

DEFINITE DESCRIPTIONS, NEGATION, AND NECESSITATION

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I

Keith Donnellan expresses his famous distinction between attributive and referential uses of definite descriptions as follows: "A speaker who uses a definite description attributively in an assertion states something about whoever or whatever is the so-and-so. A speaker who uses a definite description referentially in an assertion, on the other hand, uses the description to enable his audience to pick out whom or what he is talking about and states something about that person or thing."¹ So, for example, if a speaker says, "The murderer of Smith is insane", where "the murderer of Smith" is used attributively, and if there is no unique murderer of Smith, the speaker did not predicate being insane of anyone or anything. But if the definite description is used referentially, the speaker did predicate being insane of someone even if there is no unique murderer of Smith.

An unambiguous report of what is said, in the case where "Smith's murderer" is used referentially, would be

Jones was said to be insane by Tom

where Tom is the speaker who uses "Smith's murderer" to single out Jones. In the case where the definite description is used attributively an accurate report of what is said would be

¹ Keith S. Donnellan, "Reference and Descriptions", *Philosophical Review*, 75 (1966): 281-304 (at 285).

Tom said that Smith's murderer is insane.

What I am asking in this paper is: in the case of attribute usage, is the definite description to be analyzed as Russell said or is it to be treated as a referring expression, functioning semantically as a proper name?

II

David Kaplan notes that Russell's "On Denoting" presents a theory of indefinite descriptions, as well as the famous theory of definite descriptions, and that the latter theory results from extending the former to the new case.² Kaplan accepts the theory in application to indefinite descriptions, but is dissatisfied with its extension to definite descriptions. He argues that since the theory is just right for indefinite descriptions, any "disanalogies" between definite and indefinite descriptions will "throw suspicion" on the extension of that theory to definite descriptions.

He focuses on two disanalogies: (1) Russell devised a notation in which definite descriptions are treated as syntactic units, but never did this for indefinite descriptions. (2) Russell said that we might treat a "proper"³ definite description *as if* it denoted the object uniquely satisfying its contained propositional function, but suggested no comparable "as if" treatment for indefinite descriptions.

A reply to this is that Russell could have presented his theory *without* either providing a special notation for definite descriptions or remarking on the possibility of treating them as if they were names. A reply to the reply is that Kaplan could yet point out that it nonetheless would have been *natural* to treat definite descriptions, both notationally and informally, as if they were names, whereas a comparable treatment would not be natural for indefinite descriptions. This difference, Kaplan would hold, points to some fundamental difference

² David Kaplan, "What Is Russell's Theory of Descriptions?", in *Bertrand Russell: a Collection of Critical Essays*, ed. D. F. Pears (Garden City, NY: Doubleday, 1972), pp. 227-44.

³ A definite description is *proper* just in case its contained predicate is true of just one thing, and otherwise is *improper*.

between our conceptions of the uses of definite and indefinite descriptions which serves to make it doubtful whether a theory correct for the latter could also be correct for the former.

Kaplan's view of this underlying difference in conceptions comes out when he says that theories of definite descriptions which classify them with names accord with "the *natural* semantical analysis" (p. 239; emphasis added). Russell's theory further fails to accord with what Kaplan calls "our grammatical preconceptions", which, he suggests, "continue to dominate our ideas" (p. 241).

III

The objection to Russell's theory, then, is that it denies certain deeply ingrained conceptions.

Cast in this light the objection may seem slight indeed. For it is not as if Russell presented his account without appreciation of the fact that it denies certain entrenched conceptions. Just the opposite, for just a few years earlier these conceptions had been his own and he viewed his work as a departure from them.⁴

Nor can Kaplan's objection securely rest on the mere fact that Russell's theory denies widely shared intuitions. For the same holds for Russell's theory of indefinite descriptions, which Kaplan nonetheless accepts.

Traditionally, terms like "every man", "all men", "a man", etc., had been taken to be name-like terms to which we can attach predicates like "bald" to form subject-predicate propositions. And Russell himself had held that such traditional subject terms denote subjects for predication. These quite natural conceptions are denied by his later doctrine of indefinite descriptions.

