Having launched some critical remarks, let me in ending add that this is a wonderfully clear and well-argued book with a refreshing non-dogmatic air to it, that I am sure will function as a central reference point for these debates in the time to come. (Thanks to Adam Sennet for helpful comments and suggestions.)

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***Reference Without Referents,* by R. M. Sainsbury.** Oxford: Oxford University Press, 2005, 280 pp., £30.

The problem of empty names continues to be a large thorn in the side of the Millian theory of reference. If the meaning of a name is exhausted by its referent then empty names are meaningless, and so, presumably, are the sentences in which they occur. But many sentences with empty names appear to be meaningful and even true, e.g. 'Vulcan does not exist,' or perhaps 'Sherlock Holmes is a detective.' The Frege-Russell description theory of names avoids these problems by holding that names are synonymous with descriptions, for example, 'Vulcan' is synonymous with the description 'the planet postulated by Le Verrier to explain the perturbations in the perihelion of Mercury.' But of course, as Kripke showed us, names are not synonymous with descriptions.

In *Reference Without Referents* Sainsbury makes an admirable attempt to steer a middle course between Millianism and descriptivism. His main idea is that by adjusting the logic and reference axioms for a homophonic truth-theoretical semantics we can achieve a uniform and ontologically conservative account of both empty and non-empty names. According to Sainsbury, the correct logic for semantics is a variety of free logic called Negative Free Logic (NFL). As in any free logic, the quantifier rules are restricted in the following ways:

Universal Instantiation: From $\forall x Ax$ and $\exists x \; x = t$ infer $A(t/x)$ (where '$A(t/x)$' is the formula which results from 'Ax' by replacing every occurrence of 'x' by 't').

Existential Generalization: From A(t/x) and $\exists x\ x = t$ infer $\exists x$ Ax. (p. 65)

What makes Negative Free Logic 'negative' is the fact that any simple sentence containing an empty name is treated as false, instead of neither true nor false, as in Fregean Free Logic, or perhaps even true, as in Positive Free Logic. A simple sentence 'is one constructed by inserting *n* referring expressions into an *n*-place predicate' (p. 66). So, for example, 'Vulcan is a planet,' 'Pegasus has wings,' and 'Sherlock Holmes is a detective,' are all false. Even 'Vulcan is Vulcan' is false. This is okay, though, since on the restricted form of Universal Instantiation 'Vulcan is Vulcan' does not follow from the logical truth '$\forall x\ x = x$.' Further, in NFL the negations of falsities are truths. This has the nice result that negative existential claims containing empty names, e.g. 'Vulcan does not exist,' are true. (For Sainsbury, 'exists' is a simple monadic predicate.) But it also leads to the surprising consequence that 'Vulcan is not a planet,' 'Pegasus did not have wings,' 'Sherlock Holmes is not a detective' and 'Vulcan is not Vulcan' are all true! Sainsbury remarks:

> We could enrich the syntax in a non-standard direction by associating the individual constants with scope. Intuitively, the idea is to make room for a distinction corresponding to the one Russell claimed for 'The present King of France is not bald.' (p. 70)

Sainsbury's use of 'could' makes it unclear whether he endorses this strategy. In any case, the idea would be that 'Vulcan is not a planet' is ambiguous, depending on whether the name 'Vulcan' takes wide or narrow scope with respect to negation. When the name has wide scope, something like 'Vulcan is such that it is not a planet,' the sentence is false. When the name has narrow scope, i.e. 'It is not the case that Vulcan is a planet,' the sentence is true. This would still commit Sainsbury to the view that there is a true reading of 'Vulcan is not a planet.' Even more troubling, there would be a *false* reading of 'Vulcan does not exist.' (In his discussion of definite descriptions, Sainsbury denies that there is a false reading of 'The King of France does not exist' (p. 183).) Another problem is the fact that, as Sainsbury is aware, readings multiply when more than one name is involved. 'Hercules did not ride Pegasus' turns out to be four ways ambiguous, depending on the relative scopes of the two names and

negation. As Sainsbury points out, 'This approach makes more distinctions than we are likely to find in a natural language' (p. 71). So either Sainsbury is committed to the unambiguous truth of, e.g. 'Pegasus did not have wings' and 'Vulcan is not Vulcan,' or he is saddled with the difficulties for the scope-distinction strategy. Of course, there might be some alternative to both of these options, but if so Sainsbury does not mention it.

The uniformity of the treatment of empty and non-empty names comes from the fact that, on Sainsbury's account, the truth-theory contains a single kind of reference axiom for referring expressions, for example:

(1) $\forall x$ ('Vulcan' refers to $x \leftrightarrow x =$ Vulcan)

Since Vulcan does not exist, both sides of the biconditional are false for all values of 'x,' so the biconditional is true for all values of 'x,' and so this universally quantified sentence is true. Since the truth-theory employs the restricted form of Universal Instantiation, this does *not* entail:

(2) 'Vulcan' refers to Vulcan

which according to NFL is false. T-sentences with empty names, for example:

(3) 'Vulcan is a planet' is true $\leftrightarrow$ Vulcan is a planet

also come out true, since again both sides of the biconditional are false.

