

8 Necessity in Reference

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1 Kaplan's Question

Are nouns necessarily about whatever they are about, or are they only contingently so? Consider proper nouns: Is it necessary that Socrates's name refer to him? In the closing paragraph to a much-cited paper on the metaphysics of words, David Kaplan writes:

The question, 'Is it possible that a name which in fact names a given individual, might have named a different individual?' is, for me, a substantial metaphysical question about the essence of a common currency name. By calling the question a *substantial, metaphysical* one, I do not intend to puff up its importance nor to make it seem more mysterious or occult. Perhaps, in the end, the question calls only for a decision, or perhaps, in the end, the question will seem unimportant. This may be the *tao* of substantial metaphysical questions. But there is not, I believe, an *obviously* correct answer. (1990, 118–119)

In what follows, I argue that the correct answer to Kaplan's question is "no." It is not possible for a name that in fact names a given individual to have named a different individual. There are two distinct issues here. The first is whether a name that in fact names an individual might have failed to do so. The second is whether a name that in fact names an individual might have named another. I will focus on the first issue and argue that a name that names a given individual cannot have failed to do so. The second issue is then settled negatively as well under the plausible assumption that a name cannot name two—or more—individuals at once.¹

There are certain uninteresting ways of answering Kaplan's question negatively. Consider, for example, a strict necessitarian line: each thing has

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its actual properties necessarily and bears its actual relations to other actual things necessarily. So whatever each name names, it names as a matter of necessity, and so it will not be possible for a name that in fact names an individual not to do so. Or consider a counterpart-theoretic construal, whereby a certain conversational context selects a counterpart relation that is the minimal reflexive relation. On such a view, again, no actual name can refer to anything other than its actual referent because no actual name will have a counterpart referring to anything other than the actual referent. Or consider, finally, a Priorean historical approach to modality, according to which what is possible for a thing is always per a given moment in time, with the history of the item leading up to that moment closed to modal variation.² On such a view—to which I am considerably sympathetic—if the fact that a name refers to a particular individual at a given time t is determined by the name's history up to t , then it will not be possible at t for the name not to refer to the individual. What makes all these negative answers to Kaplan's question uninteresting is that they fail to take into account what is metaphysically distinctive about names, what it is about their nature as intentional items that decides the issue. My aim here is to defend an interesting negative answer to Kaplan's question.

On Kaplan's conception a name is a common currency item, a natural object with a complicated causal history. In naming Socrates, someone—one of his parents, say—produced a phonological object and introduced it into the language as an initial tag for him. Other such objects—"repetitions" of the initial one—then proceeded to enter into circulation within a certain linguistic economy, which has subsequently proliferated via many people, both intra- and interpersonally, down the generations and all the way to contemporary uses of the name. We may now consider all of these phonological objects, together with inscriptions and the like, as various historical "stages" of a single branching complex object—a "continuant" scattered through space and time. This is what Socrates's name is on Kaplan's conception.³

Without sharing the tentative Carnapian attitude expressed in the cited passage above, according to which the question whether it is necessary for Socrates's name to refer to Socrates might ultimately call for a "decision," the conception elaborated below agrees in general outline with Kaplan's. The main deviations from his position are the focus on referring uses of names and the emphasis on the mental set needed for the production of tokens—or "stages" in Kaplan's preferred terminology—in the constitution of types—or "continuants."⁴ I argue that a plausible basic tenet of Kaplan's metaphysics of words, coupled with a particular outlook on *de re* modality

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and a particular outlook on *de re* attitudes, forces the conclusion that it is necessary for Socrates's name to refer to Socrates. The basic tenet in question is this: On any theoretically sound view of the nature of linguistic expressions and their significance, tokens take explanatory priority over types. Specifically, if a name refers to an individual, it is only because its referring tokens do. I submit that this has the following plausible consequence: It is possible for name *N* not to be about item *o* only if it is possible for some referring token *t* of *N* not to be about *o*.⁵ Once this is taken on board, the question whether names are necessarily about whatever they are about is superseded by the question whether their referring tokens are necessarily about whatever they are about. A positive answer to the latter will entail a positive answer to the former.⁶ And to see the justification for thinking that referring tokens of names are indeed necessarily about whatever they are about requires that we delve into the nature of these tokens. My argument proceeds in two main steps.

2 The Nature of Tokens

We begin our foray into the nature of tokens with the account offered by Sylvain Bromberger and Morris Halle of what goes on in a particular tokening of a certain English sentence (referred to as '(1)' in the cited passages below). The choice to focus on Bromberger and Halle's account is not arbitrary. Their account of token production is the only one offered by current phonological theory:⁷

The uttering of (1), like the aiming of a rifle . . . required a distinctive mindset, distinctive intentions on my part, intentions that I could not have formed without certain pre-existing intellectual capacities. (Bromberger and Halle 2000, 23)

It is a truth about the world that event (1) had the *determinable* property of having intended morphemes. And it is a truth about the world that each spoken token also does. Other events, even events with acoustic properties, do not have that determinable property. Noises made by our coffee pot, or coughs for instance, do not have it. That fact is of the same order as the fact that swinging pendula have periods, while standing rocks do not; that positive numbers have square roots, while trees do not; that the manuscript from which we are reading has a certain gravitational mass, while the ideas we are expressing do not. (Ibid., 32)

The picture that emerges is that of tokens as products of certain intentions, among them intentions to employ certain morphemes (as well as phonetic intentions). It is this feature of tokens that distinguishes them from mere instances of sound patterns or orthographic shapes. To be a given token is to be the product of a process that requires being in certain attitudinal

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states, including the state of intending to employ a given morpheme. This is a distinctive claim about the nature of tokens. A token is not just a noise or an inscription caused in any which way. It is an item with an involved cognitive pedigree. Just as it is the nature of swinging pendula to have periods, the nature of positive numbers to have square roots, and the nature of manuscripts to have gravitational mass, so it is of the nature of tokens to originate from certain intentions. To say that in general tokens are the products of certain intentions is to say that without the intention that produced it a given token would not be what it is. This is a matter determined by what the token is, by the fact that the token emerged as a result of certain intentions, among them the intention to employ a certain morpheme. These intentions play a constitutive role, making the token the item that it is.

