalists and compositionists think of reference in very different ways. This means that they must also think of the notion of *objecthood* in very different ways. According to the metaphysicalist, there is a language-transcendent notion of objecthood: to be an object is simply to be one of the “entities” carved out by the world's objective structure and to have the right kind (i.e. “saturated”) ontological character.

The compositionist would disagree. As usual, she need not accept the metaphysicalist's ideology. But she would also deny that there is a language-transcendent notion of objecthood. From the compositionist's point of view, the notion of objecthood cannot be separated from grammatical considerations: to describe the world as containing objects *just is* to describe the world by using a sentence that contains singular terms (or variables taking singular-term positions).<sup>7</sup>

Does the compositionist's conception of objecthood commit her to the view that the objects themselves are language-dependent? Absolutely not. The compositionist has no reason to deny that there is a definite way the world is. Suppose she thinks that the world is such that Venus is a planet. When one *describes* this way for the world to be by using the sentence “Venus is a planet”—which includes the singular term “Venus”—one describes the world as containing an object. Such an object-involving *description* of the world would have been unavailable to us if we had no singular terms. But the world would have remained unchanged in all astronomical respects. Venus would have continued to exist, even if we lacked the resources for describing the relevant feature of the world in a way that rendered Venus salient.

The compositionist thinks that there is no difference between describing the world

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<sup>7</sup>Compare Dummett (1981), p. 497.

as containing objects and describing the world by using a sentence that contains singular terms (or variables taking singular-term positions). Is there anything further she might say to elucidate the notion of object? Yes, though it is of limited utility. She can say—using a quantifier that binds variables taking singular term positions—that *everything* is an object ( $\forall x(\text{Object}(x))$ , in a first-order language). We will return to this in section 2.3.

## 1.9 Summary of Section 1

Compositionism is a view about the nature of the relationship between language and the world it represents. In slogan form, it is the view that language only makes contact with the world at the level of sentences. Sub-sentential expressions have meanings, but these meanings impose no constraints on the meanings of sentences beyond the requirement that it be possible to generate the meanings of sentences by using a recursive procedure of the right kind. In particular, an assignment of meanings to sentences couldn't possibly be derailed by the failure of a sub-sentential expression to properly “hook up” with the world.

It is no part of compositionism that singular terms fail to refer. A compositionist would insist, for example, that a term like “Socrates” refers—in the most genuine and literal sense possible—to Socrates. But, unlike her metaphysicalist counterpart, she would also claim that it is a mistake to think that a singular term could fail to refer on account of there being no suitable referent amongst the “entities” carved out by the world's objective structure. As long as some atomic sentence containing the term has been assigned truth-conditions that turn out to be actualized, the term will refer.

Along with the compositionist's conception of reference comes a conception of the notion of *object*. Whereas the metaphysicalist would claim that to describe the world as containing objects is to describe the world as containing “entities” with a particular “ontological character”, the compositionist thinks that to describe the world as containing objects is to describe the world by using a sentence that contains singular terms (or variables taking singular-term positions). So she thinks that there is an inextricable link between the notion

of an object and the notion of a singular term.

Compositional sounds like a radical view. Why take it seriously? Because it sits naturally with an attractive conception of the way language works: the Social Picture of Language. On this picture, language is a tool for making speech acts. So all it takes for an assignment of meanings to sentences to be acceptable is for it to deliver a useful tool for making speech acts. In the case of infinite languages, this motivates the compositionalist thought that one's assignment ought to be generable compositionally. But it gives us no reason to accept the metaphysicalist idea an assignment of truth-conditions to sentences is only acceptable if the sentences are built from sub-sentential expressions that are properly "hooked up" with the world. So if the Social Picture of Language is correct, it is not clear that the metaphysicalist's constraints on reference can be justified on the basis of purely linguistic considerations. Any justification must come from one's metaphysical picture of the world.

## 2 Predicate-Reference

In the preceding section we discussed a compositionalist conception of the reference of singular terms. In this section we will discuss an analogous conception of predicate-reference.

