

Descriptive Names vs. Descriptive Anaphora

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Alan Berger presents analyses of (i) descriptive names (those the referents of which are fixed by description) and (ii) pronouns in discourses that are anaphoric on expressions occurring in preceding sentences. Each analysis has much to be said for it. In my opinion, however, he muddies the water by treating descriptive names and discourse anaphora as if they were two instances of essentially the same thing. He treats descriptive names as if they were anaphoric on expressions used in their original introduction, and discourse anaphors as if they were rigid singular terms the referents of which are determined descriptively. Neither, in my view, is correct.

Berger divides proper names into *F* (or *focusing*)-type and *S* (or *satisfying*)-type. The referent of an *F*-type name is determined by the fact that speakers focus on it, and intend to use the name to refer to it. In ostensive baptisms, speakers have an object in mind, often because they are, or have been, in perceptual contact with it. When they decide to name it, they may do so in various ways. They may say, *Let's call him 'Fido'* (pointing at a certain dog), or *Let's call that dog 'Fido'*, or even *Let's call the dog we bought this morning 'Fido'*. In these cases, the referent of *n* is **not** fixed by a description *D* in Kripke's sense, even if *D* is used to introduce *n*. Rather, as Berger nicely points out, *D* is a merely a tool used to direct attention to the individual the speaker has in mind, and intends to use *n* to talk about. It is this intention, rather than satisfaction of any description, that determines the referent of an *F*-type name. Thus, even if *D* turns out to not to denote the object *o* the speaker has in mind – the baptism will succeed in introducing *n* as a name of *o*, provided that *D* has played its role of drawing attention to *o*.

Of course, not all *F*-type names are introduced with formal baptisms. People already familiar with a certain body of water might simply begin calling it *Green Lake*. If the practice

holds, and in time becomes conventionalized, the lake will acquire an F-type name (whether or not it is really green), despite the fact that there may have been no single use which established the connection between the name and its bearer. Similarly, a name *n* that already has a referent may go through a period in which its referent is confused with something else that speakers focus on when using *n*. If this persists, and the new object becomes salient and important to speakers, *n*'s reference may change, even if no one intended any change. One of the strongest parts of Berger's book is his discussion of how such changes occur.

In contrast to F-type names, the referents of S-type names are determined to be whatever satisfies descriptions extracted from what Berger calls the *anaphoric background statements* used to introduce the names. For example, he imagines a speaker introducing an S-type name by saying, *Some woman will be the forty-fifth president of the United States. Let that woman – whoever she may be – be called 'Alice'.* Here, the formula -- *x is a woman and x will be the forth-fifth president of the United States* – is the reference-fixing description. The name 'Alice' is taken to be a rigid designator that refers to whatever individual uniquely satisfies this description.

Berger has much to say about these terms, including informative discussions of reference transmission, reference change, and the transformation of some S-type names into F-type names. However, two points of contention stand out. First, he imposes no acquaintance constraints on the introduction of S-type names. According to him, *D* can be used to introduce an S-type name referring to its denotation *o*, even if one has no knowledge of *o*, or any hint that *o* is denoted by *D*. Since I have argued elsewhere against this view, I will not repeat myself here.¹ The second

¹ Chapter 16 of Philosophical Analysis in the Twentieth Century, Volume 2 (Princeton: Princeton University Press) 2003, and chapters 4 and 10 of Reference and Description: The Case Against Two-Dimensionalism (Princeton: Princeton University Press) 2005.

point of contention involves Berger's claim that "*a speaker may never be aware of what actual description, attributively used, was initially employed to fix the reference. A speaker may not know, for example, what description was initially given in fixing the reference of 'Neptune'. Nonetheless, if the reference of the term is fixed by the original description, its reference is grounded in, or rests on, a description used attributively.*" (8). The import of this remark seems to be that the referent of an S-type name *n* may be fixed by description, even though understanding *n* does not require knowledge of its descriptive reference-fixer.

If this is right, then (i) Berger's S-type names are **not** those the referents of which are fixed by description in **Kripke's** sense,² and (ii) the distinction between F-type and S-type names is entirely nonsemantic. In both F-type and S-type cases, the contribution of a name to propositions semantically expressed by sentences containing it is, for Berger, its referent. In neither case, apparently, is knowledge of a reference-fixer required for linguistic competence. Thus, in David Kaplan's terminology, neither the semantic content of an S-type name, nor its character, includes the content or character of its so-called descriptive reference-fixer. Since there is nothing more to the semantics of a name than its content and character (i.e., rule known by competent speakers for assigning contents to contexts), having its referent fixed by a description in Berger's sense is a nonsemantic fact about the name.