Bromberger and Halle's claim that tokens have the *determinable* property of having intended morphemes is a claim about the nature of tokens in light of their conditions of production. The question then arises whether it is plausible to think of the *determinable* possession of intended morphemes as pertaining to the nature of the produced token without having the *determinate* possession of a particular intended morpheme pertaining to the token's nature.⁸ Compare: Even if it is of the nature of a given chair to be massive—to be of some mass or other—it may not be of the nature of the chair to be of a particular mass. Why, runs the objection, would produced tokens not be like chairs and their masses in this regard? The answer is that in the case of produced tokens it is not plausible to think of the determinable property pertaining to the nature of the item without the determinate property pertaining to its nature. The relevant difference lies in the fact that in the case of produced tokens the item has the determinable property pertaining to its nature *only because* it has the determinate property playing a key role in the item's production and thus pertaining to its nature in the first instance. In the latter case this is just not so. Assuming that being massive pertains to the chair's nature, this is not because being of a particular mass played some key role in the chair's production. On the contrary, we think of the chair's particular mass at a given moment in time as an outcome of its production and subsequent persistence. Being massive pertains to the chair's nature as an inheritance of the massivity of the antecedent physical materials and components from which it was produced. The situation here is distinctly unlike the situation with, say, chair production involving some intention or other to produce the chair. *If* an intention to produce the chair pertains to the chair's nature, it is only because a specific intention to produce the chair made a significant contribution to

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the chair's actual production. Similarly, if a token has possession of some intended morpheme or other pertaining to its nature, it is only because it already has possession of a particular intended morpheme pertaining to it.

If we say that a token of a noun is the end result of a process involving the cognitive attitude of intending to employ the noun, our next question is what it is to intend to employ a noun in a referring use. Our general answer is that to intend to employ a noun in a referring use is, among other things, to have a certain referential intention. That reference should require referential intentions is a special case of a more general thesis—that items that exhibit aboutness do so by virtue of being so intended.⁹ But how to think of referential intentions is a subtle matter. One plausible view of referential intentions for a typical common noun construes them as intentions to refer to anything relevantly similar—by standards that may lie outside the speaker's purview—to paradigmatic instances of a kind.¹⁰ A plausible view of referential intentions for a typical proper noun construes them as intentions to refer to that to which the person from whom the speaker picked up the noun referred.¹¹ We can generalize by saying that when we intend to employ a given noun in a referring use we intend to refer to something, a particular thing if the noun is proper or else things or stuff of a particular kind if the noun is common. How to think further of such intentions will be taken up in the next section.

So the nature of a token of a noun is such that what the token is, in the most demanding sense, is determined by the intentions that produced it. These include the intention to employ the noun. Given that the overall intention to employ a noun in a referring use includes the intention to refer to some thing or things or stuff, the nature of the token is such that what the token is is determined, among other things, by this referential intention. The referring token is produced by the referential intention as a matter pertaining to its very nature. We enter a modal implication of this essentialist point as follows. Where t is a token (of noun N) actually produced by, among other things, referential intention ri ,

- (i) it is necessary for t to be produced by ri .¹²

This concludes the first step of our argument for the negative answer to Kaplan's question.

3 The Nature of Referential Intentions

A referential intention is first and foremost a cognitive attitude. A conception I endorse and defend elsewhere is that cognitive attitudes come in

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two basic varieties: specific and generic.¹³ Specific cognitive attitudes, a.k.a. *de re* attitudes, are attitudes directed at particular things, such as the attitude of wanting a particular sloop or believing Orcutt in particular to be a spy.¹⁴ Generic cognitive attitudes, on the other hand, are attitudes such as wanting some sloop or other, or believing that someone or other is a spy. Generic attitudes do not concern us here: the referential intentions that give rise to specific tokens are themselves specific cognitive attitudes, a point to which I shall return. The account I favor construes specific cognitive attitudes as the bearing of genuine relations among the agent, the particular thing (or things) the attitude is directed at (suitably ordered if the attitude is directed at a plurality), and other suitable relata such as the property (relation) believed or intended of the thing (or things) in question. Another more familiar alternative would construe such an attitude as a relation borne not directly to the thing itself but rather to a representation of the thing.¹⁵ If it is granted that in the absence of its object the specific attitude could not obtain either, whether as a result of the essential dependence of the attitude on its relata as in my preferred account or the essential dependence of the representation on its object as in the alternative account, then for present purposes we can afford to remain neutral between these options. In what follows I operate under the auspices of the former.

Let us now consider some representative inventory of specific attitudes, attitudes directed at particular things: Ernst hunting a particular lion, my wanting a particular sloop, Ralph believing Orcutt in particular to be a spy, and my worshipping Bill Gates. The substance of the present account for such cases is this: All involve direct causal-historical relations of subjects to objects. In all such cases, whether those in whose reports the verb takes a clausal complement ('believe') or those in whose reports the verb does not ('hunt', 'want', 'worship'), we draw a distinction between connectivity to the subject matter of the attitude and further cognitive vicissitudes of the agent and the subject matter vis-à-vis one another. We mark this connectivity relation by "c-relation." Being on the trail of a particular lion in the case of specifically hunting it is an instance of the c-relation. It is first and foremost a causal-historical relation.¹⁶ Let us say that at a certain moment in time the specifically hunted lion left a footprint in the sand that was later picked up by the hunter. It was such an encounter with a footprint that ultimately enabled a successful resolution—from the point of view of the hunter, that is—to the specific hunt of this particular lion.¹⁷ By analogy, a trace left behind by a particular sloop, say a memory trace of an actual encounter with it, or a glossy photograph in a boating magazine, is a prerequisite for wanting that sloop in particular. Similarly, being

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historically related to Ortcutt in some such way enables Ralph to believe specifically of Ortcutt that he is a spy. Much ink has been spilled over attempts to spell out exactly what demands are imposed by the c-relation. Not only do I have no unified comprehensive account on offer—I am rather skeptical that any significant theoretical advance is forthcoming in attempting to unify the various types of c-relatedness under a single explanatory umbrella. But the examples discussed here can provide general guidelines for at least some prominent types of causal-historical connectivity.

That a subject of a specific attitude bears the c-relation to its object is understood to be determined as a precondition for subsequent cognition. In particular, the subject being c-related to the object is not a function of the object satisfying some predicative complex in the cognitive possession of the subject. Rather, the c-relation is the causal-historical peg, so to speak, upon which the subject may hang subsequent cognitions. (The point is about cognition proper, linguistic matters aside.) If Ralph believes Ortcutt to be a spy, his being relevantly connected to Ortcutt is not a function of predicative baggage on Ralph's side of things, of Ortcutt uniquely satisfying some qualitative Ortcutt-specifying condition in the cognitive possession of Ralph. Rather, being c-related to Ortcutt is a cognitive prerequisite for Ralph's subsequent ascription of being a spy to him. And not only is being c-related to Ortcutt required both for Ralph believing Ortcutt to be a spy and for Ralph believing Ortcutt not to be a spy—being c-related to Ortcutt is even required for Ralph suspending his judgment as to whether Ortcutt is a spy and thus *not* believing Ortcutt in particular to be a spy.