### 2.1 The Entity and Expressibility Theses

I would like start by considering some recent work by Bob Hale and Øystein Linnebo (Hale & Linnebo typescript). I will later argue that their proposal could be motivated from a metaphysicalist point of view but not from a compositionalist's point of view, and this will help bring compositionalism into better focus.

Hale and Linnebo's discussion presupposes a notion of "entity" that is meant to satisfy the following principle:

**Entity Thesis** If an expression is referential, then it refers to an "entity".

They presuppose, in particular, that if a *predicate* is referential, then it must refer to an “entity”.

And what is an “entity”? Hale and Linnebo suggest that a Fregean would think of “entities” as falling under different “ontological categories”:

an entity belongs to a certain ontological category if and only if it is, or could be, the referent of an expression belonging to a corresponding syntactic category. Thus, objects are those things which are or could be the referents of proper names (i.e. singular terms), monadic first-level concepts [...] are those things which are or could be the referents of first-level predicates, and so on. (Hale & Linnebo typescript)

With this as their background, Hale and Linnebo defend the following claim:

**Expressibility Thesis** There is a variable that has among its values all entities of all ontological categories. (Hale & Linnebo typescript.)

The Entity and Expressibility theses are both potentially controversial. One way to see this is to consider the question of what they tell us about the reference of *plural* terms.

Let us start with the Entity Thesis. Suppose that one thinks that a plural term like “the elephants” refers, collectively, to the elephants. It is not obvious that this warrants the conclusion that “the elephants” refers to an “entity”. For what “entity” would that be? The most straightforward answer—“the entity in question is the elephants” (!)—is dubiously grammatical, and therefore dubiously intelligible. Perhaps someone would wish to claim that the entity in question is the “plurality” of elephants. Although that answer has the advantage of grammaticality, it has the disadvantage that it risks changing the subject. For how is the “plurality” of elephants related to the elephants? If one answers anything other than “it is identical to them”, one has changed the subject. But if one does answer “it is

identical to them”, one is again left with a claim that is dubiously grammatical, and therefore dubiously intelligible.<sup>8</sup>

What about the Expressibility Thesis? As Hale and Linnebo are well aware, the Expressibility Thesis leads to contradiction in the presence of seemingly harmless assumptions. Here is a way of using plural terms to derive a contradiction:

Say that the “entity” referred to by a plural term is a “plurality”. Using the variables postulated by the Expressibility Thesis, we can say that some pluralities contain no pluralities amongst their members (for instance, the plurality referred to by “the elephants”). And we can say that some pluralities do contain pluralities amongst their members (for instance, the plurality referred to by “the pluralities”). Let  $\rho$  be the plurality referred to by the plural term “the pluralities that do not contain themselves as members”. Does  $\rho$  contain itself as a member? Either way, you get a contradiction.

A friend of the Expressibility Thesis must make a substantial move to block this argument. She might claim, for instance, that the variables postulated by the Expressibility Thesis do not allow one to form meaningful plural terms. Or she might claim that although such terms are meaningful, some of them fail to be referential—or refer, but fail to refer to an “entity”.

Hale and Linnebo explore versions of the two latter moves, and find that each of them has “advantages and disadvantages”. I will not pursue the issue further here. All I want to do for now is put the Entity and Expressibility theses on the table, and note that they are potentially controversial.

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<sup>8</sup>Lewis (1991) famously claimed that “the fusion [of cats] is nothing over and above the cats that compose it. It just *is* them. They just *are* it.” (p. 81) I certainly think Lewis is onto something here. For it is natural to think that there is no difference between the *fact* that there are cats and the *fact* that there is a fusion of cats. In other words, it is natural to accept:

For the fusion of cats to exist *just is* for the cats to exist  
—which is perfectly grammatical. But note that this is simply an instance of the thesis that a single feature of reality can be carved up in different ways. It has no tendency to entail the dubiously grammatical—and therefore dubiously intelligible—“the fusion is the cats”.