² When *D* fixes the referent of *n* in Kripke's sense, a speaker who understands *n* is expected to know this, and hence be in a position to know, without appeal to further evidence, that "[if *n* exists, then *n* is *D*]" is true. (Naming and Necessity, (Cambridge MA: Harvard), 1980, p. 73) In this sense, knowledge of the reference-fixing description is part of a speaker's competence with *n*.

Properly understood, Berger's account of F-type and S-type names is not a semantic theory specifying what the meanings, referents, or competence conditions of names are; rather, it is a presemantic, or foundational, theory of how names acquire, retain, and in some cases change, their semantic properties over time. Thought of in these terms, the account is plausible and informative. However, it is **not** a theory of the same sort as one that interprets descriptive anaphora -- like the pronoun *she* in the discourse: *Some woman will be the forty-fifth president of the United States. She will be a Republican.* The task of such a theory is to specify the semantic contents and truth conditions of such discourses, not to explain the causal history by which the words in it acquired their semantic properties.

One effect of Berger's assimilation of S-type names to descriptive anaphora shows up in his explanation of the informativeness of true identity statements in terms of the different semantic information allegedly associated with F-type and S-type names.

"It should now be clear why certain identity sentences convey different semantic information from that conveyed by sentences of the form 'a=a'... This can happen when the term 'a' in the sentence 'a=a' is either a different type than the term 'b' or both terms are different S-type terms. If, say, term 'a' is F-type and term 'b' is S-type, since each of these terms determine their referent in a different manner, they convey different information. Thus the fact that they each have a different manner of presentation of the same referent explains why they differ in cognitive significance. ... What this sentence ['a=b'] conveys is something like "the object focused on as the referent of the F-type term is the same as the object that in fact satisfies the A-B condition of the S-type term." (57-8)

This explanation works only if modes of reference-fixing – including descriptions used to introduce and endow S-type names with their semantic properties -- are known by competent speakers. For Berger, however, competent speakers are **not** required to have this knowledge. Thus, the different foundational facts responsible for how a and b acquired and retained their referents may have **no** cognitive significance. Of course, speakers are not forbidden from having such foundational knowledge, and if they do, then utterances of identities will convey the information Berger suggests. But there is nothing special or semantic about this. Whenever speakers associate descriptions D_a and D_b with names a and b -- for whatever reason -- utterances of $\lceil a = b \rceil$ will convey the information expressed by $\lceil D_a = D_b \rceil$.

I suspect that Berger was led to think that S-type names make special contributions to the cognitive significance of identity statements containing them, in part, because he assimilated them to discourse anaphors like *she*, which occurs in an apparent identity statement in the discourse, *Some woman will be the forty-fifth president of the United States. You may know her already. She is Condolesa Rice.*³ Anyone understanding this discourse knows that its final sentence conveys the information that the woman who will be the forty-fifth president of the United States is Condolesa Rice. According to Berger, the reason for this is that *she* is a (rigid) S-type singular term the referent of which is fixed by the description associated with the clause containing its antecedent. If this were really so, then his explanation of informative identity statements would apply. But it isn't so.

Here is Berger's argument to the contrary.

"Smith: A woman (some woman or other) will land on Mars in the year 2051.

³ See page 63 for a related example.

Jones: She will be an American.

To see that the S-type term ‘she’ in our example above rigidly refers to some woman under consideration, we can imagine Smith going on to say the following:

Smith: Were she to have earned more money as a musical conductor than as an astronaut, she would have been conducting on Earth rather than preparing for her voyage to Mars.

The S-type term ‘she’ still rigidly refers to the same woman who actually became an astronaut, even when we consider the possible circumstance in which she chose not to become one.” (44-5)

This can’t be correct. Let S and J be the propositions asserted by Smith’s and Jones’s initial remarks in world-state @. (Berger takes each utterance to express a proposition.) Suppose that S and J are true in @ because an American woman A lands on Mars in 2051 in @. If ‘she’ were a rigid designator of A, then for all world-states w, S and J would jointly be true in w iff some woman or other lands on Mars in w, and A is an American in w – even if neither A, nor any other American, lands on Mars in w. But this is absurd. The truth of what was said in @, when evaluated at arbitrary world-states, requires some American woman to land on Mars in those states, but it does not require one and the same individual to do so in every case. Thus, the anaphor, *she*, that occurs in the discourse is **not** a rigid designator of anyone.

How, then, can we accommodate Smith’s second, counterfactual remark? Somehow, we must treat the anaphor *she* as carrying the quantified clause containing its antecedent along with it. To do this, we add the clause to the beginning of the remark, and treat *she* as a variable that gets bound by the quantifier, *some woman*, it contains.