In all that follows I focus on the facts of cognition themselves rather than on the semantics of our reports of such facts. What relation must obtain between the metaphysics of a given domain of facts and the semantics of reporting those facts is a vexing methodological question I cannot dwell on here.¹⁸ Schematically—and setting aside the matter of connectivity to properties and relations—we can represent the metaphysical situation of Ralph believing Ortcutt in particular to be a spy as

$$\langle C(\text{Ralph}, \text{Ortcutt}) \rangle \textcircled{C} \text{Bel}(\text{Ralph}, \langle \text{Ortcutt} \rangle, \text{Spy}(_)),$$

where 'C' stands for the c-relation and '©' is a non-truth-functional cognitive prerequisite connective.¹⁹ And Ralph not believing Ortcutt in particular to be a spy can be represented as

$$\langle C(\text{Ralph}, \text{Ortcutt}) \rangle \textcircled{C} \neg \text{Bel}(\text{Ralph}, \langle \text{Ortcutt} \rangle, \text{Spy}(_)).$$

In short, there are two distinct ways in which it might not be the case that Ralph believes Ortcutt to be a spy. First, Ralph may not believe Ortcutt to

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be a spy in the sense just given. Second, the cognitive prerequisite for believing (or not believing) Ortcutt in particular to be a spy may not obtain to begin with. On the present conception the way c-relatedness figures in the metaphysics of specific attitudes is analogous to the way in which according to the familiar presuppositional account of ‘The ϕ is ψ ’ the existence of a unique ϕ is required both for its truth and for its falsity.²⁰ If there is a particular sloop I want, let us say the *Northern Spray*, then my being c-related to the *Northern Spray* is a cognitive prerequisite, or precondition, for wanting it in particular:

$\langle C(I, \text{the } Northern \text{ Spray}) \rangle \circledast \text{Want}(I, \text{the } Northern \text{ Spray})$.

But *not* wanting the *Northern Spray* in particular also requires my being c-related to it:

$\langle C(I, \text{the } Northern \text{ Spray}) \rangle \circledast \neg \text{Want}(I, \text{the } Northern \text{ Spray})$.

It may be thought that for attitudes in whose reports the main verb receives a nonclausal complement, such as wanting, worshipping, and hunting, there really is no wanting that is not wanting-as, no worshipping that is not worshipping-as, and so on. Thus, any account of these basic cases should respect such differences as those between my wanting the *Northern Spray* as a status symbol, as a means of transportation, and as fuel for my bonfire. On such a view there really is no such thing as specific wanting *simpliciter*, no such two-place relation that can obtain between agents and the particular objects of their wants. If this is indeed so, then specific wanting, worshipping, and their ilk, turn out to be more belief-like than we were initially inclined to suppose, better construed as three-place relations among agents, objects, and the relevant properties.²¹ For present purposes we need not settle the issue.

With this view of specific cognitive attitudes as the bearing of genuine relations to particular things on board, a given attitude of intending to refer to a particular thing is to be thought of as an instance of the following schema:

$\langle C(\text{agent, morpheme}), C(\text{agent, object}) \rangle \circledast \text{RI}(\text{agent}, \langle \text{morpheme, object} \rangle, \text{mRefer}_{(-1,-2)})$,

where mReferring is the relation that is to hold between the morpheme (a noun) and the thing.²² The referential intention is the intention to employ the noun for a particular thing. A token of the noun is then produced by such an intention together with other intentions, such as phonetic intentions. Importantly, the referential intention does not incorporate the relation of token reference (written as “Refer_(-1,-2)”). Otherwise, token *t* would

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be generated by, among other things, referential intention *ri*, which would already include *t* within its second relatum, giving rise to a peculiar form of self-generation.

4 Putting It All Together

There are several remaining issues that require filling in before we can proceed to our conclusion. The first involves a minor adjustment to what has already been said in order to accommodate initial dubbings. A referential intention as construed here requires that the speaker bear the *c*-relation to a preexisting morpheme, whereas when we name things for the very first time we set new morphemes into linguistic motion, so to speak. This demands some accommodation, presumably via a notion of a basic referential intention rendered perhaps along the lines of

$\langle C(\text{agent}, \text{object}) \rangle \textcircled{C} \text{RI}_{\text{basic}}(\text{agent}, \langle \text{object} \rangle, \text{Refer}_{\text{basic}}(_))$.

The second issue goes to the heart of the current proposal. It may seem that by incorporating ‘*mRefer*(_{1,2})’ into our account of referential intentions we are abandoning the commitment articulated earlier of allotting explanatory priority to tokens over types. But this is not so. Think of what we do when we deploy a noun to refer to a particular thing by analogy to individually contributing to the overall trajectory of a balloon in a room full of players. Say that our general collective aim is to prevent the balloon from reaching the ground without grabbing it, and that each of us gets a turn to influence the balloon’s trajectory. Each of the players (except the first) receives the entire historical trajectory of the balloon as input and produces an individual contribution as output, which then gets added to the overall trajectory that the next player receives as input in turn. This does not compromise the idea that the overall trajectory is secondary in the order of metaphysical explanation to the individual contributions made by each of the players. Similarly, in our case, each user of the name acts on the entire historical branching morpheme as input, produces an addition to one of the branches in the form of the generated token, and passes on the outcome to other users (including this very user at a later time). This, again, does not compromise the idea that the continuing production of the branching morpheme is secondary in the order of metaphysical explanation to the production of the individual tokens.