## 2.2 Back to Metaphysicalism

In this section I will argue that the metaphysicalist is in a position to accept both the Entity Thesis and the Expressibility Thesis.

As we noted in sections 1.2 and 1.7, the metaphysicalist believes that facts are objectively structured into “components”, and therefore have “objective constituents”. This means that she has a straightforward way of understanding the notion of “entity” that is presupposed by the Entity and Expressibility Theses: an “entity” is simply an “objective constituent” of a fact.

The metaphysicalist believes, moreover, that in order for an atomic sentence to describe a fact, each of its subsentential expressions must refer to one of the fact’s “objective constituents”. So we immediately get a version of the Entity Thesis: the referential expressions in an atomic sentence will always refer to “entities” in the sense just characterized.

Finally, the metaphysicalist thinks that the objective constituents of a fact have different kinds of “ontological characters” (e.g. “saturated”, “unsaturated”), and that expressions of different syntactic categories refer to constituents with different such “characters”. So we immediately get a version of the idea that expressions of different syntactic categories refer to “entities” of different “ontological categories”.

What about the Expressibility Thesis? The metaphysicalist thinks that the *semantic jobs* of predicates and singular terms—picking out an “unsaturated entity” and picking out a “saturated entity”, respectively—can be specified without bringing in syntactic notions. They can be specified using metaphysical notions: to be an “entity” is to be the “objective constituent” of a fact, and to be “saturated” or “unsaturated” is to do with one’s “ontological character”. So there is no obvious reason why one couldn’t introduce a variable designed to do *both* these jobs, and therefore no obvious reason why there couldn’t be a variable that takes as values both the referents of predicates and the referents of singular terms, as the Expressibility Thesis requires.<sup>9</sup>

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<sup>9</sup>It is also worth noting that one’s ability to state the content of metaphysicalism relies on a version of

### 2.3 Predicate-Reference for the Compositionalist

Let us now turn to compositionism. In the present section we will consider a compositionalist account of predicate-reference; in the next section we will discuss the Entity and Expressibility Theses from a compositionalist point of view.

As we have seen, the compositionalist thinks that compositional structure matters to truth, but only insofar as it places constraints on how one's decision to associate some ways for the world to be with some sentences can coexist with one's decision to associate other ways for the world to be with other sentences.

In sections 1.4 and 1.7 we discussed some of the consequences of this view for the compositionalist's conception of reference for singular terms. We noted, in particular, that the compositionalist would reject the metaphysicalist idea that a singular term has the function of picking out an "entity" of saturated ontological character from amongst the "entities" carved out by the world's objective structure. The result is that a singular term  $t$  couldn't possibly fail to be referential by somehow failing to properly "hook up" with the world. As long as  $t$  is part of a language whose sentences have been assigned truth-conditions compositionally, and as long as some atomic sentence containing  $t$  has been assigned truth-conditions that turn out to be satisfied,  $t$  will be genuinely referential.

The compositionalist conception of predicate-reference is exactly analogous. As in the case of singular terms, she would reject the metaphysicalist idea that a predicate has the function of picking out an "entity" with a certain kind of ontological character—*unsaturated* character, in this case—from amongst the "entities" carved out by the world's objective structure. And, as in the case of singular terms, this means that a predicate  $P$  couldn't possibly fail to be referential by somehow failing to properly "hook up" with the world. As long as  $P$  is part of a language whose sentences have been assigned truth-conditions compositionally,

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the Expressibility Thesis. For unless one had something akin to a variable that has as values "entities" corresponding to different ontological categories, one cannot so much as express the thought that a way for the world to be is articulated into "objective constituents" with different "ontological characters". (Of course, the compositionalist need not see this as a reason to accept the Expressibility Thesis, since, as we have seen, she need to think of metaphysicalism as a genuinely intelligible thesis.)

and as long as some atomic sentence containing P has been assigned truth-conditions that turn out to be satisfied, P will be genuinely referential.