∃x (Woman x & Land x, mars, 2051 & if it were the case that x earned more money..., then it would be the case that x...).

Although this analysis falsifies much of what Berger **says** when motivating his system of discourse anaphora and using it to solve various problems, it is precisely what he **produces** in the final chapter, when he formalizes it. He simply misdescribes the system.

Fortunately, the system itself is interesting, and well worth considering. It is presented as a formalization of English discourses containing intersentential anaphora, including both singular and plural anaphors. The heart of the account is a modestly enriched first-order language, together with a truth-conditional semantics that accommodates restricted quantification and the intersentential binding of variables. Discourses are assigned sequences of formulas in the formal language, with distinct sentences in the discourse typically assigned distinct representations. The interpretation of the discourse consists of the sequence of interpretations assigned to representations of the sentences that make it up. Although earlier representations in the sequence can affect the interpretations of later representations, each is seen as expressing its own proposition, the truth conditions of which are given by the formal semantics.

Only the formal language and its semantics are precisely specified. Although some informal rules are given for translating English into the formal system, no precise translation algorithm is attempted. For Berger, this represents the division of labor between the logician, who provides meaning-representing frameworks, and the linguist, who fills out the frameworks for different natural languages. Although this approach leaves many important questions unanswered, most of Berger's examples are clear enough to provide an idea of what can, and what cannot, be done in the system.

As before, however, Berger's remarks about his system are sometimes unhelpful.

“when I say that we want to assign a truth value to individual sentences of a discourse, I do not mean that if a sentence, say,

(1) Some woman will land on Mars in the year 2051,
is false, we can nevertheless assign an independent truth value to any sentence
containing an expression anaphoric upon some expression in (1), such as

(2) *She* will be an American.

*If the A-B sentence [in this case (1)] is false, then sentences anaphoric upon
expressions in this sentence cannot be true.* In fact, it is my view that **the truth
of the A-B sentence is a presupposition for sentences anaphoric upon
expressions in it to have a truth value.**” (204, my boldface emphasis)

According to the semantics Berger actually provides, the claim that the truth of (1) is a necessary
presupposition for (2) to have a truth value is false – a vestige of his mistaken idea that when (1)
is false *she* belongs in the same category as a name that fails to refer because its reference-fixing
description fails to denote.

One way in which (1)-(2) can be represented in Berger’s system is by (1a) and (2a).

1a. $\exists x$ (Woman x & Land x , mars, 2051)

2a. $(\exists x^1 \text{ American } x^1) [(\text{Woman } x^1 \text{ \& Land } x^1, \text{ mars, 2051})]$

(2a) doesn’t contain any singular term the denotation of which depends on the truth of (1a).

Instead, the pronoun in (2) has been replaced by a quantifier the range of which is restricted by
the clause in square brackets. Since what we have is, in effect, a new notation for restricted
quantification, (2a) says that some woman who will land on Mars in 2051 will be an American.

This claim is not truth valueless, but false, when (1) is false.

Another way of representing the discourse in Berger’s system is by (1b) and (2b).⁴

⁴ Compare to example 3 (209).

- 1b. $\exists x^1 (\text{Woman } x^1 \ \& \ \text{Land } x^1, \text{mars}, 2051) [(\text{Woman } x^1 \ \& \ \text{Land } x^1, \text{mars}, 2051)]$
 2b. American x^1

The counterpart in (2b) of the pronoun *she* in (2) is an occurrence of the variable x^1 which is bound by the quantifier in (1b). This binding results from a special clause in the definition of what it is for a formula in a sequence of lines (representing a discourse) to be true relative to an assignment of values to variables.⁵ The clause specifies that (2b) will be true relative to an assignment A iff the formula

3. $\exists x^1 (\text{Woman } x^1 \ \& \ \text{Land } x^1, \text{mars}, 2051 \ \& \ \text{American } x^1) [(\text{Woman } x^1 \ \& \ \text{Land } x^1, \text{mars}, 2051)]$

which results from inserting (2b) into (1b) is true relative to A. Given the usual definition of sentential truth as truth relative to all assignments, we get the result that the above occurrence of (2b) is equivalent to (3). Thus, (2b) will be false, rather than truth valueless, when (1) is false.

It is worth noting that the special clause in the definition of truth relative to an assignment governing intersentential binding would not have been needed, if the translation algorithm from English to the formal system had been specified so as to produce (3) directly, as the representation of (2). This result seems to generalize. Although Berger uses intersentential binding to give interesting results for some moderately complex examples, it appears that these results can be accommodated by a notational variant of his system in which the implicit translation algorithm used in the special clause of his semantics is eliminated from the definition of truth (with respect to an assignment) and incorporated, instead, into the translation from

⁵ Clause 5 (226). Berger's terminology differs slightly from mine. Whereas I speak of a formula being true relative to an assignment of values to variables, he speaks of a sequence of objects (used to assign values to variables) satisfying a formula. These are equivalent.