We note that the present approach contains a ready response to a version of what Michael Devitt has termed “the *qua* problem” as applied to referential intentions.²³ This is the problem of what determines that in

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intending to refer to a person, say, it is the person who is the intended referent rather than the lattice of molecules comprising the person or the person's surface or whatever. One solution is to think of the intention to employ the noun to mRefer to something as relativized to a property, in which case the second relatum of the referential intention would have an extra slot for the property of being a person and the relational property that is the third relatum will be triadic rather than dyadic.²⁴ This solution is similar in outline to the response offered above to the objection to dyadic specific wanting of a particular sloop. Relativizing a referential intention to a property is a metaphysical relativization, not an epistemic one supposedly lying within the purview of the speaker. (We may think of this as on the same order as relativizing being at rest to a reference frame.) The intention to refer merely to the surface of the person rather than to the entire person includes a slot for the property of being a surface. In order to intend to refer to this surface the speaker would need to be c-related to the person. But there is no further requirement that the intended referent satisfy some further predicative condition in the cognitive possession of the speaker. The approach is thus not vulnerable to the kind of critique Kripke levels against the Geachian view that reference is invariably under a sortal.²⁵

It may be doubted that referential intentions are specific attitudes. It may be supposed that referential intentions are invariably descriptive, that they are intentions to refer to anything satisfying a certain description, which would make them generic in the proposed typology. Here familiar arguments against descriptivism about names apply with very little alteration.²⁶ A case from Donnellan adapted to the present issue: A subject faces a large screen on which two squares, indistinguishable except by their relative position, are seen arranged vertically. The subject is asked to name the squares, upon which she names the one apparently on top 'Alpha' and the one apparently on bottom 'Beta'. Unbeknownst to her she is fitted with upside-down inverting glasses. It seems obvious that the subject named the square that is in fact on bottom 'Alpha'. Subsequently, the referential intention with which she employs 'Alpha' (in, say, reporting changes in the squares) is not the descriptive intention to refer to whichever square is on top but the specific intention to refer to the particular square that happens unbeknownst to her to be on bottom. Such examples may be multiplied as needed.

One version of descriptivism about referential intentions, however, is due to a certain misreading of Kripke's metasemantic views and deserves a separate discussion. It might be supposed that in employing a name we

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intend to refer to whatever the person from whom we picked up the name referred. And the intention to refer to the thing to which the person from whom we picked up the name referred seems generic rather than specific.

To see what is at stake here we need to draw a distinction between primary intentions and secondary ones. A primary intention for a given act is distinguished by the fact that if it misfires the act itself fails, whereas this is not so for a secondary intention. To illustrate we may recall another case from Kripke. Seeing someone at a distance raking leaves and believing the person to be Smith, I say, "Smith is raking leaves." Let us assume that in using 'Smith' I had a referential intention to refer to the bearer of the name, Smith. Let us also assume that in using 'Smith' I had a referential intention to refer to the person I see at a distance. (Recall that I believe the man I see at a distance to be Smith.) On Kripke's view, my intention to use the name to refer to its bearer would be primary, whereas my intention to refer to the person I see at a distance would be secondary. So on such a view, if it turns out that the intention to refer to the bearer misfires owing to the nonexistence of a bearer, then my referential use of 'Smith' fails too even if I secondarily intended to refer to the person seen at a distance. And if it turns out that the person straight ahead is a mirage and Smith is at home watching television, then on such a view I did manage to use 'Smith' to refer to Smith and say something false about him. On the opposing view, the intention to refer to the person seen at a distance is primary. So on such a view, if it turns out that what I see straight ahead is a mirage, then I failed to refer in my use of 'Smith' even if I secondarily intended to refer to the bearer of the name, Smith. And if it turns out that 'Smith' has no bearer and the person straight ahead is indeed raking leaves, then on such a view I used 'Smith' referentially to say something true about the man seen at a distance.

My present claim is that in employing a name referentially, the primary referential intention is a specific attitude even if it is accompanied by a secondary generic attitude in the form of a descriptive intention to refer to whatever the person from whom I picked up the name referred. To see most clearly how primary referential intentions can remain nondescriptive while accompanied by secondary descriptive ones, we may turn to the metasemantics of common nouns. Let 'CN' be a linguistically deferential common noun. What does linguistic deference amount to here? As a general matter, to say that 'CN' is linguistically deferential does not thereby construe the term as a term for "what the experts specify." Users of 'CN' primarily intend to employ 'CN' to refer to CN. The further metasemantic

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question of deference is whether or not such a primary intention to refer to CN is mediated by a secondary deferential intention to refer to what the experts specify. When it is so mediated, that is, when novices intend to refer to CN *by* intending to refer to what the experts specify, this reflects the novices' belief that the experts are reliable in determining whether or not something is CN. (Whether or not the experts are in fact reliable is another matter that does not touch on the novices' repertoire of referential intentions.) But it is not as though the novices *primarily* intend to refer to whatever the experts specify.

Compare: We all intend to achieve fulfillment in life, let us suppose. There is then the question whether or not such an intention in a given case is or is not mediated by a secondary intention to follow the teachings of a guru. When it is so mediated, that is, when the person intends to achieve fulfillment *by* intending to follow the teachings of the guru, it reflects the person's belief that what the guru says about how to live is reliable. (And again, whether or not what the guru says is reliable does not touch on the intentions of the fulfillment-seeker.) But it is not as if we should think of such a person as someone who *primarily* intends to follow the teachings of the guru.

Turning now to referential intentions for names, if Kripke is correct then we are deferential in our referential intentions to those from whom we pick up the names. This in no way makes our primary referential intentions descriptive. I intend to refer to someone *by* intending to refer to whomever the person from whom I picked up the name was referring. But it is not as though my intending thus to refer is the intention to refer to: whomever the person from whom I picked up the name referred. In short, despite the possibility of mediation by secondary descriptive intentions, primary referential intentions are nondescriptive. They are specific cognitive attitudes rather than generic ones.

For the remainder of the chapter we may ignore the connectivity (or "c-relatedness") that must obtain between the agent and the particular thing(s) the attitude is directed at, in our case both the morpheme and the referent. We can now say that it is a matter of a primary referential intention's relational nature that such a cognitive attitude cannot remain invariant across the variability of its relata.²⁷ A referential intention depends for what it is on the intended referent. A difference in referent forces a difference in the referential intention itself insofar as the latter is the bearing of a genuine relation to the former. This dependence of the referential intention on its object is, again, a matter pertaining to the attitude's nature.

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Where o is the object specified by referential intention ri as the referent for morpheme N , we can enter a modal implication of the point as follows:

- (ii) It is necessary for ri to specify o as referent.

Putting this together with

- (i) It is necessary for t to be produced by ri ,

gives us:

- (iii) It is necessary for t to refer to o .

This concludes the second step in the argument for the negative answer to Kaplan's question.