One question that arises here is how one is to use the reference axiom for 'Vulcan' to derive homophonic T-sentences for object language sentences containing 'Vulcan.' One of the key theses of this book is the claim that 'Semantic theorems are often (and ideally) homophonic' (p. 46). The question is how, given NFL as the background logic, we are to derive homophonic T-sentences for object-language sentences with empty names (or with non-empty names, for that matter). For example, how are we to derive (3) from (1), along with the axiom for 'is a planet'? Remember that we are not allowed the classical, unrestricted form of Universal Instantiation, and so the derivation cannot proceed in the usual way. Sainsbury leaves the reader completely in the dark on this matter. It was only by looking

at a paper by Tyler Burge ('Truth and Singular Terms,' *Noûs* 8, 1974) which Sainsbury cites, that I was able to piece together how the derivations might work. First, we need to slightly alter the form of Sainsbury's reference axioms.

(1') $\forall x \, (x = \text{ref}(\text{'Vulcan'}) \leftrightarrow x = \text{Vulcan})$

Then we include the following axiom in the truth-theory:

(4) $\forall x \, (x = t_1 \leftrightarrow x = t_2) \to [\, A(t_1/y) \leftrightarrow A(t_2/y) \,]$

To simplify matters, let us skip sequences and satisfaction, so that our axiom for 'is a planet' is:

(5) $\forall n \, (\ulcorner n \text{ is a planet} \urcorner \text{ is true} \leftrightarrow \text{ref}(n) \text{ is a planet})$

From (5), plus the existence of the name 'Vulcan,' i.e. '$\exists n \; n = $ 'Vulcan,'' we have by the restricted Universal Instantiation rule:

(6) 'Vulcan is a planet' is true $\leftrightarrow \text{ref}(\text{'Vulcan'})$ is a planet

From (1') and (4), by *modus ponens* we have:

(7) $\text{ref}(\text{'Vulcan'})$ is a planet $\leftrightarrow$ Vulcan is a planet.

And from (6) and (7), by substitution of material equivalents, we have our homophonic T-sentence (3). This works nicely and has no obvious problems. Still, it is unclear from his book whether this is what Sainsbury intended. In his discussion of definite descriptions (p. 176), he gives a sample derivation of a T-sentence for 'The King of France is bald,' which does not employ an additional axiom like (4). However, the derived T-sentence is not homophonic. Applying the same strategy to 'Vulcan is a planet,' the resulting T-sentence would be:

(8) 'Vulcan is a planet' is true $\leftrightarrow$ something is Vulcan and it is a planet.

But Sainsbury intends the truth-theory to provide homophonic T-sentences like (3).

So far these are just quibbles or calls for clarification. There is a larger problem with Sainsbury's book. The adoption of NFL and adjustments in the semantic theory are motivated by the view that

empty names are meaningful, and hence cannot be ignored by semantic theory. This is also Sainsbury's principal reason for rejecting the Millian account of names. Unfortunately, Sainsbury fails to establish that empty names are meaningful. He argues convincingly that empty names are *intelligible*. For example, he observes that there are 'what appear to be coherent practices of using names independently of whether they have or are known to have bearers' (p. 86). The problem is that *intelligibility does not imply meaningfulness*. For example,

(9) Sally seems sleeping.

is intelligible but meaningless, since it is syntactically ill-formed. Even though (9) can be used to communicate that Sally seems to be asleep, no one would hold that (9) must be assigned an interpretation by the semantics for English. Similar examples abound.

A Millian about names could accept Sainsbury's arguments for the intelligibility of empty names and still hold that empty names are meaningless. It is simply not the case that according to Millian theories of reference, 'the intelligibility of a referring expression ensures that it has a referent' (p. 64). A now familiar feature of Millian theories, often deployed in their account of propositional attitude reports, is the view that assertions of sentences containing names usually succeed in conveying propositions other than the propositions semantically expressed by those sentences. In a similar vein, a Millian could hold that when speakers utter sentences containing empty names they succeed in conveying propositions, even though the sentences they utter do not themselves semantically express any propositions. (Cf. Kenneth Taylor, 'Emptiness Without Compromise,' in *Empty Names, Fiction and the Puzzles of Non-existence*, eds. Anthony Everett & Thomas Hofweber, Stanford, CSLI, 2000, pp. 17–36.) For example, an utterance of

(10) Santa Claus will come down the chimney tonight.

can communicate the proposition that the jolly fat man from the North Pole who drives a flying sleigh will come down the chimney tonight, even though (10) itself is strictly speaking meaningless. This is *not* to revert to a descriptivist account of names. There is no suggestion here that (10) means any descriptive proposition. Sainsbury and the Millian both rightly emphasize that there is no description that

could serve as the public meaning of 'Santa Claus.' But accepting this does not preclude holding that an utterance of (10) can communicate some descriptive proposition. These descriptive propositions may vary from conversation to conversation, depending on what speakers and hearers believe about Santa Claus. Even so, the very fact that an empty name like 'Santa Claus' can be reliably used to convey descriptive propositions is enough for there to be a coherent linguistic practice involving this name. Empty names may be intelligible, in the sense that they can be reliably and successfully used in communication, without being meaningful.