As we saw in section 1.8, the compositionalist's conception of reference for singular terms has consequences for her conception of objecthood. She thinks that to describe the world as containing *something* is simply to describe it by using singular terms (or variables that take singular term positions). The situation is analogous when it comes to the compositionalist's conception of predicate-reference: the compositionalist thinks that to describe the world as being such that a given object is *somehow* is simply to describe it by using a predicate (or variables taking predicate positions).

The compositionalist's understanding of the semantic job of singular terms is shaped by her conception of objecthood. She would start by claiming, uncontroversially enough, that the semantic job of a singular term is to describe the world as containing *something*. But since she also thinks that to describe the world as containing something is simply to describe it by using singular terms (or variables taking singular term positions), she will go on to claim that there is no way of doing the semantic job of a singular term without being a singular term (or a variable that takes singular term positions).

The compositionalist would say something exactly analogous about the semantic job of predicates. She would start by claiming, uncontroversially enough, that the semantic job of a predicate is to describe the world as being such that a given object is *somehow*. But since she also thinks that to describe the world as being such that a given object is somehow is simply to describe it by using a predicate (or a variable that takes predicate positions), she will go on to claim that there is no way of doing the semantic job of a predicate without being a predicate (or a variable that takes predicate positions).<sup>10</sup>

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<sup>10</sup>For related notions of predicate-reference, see Krämer 2014 and Trueman forthcoming.

## 2.4 Compositionality and the Entity and Expressibility Theses

The compositionalist disagrees with the metaphysicist about the Entity and Expressibility Theses.

As I noted in section 2.2, the metaphysicist thinks that the semantic jobs of predicates and singular terms are suitably independent of the notion of a predicate and the notion of a singular term. So she sees no obvious obstacle to introducing a variable that does both these jobs, as required by the Expressibility Thesis. In contrast, we have just seen that the compositionalist thinks that performing the semantic job of a singular term requires a singular term (or a variable taking singular term positions), and that performing the semantic job of a predicate requires a predicate (or a variable taking predicate positions). So—unless a single expression can work both as a predicate and a singular term—it is impossible for a single expression to perform both semantic jobs, which is contrary to what the Expressibility Thesis demands.

In addition, the compositionalist faces little pressure to adopt a notion of “entity” general enough to play the sort of role that the Entity and Expressibility theses demand. She thinks that singular term reference is a matter of talking about *something*, and that predicate-reference is a matter of saying of something that it is *somehow*. But she has no reason to add, ungrammatically: “when something is somehow, the thing and the how are both entities”.

The metaphysicist is in a very different position. As we saw in section 2.2, her notion of the “objective constituents” of a fact is *already* a notion of “entity” with the requisite level of generality. She thinks, in particular, that predicates and singular terms both refer to “entities” in this sense. So even if the metaphysicist agrees that a singular term reference is a matter of talking about something, and that predicate-reference is a matter of saying of something that it is somehow, she would go on to add that the two types of reference have something important in common: they both involve the pairing of an expression with the “objective constituent” of a fact.

Even though the compositionalist is not committed to the view that facts are *objectively* structured, she might sometimes speak of facts' being "structured". She might say, for example, that a single fact can be structured in different ways. Doesn't this commit her to the claim that a fact has different "constituents"?

It does—but not in a sense of "constituent" general enough to support the Entity and Expressibility theses. The compositionalist thinks that to "structure a fact" is simply to describe the fact by using a syntactically articulated *sentence*. So, for instance, when she claims that a single feature of reality can be structured in different ways, all she means is that it can be accurately described by sentences with different syntactic structures. On this understanding of structuring, there is no commitment to the idea that facts have "constituents" in a sense that would allow one to say that both predicates and singular terms refer to such "constituents".