The missing premise is the requisite connection between the relevant relations of reference, production, and specification: It is necessary that token reference obtain if the token is produced by whatever specifies the referent.²⁸ And this is indeed the right connection. For suppose otherwise. Suppose that it is possible that a token fail to refer to the individual specified by the intention that produced the token. What might support this? The thought must be that the individual specified by the referential intention is the "wrong" individual (Ted) for the particular morpheme ('Ned') tokens of which have up to now referred to another individual (Ned). And so, the thought must continue, because the token in question fails to refer to the "right" individual (Ned), it fails to refer at all. And so it fails to refer to the individual specified by the producing referential intention. But within the present approach, the token produced by a referential intention that specifies Ted refers to Ted, acoustic similarity to past tokens of 'Ned' notwithstanding. By the assumption made earlier that a type refers to an individual only if every referring token of it does,²⁹ if the type 'Ned' refers to Ned then the token thus produced is not of that type. In terms of the balloon analogy offered earlier for how to think of the relation between a preexisting morpheme and a referential intention incorporating it into token production, even the player who drops the balloon and then proceeds to inaugurate a newly minted trajectory for the balloon is still in some sense acting on the freshly terminated old trajectory as input. But the output does not then get added to the old trajectory—it is a fresh start. If the balloon then gets dropped in turn, the trajectory thus inaugurated will have had a very short career. Going back to the Ted–Ned case, under the conditions envisaged it is wrong to say that the produced token does not refer to Ted as required by the objection to the proposed connection between reference, production, and specification. The token does refer to

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whatever the producing intention specifies. And this can be so even if the production of such a token brings about the inauguration of an extremely short-lived type, the very token in question.

In light of these considerations, we conclude that a given token of a referring noun refers to what it refers to as a matter of necessity. Given that token t refers to object o , it is impossible that t should not refer to o . And so, assuming that no token can refer to two or more individuals at once, it is not possible for a token of a name that in fact refers to a given individual to have referred to a different individual. The conclusion derives from the necessity of a particular token being produced by a particular referential intention, coupled with the necessity of the referential intention being directed at a particular individual.

5 Concluding Complications

Our focus thus far has been on referring tokens of names. But if my intending to refer to Neptune is understood in terms of my bearing the c-relation to Neptune, what is to be said about cases in which there is nothing there for me to bear the c-relation to? Consider the name “Vulcan” as introduced by Le Verrier for a planet hypothesized to be closer to the sun than Mercury and responsible for perturbations in Mercury’s orbit—a name of nothing, as it happens. Our problem is the absence of a second relatum for such purported specific cognitive relations as believing Vulcan to be hot, worshipping Vulcan, or intending to refer to Vulcan. And regarding all such cases we take a hard line: there is no believing Vulcan to be hot in the absence of Vulcan, no worshipping Vulcan in the absence of Vulcan,³⁰ and no intention to refer to Vulcan in the absence of Vulcan. There is nothing in such cases for me to bear the requisite c-relation to.

It is important to note that the explanatory burden here for a relational metaphysics of cognitive attitudes is not merely to ascertain that there is nothing to which I can be cognitively related in such specific cases. The explanation needs to extend further to cases of absence of a second relatum in shared specific cases, such as the case of you and I both failing to believe that Homer was the author of the *Iliad* owing to the nonexistence of Homer in a way that is shared by us and not shared by someone who fails to believe that Zeus was the author of the *Iliad* owing to the nonexistence of Zeus; or the case of different Greeks commonly failing to worship the nonexistent Zeus without thereby commonly failing to worship the nonexistent Poseidon. Indeed, the explanation needs to go as far as accounting

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for the fact that the Greek failure to worship Zeus owing to the nonexistence of Zeus and the Roman failure to worship Jupiter owing to the nonexistence of Jupiter are in some interesting sense cofailures.³¹

Our explanation can achieve this, provided that we remember that it is not our explanatory aim to specify a what-is-believed propositional commonality for the various attitudes in question. What needs explaining, rather, is what in their relevant respective histories makes distinct cognitive states traceable back to a single locus, one that happens to be occupied by nothing. Here we can take our clue from Donnellan's (1974) treatment of true negative existential. On Donnellan's view, an utterance of a sentence of the form '*N* is ϕ ' is true just in case (1) the right historical connection holds between that use of '*N*' and a thing, and (2) the thing in question ϕ s. For the purposes of semantic theory, this needs some refinement. According to Donnellan's proposal, both 'Vulcan exists' and 'Vulcan is hot' fail to be true, and yet 'Vulcan exists' is supposed to turn out to be false while 'Vulcan is hot' is supposed to turn out neither true nor false. But putting such semantic details aside, Donnellan's insight is that once we shift our theoretical perspective from providing a content-specifying interpretation of a target utterance into the theorist's language to explaining directly the conditions under which the target utterance is true given its relevant historical setting, we can utilize the notion of a block in the historical chain leading back from the contemporary use of the name contained therein.³² And this carries over to the metaphysics of cognition as well.

Let us assume that the name 'Homer' was introduced by some ancient editor as the name of a merely stipulated single source for a corpus of verses subsequently bundled together as the *Iliad*. A contemporary use of the name 'Homer' would have its source, then, in a block occurring at the point of this ancient editorial decision (or perhaps its subsequent execution). This is unlike the case of the name 'Socrates', let us assume, which can be traced back to Socrates—the source of 'Socrates' being the bearer of the name. And just because the name 'Homer' has its source in such a block does not make it a name *of* the block in question.³³ Switching from language to cognition, we can say that believing Homer to have written the *Iliad* is not attainable in the absence of Homer. There is nothing in the actual history of any cognitive attitude of the subject to which the theorist can point and say: *This* is what the subject believes to have written the *Iliad*. And yet a divergence in relevant histories decides against classifying this subject, unwittingly failing to believe that Homer

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wrote the *Iliad*, with another subject who fails to believe that Zeus wrote the *Iliad* owing to the nonexistence of Zeus. If an image is wanted here, it is this. We may think of contemporary Homer-states as nodes in a tree of cognitive dependence whose trunk is rooted in the ancient editorial decision. Thus, for example, my Homer-states stem from my teacher's Homer-states, as are the Homer-states of many of my classmates. Let us think of this kind of historical dependence of cognitive states as extending all the way back to the ancient editorial decision as their common origin. Now, a similar story can be told about contemporary Zeus-states as nodes in a distinct tree of cognitive dependence. It is the distinctness of the two trees that grounds the determination that the failure to believe that Homer wrote the *Iliad* is distinct from the failure to believe that Zeus wrote the *Iliad*.