Similarly, when a speaker reports a belief using (10), as in an utterance of (11):

> (11) The child believes that Santa Claus will come down the chimney tonight.

she conveys that the child has some descriptive belief, e.g. the belief that the jolly fat man from the North Pole who drives a flying sleigh will come down the chimney tonight. In this way, different utterances of (11) can be used to attribute different descriptive beliefs on different occasions. This is despite the fact that, semantically, no belief is expressed by the embedded clause in (11) and hence at the semantic level no belief is attributed to the child.

Against this, Sainsbury remarks:

> Intuitively, however, the children all have the same belief when they believe that Santa Claus will come down the chimney tonight, even though their parents have given them slightly different versions of the Santa Claus story… (p. 89)

This is a very thin reed on which to hang a rejection of Millianism. To the extent that there is any such intuition of sameness of belief it can be explained by the simple fact that the children all utter the same sentence, i.e. (10), or, if the children are non-English speakers, suitable translations of (10) into other languages.

This book is full of interesting and provocative views on many topics within the orbit of the problem of empty names, e.g. initial baptisms and name-using practices, anaphoric and demonstrative pronouns, fictional names, and mental reference and individual concepts. Perhaps the most provocative of all is Sainsbury's view that

many, and perhaps all, definite descriptions in subject position are rigid referring expressions (§5.2). For example, Sainsbury thinks that when it occurs in subject position the description 'the teacher of Alexander' is a rigid referring expression. Sainsbury floats the more general claim that all definite descriptions in subject position are rigid referring expressions, but then notes that:

> I would expect most readers to react that this is obviously false. I do not hope to persuade you of its truth, but I will suggest that the most conspicuous and familiar putative counterexamples are far from decisive. (p. 185)

One is left wondering whether Sainsbury accepts the general claim or not. This is another instance of Sainsbury's frustrating tendency to propose views without actually coming out and endorsing them one way or the other.

In defense of the rigidity of descriptions like 'the teacher of Alexander,' Sainsbury simply rejects the idea that there is a false reading of (12):

> (12) The teacher of Alexander might not have taught Alexander.

Sainsbury notes:

> If the definite description 'the teacher of Alexander' is a referring expression, then it is rigid. If it is rigid, then the sentence should strike us as true (in a normal context). It does. So the use of this definite description passes this test for being a referring expression. (p. 182)

Most philosophers hold that (12) is ambiguous, depending on the relative scopes of the description and the modal operator 'might.' When the description takes wide scope, (12) is true, when it takes narrow scope, (12) is false. Moreover, the reason for thinking that the description is non-rigid is precisely that (12) is false when the description takes narrow scope. Sainsbury, however, denies that there is any such reading:

> Even when we do our best to make the modal operator have wide scope, as in
>
> > (25) It might have been the case that the teacher of Alexander did not teach Alexander
>
> we still have something that strikes me as true. (p. 183)

But there are other ways of bringing out the false reading. For example,

> (13) In some possible world, the teacher of Alexander did not teach Alexander.

strikes me as false. Moreover, it is one thing to claim that the most natural and immediate reaction to examples like (12) and (25) is that they are true. It is another to claim that it is impossible to hear them as false.

In any case, given Sainsbury's commitment to a truth-theoretical framework for semantics, he cannot adopt the view that all definite descriptions are referring expressions. There are an infinite number of definite descriptions in English. If each is treated as a rigid referring expression, then the truth-theory will contain an infinite number of reference axioms. But as Davidson has pointed out, if the truth-theory for a language contains an infinite number of axioms then the language is unlearnable. A finitely axiomatizable truth-theory must show how the contributions that definite descriptions make to truth-conditions are determined compositionally from the parts of those descriptions. This means that definite descriptions cannot be treated alongside names in the referential portion of the truth-theory. Furthermore, uniformity demands that if any definite descriptions are treated compositionally then they should all be so treated. The upshot of this is that no definite descriptions are referring expressions.

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Natural Minds, **by Thomas W. Polger.** Cambridge, MA: The MIT Press, 2004, 320 pp., £25.95 / £12.95 (paperback, 2005).

The dispute between physicalism vs. functionalism is hot again. An old idea of mind, the identity theory (that mind equals brain, and sensations are brain processes), was brought to the open discussion by Thomas W. Polger (TWP), from the University of Wisconsin-Madison (USA). Against all odds, he challenges the guardian philoso-