Suppose, for example, that one uses "Socrates is wise" to describe a particular feature of reality. The compositionalist thinks that, in so doing, one "structures" the relevant feature of reality in a certain kind of way. But all she means by this is that one describes the relevant feature of reality by using a particular singular term ("Socrates") and a particular predicate ("is wise"). She could, if she wanted, put the point differently, and say that one describes the relevant feature of reality as involving a particular object (i.e. Socrates), and as consisting of that object's being somehow (i.e. wise). But she won't see herself as saying anything over and above what she had said before, since she thinks that to describe the world as containing an object *just is* to describe it by using a singular term, and that to describe the world as being such that an object is somehow *just is* to describe it by using a predicate. And she has no obvious reason to add, ungrammatically: "the relevant feature of reality is structured into two constituents—an object (i.e. Socrates) and a how (i.e. wise)".

### 3 Conclusion

According to the compositionalist, a predicate couldn't possibly fail to be referential on the grounds that it somehow fails to properly "hook up" with the world. As long as the predicate is part of a language whose sentences have been assigned truth-conditions compositionally, and as long as some atomic sentence containing the predicate has been assigned truth-conditions that turn out to be satisfied, the predicate will be genuinely referential.

The compositionalist would reject the idea that the semantic job of a predicate can be specified independently of syntactic considerations. (In particular, she would reject the idea that the job of a predicate is to pick from amongst the "entities" carved out by the world's "objective structure" one of "unsaturated" character.) The compositionalist thinks that the semantic job of a predicate is to describe the world as being such that a given object is *somehow*, and that to describe the world as being such that a given object is somehow is simply to describe it by using a predicate. So she thinks that there is no way of doing the semantic job of a predicate without being a predicate.

This means, in particular, that the compositionalist has no reason to accept the Expressibility Thesis: the claim that "there is a variable that has among its values all entities of all ontological categories" (Hale & Linnebo typescript). The compositionalist would also see no reason to think that we have a notion of "entity" general enough to make sense of the Entity Thesis: the claim that an expression can only be referential if it refers to an "entity".

And why believe compositionalism? Because it sits comfortably with an attractive picture of language: the view that language is a tool for communication and, more specifically, a tool for making speech acts. To go beyond compositionalism is to think that there are constraints on reference that go beyond what can be justified by reflecting on the way we use language to communicate.<sup>11</sup>

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<sup>11</sup>For their many helpful comments, I am grateful to [text removed for blind refereeing].

## References

- Beaney, M., ed. (1997), *The Frege Reader*, Blackwell, Oxford.
- Davidson, D. (1967), 'Truth and meaning', *Synthese* 17(1), 304–323.
- Dummett, M. (1981), *Frege: Philosophy of Language*, second edn, Harvard, Cambridge, MA.
- Evans, G. (1982), *Varieties of Reference*, Oxford University Press.
- Frege, G. (1884), *Die Grundlagen der Arithmetik*. English Translation by J.L. Austin, *The Foundations of Arithmetic*, Northwestern University Press, Evanston, IL, 1980.
- Frege, G. (1892), 'On concept and object', *Vierteljahrsschrift für wissenschaftliche Philosophie* 16, 192–205. English translation by Peter Geach in Beaney (1997).
- Hale, B. & Linnebo, Ø. (typescript), 'Fregean categories and the problem of expressibility'.
- Krämer, S. (2014), 'Semantic values in higher-order semantics', *Philosophical Studies* 168(3), 709–724.
- Lewis, D. (1991), *Parts of Classes*, Blackwell, Oxford.
- Quine, W. V. (1960), *Word and Object*, MIT Press, Cambridge, Massachusetts.
- Rosen, G. (1993), 'The refutation of nominalism (?)', *Philosophical Topics* 21, 149–186.
- Stalnaker, R. C. (1979), 'Assertion', *Syntax and Semantics* 9, 315–322. Reprinted in Stalnaker (1999).
- Stalnaker, R. C. (1999), *Context and Content*, Oxford University Press, Oxford.
- Trueman, R. (forthcoming), 'The concept *horse* with no name', *Philosophical Studies* .
- Wright, C. (1983), *Frege's Conception of Numbers as Objects*, Aberdeen University Press, Aberdeen.