Given the conditions of production of a token of 'Vulcan', considerations strictly analogous to those above regarding referring tokens apply. Not only does such a token actually refer to nothing—it refers to nothing actual as a matter of necessity. The profile of cognitive attitudes that enter into the production of such an item does not include a referential intention. Such a token has no referential intention as part of its very makeup. But even if we set aside distinctness of the types involved based on distinct phonetic intentions, from the point of view of what Donnellan poignantly called “the omniscient observer of history,” the failure to intend to employ 'Vulcan' to refer to Vulcan is distinct from the failure to intend to employ the morphological item 'Homer' to refer to Homer. Furthermore, given that tokens of empty nouns could not refer to any actual thing, and given the assumption that no token can refer to more than one thing at once, we can establish an answer to a follow-up question to Kaplan's original question. The original question was whether it is possible for a name that in fact names a given individual to have named another. Our negative answer was established by considering the nature of referring tokens of names and arguing that it is not possible for a token of a name that refers to a given individual not to have referred to it, and so it is not possible for the token to have referred to another individual (given that no token can refer to two or more individuals at once). The follow-up question is whether it is possible for an individual to be referred to by some actual token that does not in fact refer to it. And the answer here, under the assumptions that no token can refer to two or more individuals at once and that tokens of empty nouns could not refer to any actual thing, is negative as well.³⁴

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To establish such modal results from essentialist claims regarding the nature of tokens and the cognitive attitudes that give rise to them is to subscribe to a conception of modal profiles for things that is certainly not self-evident. After all, someone might easily counter (iii) above as follows: "Let us grant that the referent of a given token played a formative role in the *actual* origination process leading up to the formation of the token. Still, why is it impossible that this very token should have referred to something else? Consider the actual token. What rules out the compossibility of the token and a distinct origination process involving a distinct referent? For if nothing does, then it is possible for the token not to have referred to its actual referent after all." The charge is well placed and demands an answer in the form of a separate discussion of the determinants of possibilities for particular things, that is, of *de re* modality, which I discuss elsewhere at some length (Simchen 2012, chap. 1).

Finally, recall that the argument pursued here was an effort to provide an interesting negative answer to Kaplan's question whether it is possible for a name that in fact names a certain individual to have named another. What "interesting" meant, in effect, was that the considerations adduced in favor of a negative answer to the question issued from the nature of names as intentional items, from the relatively local matter of what makes such items the very items they are. This, we saw at the beginning, may be contrasted with arguing for a negative answer to the question that proceeds from relatively global considerations, considerations that do not take into account what is metaphysically distinctive about the referential uses of names and the requisite cognitive attitudinal backdrop for such uses. The present case provides a vivid illustration of the familiar point that superficial convergences on specific verdicts in philosophy, even controversial ones, can easily conceal deep divergences in method and theoretical inclination. Anyone with a targeted interest in intentionality should have a *prima facie* preference for the localist treatment of the question of necessity in reference provided here over its globalist competitors.

Appendix

The main argument (i)–(iii) can be rendered explicit in a number of ways. What we need above all is some principle connecting 'Produce-by(x,y)', 'Specify(x,y)', and 'Refer(x,y)' that entails that it is necessary that token reference obtain if the token is produced by whatever specifies the referent:

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(M) $\forall x\forall y\forall z\Box(\text{Produce-by}(x,z) \wedge \text{Specify}(z,y) \rightarrow \text{Refer}(x,y))$.

With this on board, we can easily prove in SQML that

(i) $\Box(E!(t) \rightarrow E!(ri) \wedge \text{Produce-by}(t,ri))$

(ii) $\Box(E!(ri) \rightarrow E!(o) \wedge \text{Specify}(ri,o))$

jointly entail

(iii) $\Box(E!(t) \rightarrow E!(o) \wedge \text{Refer}(t,o))$.³⁵

Suppose for *reductio* that (iii) is false. Then for some world w , $E!(t)$ at w and either $\neg E!(o)$ at w or else $\neg \text{Refer}(t,o)$ at w . Suppose first that $\neg E!(o)$ at w . Then by (ii) $\neg E!(ri)$ at w , and by (i) $\neg E!(t)$ at w , contradicting our assumption that $E!(t)$ at w . Next suppose that $\neg \text{Refer}(t,o)$ at w . From M we get

(M') $\Box(\text{Produce-by}(t,ri) \wedge \text{Specify}(ri,o) \rightarrow \text{Refer}(t,o))$,

and from (M') and $\neg \text{Refer}(t,o)$ at w we get that either $\neg \text{Produce-by}(t,ri)$ at w or else $\neg \text{Specify}(ri,o)$ at w . If the former, then by (i) $\neg E!(t)$ at w , which contradicts the assumption that $E!(t)$ at w . If the latter, then by (ii) $\neg E!(ri)$ at w , which again contradicts the assumption that $E!(t)$ at w .

Moving on to Deutsch's pre-LCB, we show that

(i) $\Box \text{Produce-by}(t,ri)$

(ii) $\Box \text{Specify}(ri,o)$

jointly entail

(iii) $\Box \text{Refer}(t,o)$.

(Semantically ascending, we need to show that if the ordered pair of the actual denotata of ' t ' and ' ri ' belongs to the extension of 'Produce-by' at every world, and if the ordered pair of the actual denotata of ' ri ' and ' o ' belongs to the extension of 'Specify' at every world, then the ordered pair of the actual denotata of ' t ' and ' o ' belongs to the extension of 'Refer' at every world.) We conjoin (i) and (ii) and dedistribute the operator over the conjunction to yield $\Box(\text{Produce-by}(t,ri) \wedge \text{Specify}(ri,o))$, which, together with (M') and the suitable instance of the K axiom, yields (iii) by two applications of MP.

We can also prove in pre-LCB that

(i') $\forall x\forall y(\text{Produce-by}(x,y) \rightarrow \Box \text{Produce-by}(x,y))$

(ii') $\forall x\forall y(\text{Specify}(x,y) \rightarrow \Box \text{Specify}(x,y))$

jointly entail

(iii') $\forall x\forall y(\text{Refer}(x,y) \rightarrow \Box \text{Refer}(x,y))$.

Here we use as an auxiliary assumption the commitment incurred earlier in the chapter that a token refers to an individual only if it is produced by a referential intention that specifies the individual:

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(M*) $\forall x\forall y(\text{Refer}(x,y) \rightarrow \exists z(\text{Produce-by}(x,z) \wedge \text{Specify}(z,y)))$.

Suppose for *reductio* that for some t, o , $\text{Refer}(t,o) \wedge \neg\Box\text{Refer}(t,o)$. From the first conjunct and (M*) twice instantiated we get that $\exists z(\text{Produce-by}(t,z) \wedge \text{Specify}(z,o))$. We let ri' be that in virtue of which the latter obtains, so that $\text{Produce-by}(t,ri') \wedge \text{Specify}(ri',o)$. From this, together with (i') and (ii') each twice instantiated, the consequents conjoined and the operator dedistributed, we get that $\Box(\text{Produce-by}(t,ri') \wedge \text{Specify}(ri',o))$, which by M thrice instantiated and the suitable instance of the K axiom yields $\Box\text{Refer}(t,o)$, contradicting the second conjunct in the *reductio* assumption.