English to the formal system – thereby removing intersentential binding from the formal system altogether. Thus, Berger’s chief semantic innovation appears to be eliminable.

I have mentioned two of the three most significant features of Berger’s system: restricted quantification and intersentential binding. The third is the representation of English discourses containing plural quantifiers and anaphora. Many of Berger’s examples -- such as (4-5) -- simply involve applications of ordinary first-order quantification, requiring no substantial innovations in the formal semantics.⁶

4. Some students who are passing are learning a lot.

4a. $\exists x ((Sx \ \& \ Px) \ \& \ Lx)$

5. They will go to college.

5a. $(\forall x^1 Cx^1) [(Sx^1 \ \& \ Px^1) \ \& \ Lx^1]$

Examples like these don’t, I think, justify Berger’s claim to have given a formal semantics for plural quantification. However, one example he cites is different – the Geach-Kaplan critics-sentence (6).

6. Some critics admire only one another.

This sentence – which is taken to be true iff there is some set of critics who admire only other members of that set – is known to have no standard, first-order formulation that doesn’t quantify over sets, though it is representable in George Boolos’s system of genuine plural quantification.

Berger represents (6) as the conjunction of (6a) – (6c).

⁶ (5a) is Berger’s notation for standard restricted quantification: $[\forall x^1: (Sx^1 \ \& \ Px^1 \ \& \ Lx^1)] Cx^1$.

- 6a. $(\exists x^{1,2} Cx^{1,2}) [Cx^1]$
 6b. $\forall x^{1,2} (\sim Ax^{1,2}, x^{1,2})$
 6c. $\forall y [\forall x^{1,2} (x^{1,2} \neq y) \rightarrow \forall x^{1,2} (\sim Ax^{1,2}, y)]$

The intention is that (6a) should tell us that there is at least one member of a certain subset C^* of the set of critics, (6b) should tell us that no member of C^* is a self-admirer, and (6c) should tell us that no member of C^* admires any individual outside C^* -- all without explicitly quantifying over sets. However, there is a problem with the semantic clause governing multiply superscripted variables that Berger uses to generate this interpretation.⁷ The clause specifies that in order for any of the atomic formulas in (6a-6c) to be true relative to an assignment of o to the variable $x^{1,2}$, it is necessary that o be a member of a subset of the set of things satisfying Cx^1 . Berger evidently assumes that this subset will remain fixed as we work through the interpretations of (6a)–(6c). But nothing in the semantics guarantees this.

Let A assign o to $x^{1,2}$. (6a) is true relative to A iff there is an assignment A' that differs from A at most in assigning some o' to $x^{1,2}$ and $Cx^{1,2}$ is true relative to A' – iff there is a subset C_{6a} of the set of critics that contains o' . (6b) is true relative to A iff for every object o'' , $(\sim Ax^{1,2}, x^{1,2})$ is true with respect to an A' that differs at most from A in assigning o'' to $x^{1,2}$ – i.e., iff for each such o'' there is a subset C_{6b} of the set of critics of which o'' is a member and o'' doesn't admire o'' . But now the problem is obvious. Subsets of the set of critics are allowed to vary with each value of $x^{1,2}$. Thus, Berger's rules don't deliver the desired interpretations.

I suspect this is just a glitch. Were he to revise his treatment of multiply superscripted variables, he could, I believe, generate the desired interpretations. Still, this achievement should not be overestimated. The fact that the variables explicitly occurring in (6a) – (6c) range over

⁷ See the final conjunct of clause 1 of the definition of truth of an atomic formula relative to an assignment. (225)

individuals, not sets, is not enough to avoid the commitment to sets that comes with accepting these sentences – if, as in Berger’s semantics, this commitment is hidden in the semantic principles used to interpret them. These principles make essential reference to sets, and generate interpretations like (6T) that involve quantification over sets.

6T. The conjunction of (6a) – (6c) is true iff there is a subset C^* of the set of critics which (i) has at least one member, (ii) is such that members of it don’t admire themselves, and (iii) is such that members of it don’t admire anyone outside the set.

There is nothing wrong with this, if the goal is simply to state necessary and sufficient conditions for the truth of the English sentence (6) via its representation in Berger’s system. But if, as Berger implies, the goal is to give the **meaning** of (6) by assimilating it to its representation, then it is doubtful that the goal has been achieved -- since it is doubtful that (6) talks about sets.