Finally, assuming that nothing can refer to two or more things at once and that if a token refers to no actual thing then it could not refer to any actual thing, we can show that

$\forall x\forall y(\neg\text{Refer}(x,y) \rightarrow \Box\neg\text{Refer}(x,y))$

by showing that for any choice of t and o , the following fails:

(†) $\neg\text{Refer}(t,o) \wedge \Diamond\text{Refer}(t,o)$.

First, let t be such that $\exists x\text{Refer}(t,x)$, letting o' be such that $\text{Refer}(t,o')$, in which case $\Box\text{Refer}(t,o')$ by the previous result. Now let o be such that $\Diamond\text{Refer}(t,o)$. We assume that nothing can refer to two or more things at once:

(‡) $\forall x\forall y\forall z\Box(\text{Refer}(x,y) \wedge \text{Refer}(x,z) \rightarrow y=z)$.

The latter implies $\Box(\text{Refer}(t,o) \wedge \text{Refer}(t,o') \rightarrow o=o')$, which, together with $\Box\text{Refer}(t,o')$ and $\Diamond\text{Refer}(t,o)$, implies that $\Diamond o=o'$.³⁶ But then, by the necessity of distinctness, we get that $o=o'$. So from $\text{Refer}(t,o')$ we get that $\text{Refer}(t,o)$, which falsifies (†). Next let t be such that $\neg\exists x\text{Refer}(t,x)$. Our second assumption is that a token of an empty noun could not refer to anything actual:

(§) $\forall x(\forall y\neg\text{Refer}(x,y) \rightarrow \forall y\Box\neg\text{Refer}(x,y))$.

From the latter and our choice of t it follows that for any actual individual o $\Box\neg\text{Refer}(t,o)$, i.e., $\neg\Diamond\text{Refer}(t,o)$, which again falsifies (†). From the arbitrariness of our choices of t and o it follows that

$\forall x\forall y(\neg\text{Refer}(x,y) \rightarrow \Box\neg\text{Refer}(x,y))$.

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Notes

1. Just to forestall misunderstanding, I note that *generic* names—say, the generic English name “David” of which Kaplan’s, Lewis’s, and Hume’s first names are all specific instances—neither name anyone nor purport to do so.

2. Consider:

It is always a useful exercise (and one insufficiently practiced by philosophers), when told that something was possible, i.e., could have happened, to ask ‘When was it possible?’ ‘When could it have happened?’ So if Caesar could have had different parents, when could he have had them? After his birth, indeed after his conception—indeed, at or after his conception—it was clearly too late for him to have had different parents. But why not before? Do not the possible worlds in which Caesar figures include alternative sequels to what happened before he existed, in which we have him entering the stage at a different point? My difficulty here is that before Caesar existed (whether we suppose his conception or some other event to constitute the start of his existence) there would seem to have been no individual identifiable as Caesar, i.e., the Caesar we are now discussing, who could have been the subject of this possibility. (Prior 1960, 688)

3. Kaplan’s model has been criticized recently (LePore and Hawthorne forthcoming). I hope to address their abstracta-articulations model in relation to the question of necessity in reference elsewhere.

4. From this point on I adopt the type-token terminology for the sake of uniformity with the extant literature. This carries no substantive commitments.

5. Letting ‘Name’ be a monadic predicate for namehood, ‘mRefer’ (the ‘m’ for ‘morpheme’) be a dyadic predicate for nominal type reference, ‘Refer’ be a dyadic predicate for nominal token reference, and ‘<’ be a dyadic predicate for the referring-token-of relation, the claim is that:

$$(*) \quad \forall x \forall y (\text{Name}(x) \wedge \Diamond \neg \text{mRefer}(x, y) \rightarrow \exists z (z < x \wedge \Diamond \neg \text{Refer}(z, y)))$$

More on the difference between ‘mRefer_(-, -)’ and ‘Refer_(-, -)’ below.

6. Additional assumptions are that a name refers to something only if every referring token of it does:

$$(**) \quad \forall x \forall y \forall z (\text{mRefer}(x, y) \wedge z < x \rightarrow \text{Refer}(z, y)),$$

and that anything that bears the nominal type reference relation to something is a name:

$$(***) \quad \forall x \forall y (\text{mRefer}(x, y) \rightarrow \text{Name}(x)).$$

Later it will be argued that the nominal token reference relation holds only if it does so necessarily:

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(****) $\forall x \forall y (\text{Refer}(x,y) \rightarrow \Box \text{Refer}(x,y))$.

(See note 12 below and the appendix for further details on a suitable formal framework for such claims.) It is then easy to verify that $(*) \wedge (**) \wedge (***) \wedge (****)$ entails that a name refers to something only if it does so necessarily:

$\forall x \forall y (\text{mRefer}(x,y) \rightarrow \Box \text{mRefer}(x,y))$.

7. We note that optimality theory has no competing ontology on offer. See also Bromberger and Halle 1997.

8. Thanks to an anonymous reader for raising this issue.

9. Here is a vivid endorsement of the idea by Putnam (1981):

An ant is crawling on a patch of sand. As it crawls, it traces a line in the sand. By pure chance the line that it traces curves and recrosses itself in such a way that it ends up looking like a recognizable caricature of Winston Churchill. Has the ant traced a picture of Winston Churchill, a picture that *depicts* Churchill?

Most people would say, on a little reflection, that it has not. The ant, after all, has never seen Churchill, or even a picture of Churchill, and it had no intention of depicting Churchill. (Putnam 1981, 1)

10. The *locus classicus* of this view is Putnam 1975.

11. This is the view offered by Kripke: “When the name is ‘passed from link to link,’ the receiver of the name must, I think, intend when he learns it to use it with the same reference as the man from whom he heard it” (1980, 96).

12. This may be rendered as:

$\Box (E!(t) \rightarrow E!(ri) \wedge \text{Produce-by}(t,ri))$,

but a more natural alternative is to operate within a semantic framework that allows us to affirm straightforwardly that $\Box \text{Produce-by}(t,ri)$ without unwanted consequences of necessary existence. Deutsch’s Prior-inspired logic for contingent beings (LCB) appears to be just such a framework (see Deutsch 1990 and, for a fuller development, Deutsch 1994). Deutsch’s system is an S5 double-indexing framework, where denotation is a ternary relation among constant, world, and context of origin (rather than a binary relation between constant and world), and where validity is defined in terms of context-world pairs (“points”). The effect is that constants are assigned fixed values at a given context for any circumstance of evaluation, whether or not those values exist at the circumstance. In what Deutsch calls “pre-LCB” the only points to consider are ones with the actual world as first member. For ‘ $\Box \phi a$ ’ to hold in a pre-LCB model is for the actual thing denoted by ‘ a ’ to fall in the extension assigned to ‘ ϕ ’ at every world. This does not require a to exist in every world. There can thus be “facts about a ” at worlds in which a does not exist (without abandoning classical quantification), because at worlds in which a does not exist there are facts about a *from the point of view of the actual world*.

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13. See chapter 5 of Simchen 2012 for an elaborate defense.

14. Such attitudes may be directed at particular pluralities or stuff of a particular kind as well, but for the sake of simplicity we focus on the case of specific cognitive attitudes directed at particular individual things. The examples are from Quine 1956.

15. Similarly for properties and relations.

16. I note in passing that the view articulated here pertains to the facts of cognition. It does not pertain directly to linguistic expressions. I consider the now-familiar causal-historical facts about names to derive from the abundance of prior causal-historical facts about cognition; it is these prior facts I am trying to capture here.

17. This is not meant to exclude other ways in which the footprint might figure in the hunting of a lion. A hunter may act on the generic belief that, owing to the sociability of lions, following such a footprint tends to lead to a cluster of lions. The encountered footprint might then be incorporated into a generic hunting of a lion.

18. But see Simchen 2012, especially section 3.5, for further discussion.

19. We can let 'C' be governed by the following rule:

'C(α , β)' is true if and only if α bears the c-relation to the referent of ' β '.

We assume that "the referent of ' β '" above is used attributively, so that 'C(α , β)' comes out false when ' β ' refers to nothing. And let it be the case that $\langle X_i, \dots, X_i \rangle \textcircled{C} Y$ holds if $\bigwedge_{1 \leq i \leq n} X_i \wedge Y$ holds, its contradictory holds if $\bigwedge_{1 \leq i \leq n} X_i \wedge \neg Y$ holds, and neither it nor its contradictory hold if for any i , $1 \leq i \leq n$, $\neg X_i$ holds. The X_i are the instances of the c-relation borne to each particular mentioned in the second argument-place in Y in the order in which they appear there.

20. The *locus classicus* is Strawson 1950.

21. My wanting the *Northern Spray* in particular as a luxury item would then be rendered:

$\langle C(I, \text{the } Northern \text{ Spray}) \rangle \textcircled{C} \text{Want}^*(I, \text{the } Northern \text{ Spray}, \text{Luxury Item}(_))$.

22. I am inclined to think that in certain cases c-relatedness to the referred individual obtains only in virtue of the speaker's c-relatedness to the morpheme, but nothing hangs on whether or not this is so for present purposes.

23. For discussion, see section 5.3 of Devitt and Sterelny 1987.

24. I.e., $\langle C(\text{agent, morpheme}), C(\text{agent, object}) \rangle \textcircled{C} \text{RI}(\text{agent, } \langle \text{morpheme, object, } \phi \rangle, \text{mRefer}(_1, _2, _3))$.

25. Kripke describes a case in which a mathematician's wife, upon hearing her husband muttering "Nancy," wonders "whether Nancy, the thing to which her husband referred, is a woman or a Lie group" (1980, 115–116). Assuming we can make nonmetalinguistic sense of the mathematician's wife's thoughts, we may

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suppose her wondering use of ‘Nancy’ to be already backed up by a referential intention relativized to being a woman or a group, as the case may be. Her wonder, then, testifies to no more than a limited view of the relevant portion of her cognitive situation. (In this, her situation is not so different from that of someone who wonders whether Nancy is the woman she met at the department party last year or her husband’s mother-in-law from his previous marriage.)

26. For a powerful articulation of the pertinent issues here, see, e.g., Donnellan 1970. The example discussed immediately below is taken from section VIII of that paper.

27. From this point on, our focus is on primary referential intentions. We thus drop the qualification ‘primary’.

28. I.e., $\forall x \forall y \forall z \square (\text{Produce-by}(x,z) \wedge \text{Specify}(z,y) \rightarrow \text{Refer}(x,y))$. See the appendix for details.

29. See note 4.

30. I realize that it can seem startling that worshipping is “thingive” (by analogy to “factive”) in this way, but here I must refer the reader to chapter 5 of Simchen 2012 for an extended discussion of this and surrounding claims.

31. These are all cognitive analogues to semantic issues arising from so-called Hob-Nob cases, cases that were first brought to the fore of contemporary philosophical attention by Geach 1967. For a recent treatment of the semantic situation within a Donnellan-inspired framework, see Almog 2004.

32. Donnellan’s treatment of empty names has been widely misunderstood as construing the likes of ‘Vulcan does not exist’ as having metalinguistic content, namely, that of “the historical chain leading back from our use of ‘Vulcan’ ends in a block” (Evans 1982, 344). Such misinterpretation ignores the methodological *raison d’être* of much of Donnellan’s work, starting with Donnellan 1966. The issue requires a more meticulous examination than I can offer here.

33. See the comments regarding the so-called *qua* problem above. We can think of the failed referential intention here as relativized to the property of being human along the lines of note 24.

34. See the appendix for details.

35. See Linsky and Zalta 1994. We are assuming that ‘E!’ expresses concreteness.

36. Within the double-indexing scheme of pre-LCB we are interpreting uniformly relative to a fixed context that includes t , o , and o' . The implication then holds by dint of the fact that $\square(p \wedge q \rightarrow r)$ and $\square p$ and $\diamond q$ jointly entail $\diamond r$. We are certainly not interpreting using “weak” modality (Davies 1978). On the latter unintended interpretation (\ddagger) would only entail the claim that with respect to any world in which t , o , and o' exist, $\text{Refer}(t,o) \wedge \text{Refer}(t,o') \rightarrow o=o'$. If we then add the claim that with respect to any world in which t and o' exist, $\text{Refer}(t,o')$, and the claim that with

respect to some world in which t and o exist, $\text{Refer}(t,o)$, it will certainly *not* follow that with respect to some world in which o and o' exist, $o=o'$. (For suppose that o and o' are distinct yet do not coexist in any world. The first claim would then hold vacuously and be compatible with the truth of the second and third claims while the fourth claim would fail.)

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