But the denial is not gratuitous, and for reasons which Kaplan also touches on. We can put the matter this way. The traditional uniform scheme of analysis into subject and predicate suffers an irregularity in that in some cases we can form the contradictory of a so-called subject-predicate proposition by negating the predicate, whereas in other cases predicate negation yields only contraries and we must negate the

⁴ See Chapter v of *The Principles of Mathematics*.

entire proposition (use propositional negation) to obtain contradictions. For example, "Socrates is not bald" and "It is not the case that Socrates is bald" come to the same thing; this is not so for "Every man is not bald" and "Not every man is bald". This shows that predicates can combine with "subject terms" in quite different ways and enables us to realize that, for example, "Socrates is bald" and "Every man is bald" are of quite different logical forms. Granting this, we can then characterize a genuine singular term as one which combines with predicates to form propositions whose contradictions arise through predicate negation. This rethinking of subject and predicate forms the background against which the logician sets out to uncover a new analysis of the other traditional subject-predicate propositions, and, indeed, a new analysis powerful enough to handle relational propositions, multiply general propositions, and the propositions of mathematics.

In Russell's work the new analysis took the form of constructing complex predicates in association with variable binding operators. Thus, the complex predicate "it is not a man or is bald" and the operator "everything is such that", combine to yield the sentence "Everything is such that it is not a man or is bald". On this view the term "man", which *can* occur predicatively in everyday speech, is made to *always* occur predicatively in logical notation (either on its own or as a part of a complex predicate) and is allowed *never* to occur in logical notation in such a way as to form or help form subject terms. "Every man", "a man", "some man", etc., are excluded from the logically correct notation.

Despite much initial and even some lingering resistance, many of us, Kaplan included, accept this Russellian theory. It, we might say, now helps to form our grammatical conceptions and supplies us with new semantical intuitions.

But we can easily imagine a logician, still in the grip of the traditional conceptions and intuitions, responding to Russell's theory of indefinite descriptions in a manner like that in which Kaplan responds to Russell's theory of definite descriptions. He could point to the facts that in grammar we treat "every man" as a subject term, on a par with "Scott" (a point of view which seems to maintain itself in some contemporary linguistics), and that we think of "every man" as having denotation (e.g., by, as Russell had earlier held, being a phrase which

multiply denotes each man). He might even, as Kaplan suggests is possible, introduce indefinite descriptions into a formalism.

We cannot, then, accept the existence of grammatical conceptions and semantical intuitions as decisive; nor would Kaplan suppose we could. On the other hand, their existence and, in particular, their *persistence* is an important fact; for it is clear that whereas many of us have abandoned the old ideas about many subject terms in favour of the new analysis deriving from Frege and Russell, even the clearest understanding of Russell's theory of definite descriptions will often fail to lead one to abandon the preconceptions and intuitions to which Kaplan refers. Kaplan himself is here a case in point.

Nonetheless, we need not break off enquiry with the statement that such and such intuitions seem rock bottom. It is possible to take up these intuitions and incorporate them in alternative theories.

Kaplan sets forth two such theories, taken as being, like Russell's, theories of logical form.

IV

Each of these theories bases itself on the idea that definite descriptions function both syntactically and semantically as genuine singular terms. Each derives from Frege. The "Frege-Carnap view" holds that all definite descriptions denote and that the improper definite descriptions denote some "chosen object". This is the view of *Grundgesetze*: \neg the Φ either denotes the object which alone satisfies Φ or otherwise denotes the extension of Φ . The "Frege-Strawson view" holds that \neg the Φ , though a denoting expression, may yet fail to denote anything. It denotes something just in case Φ is satisfied by exactly one thing. On both views \neg the Φ is a genuine denoting expression.⁵

The views Kaplan presents are not precisely these, but modifications of them for two-valued logic. I will present these views through certain

⁵ In "On Denoting" a phrase is called a denoting phrase in virtue of its being of a certain form. Such phrases, Russell argues, do not denote in the sense of standing for or designating objects. Thus the possibility of purely terminological confusion. We follow Kaplan in speaking of denotation as the relation of designation. When we say that an expression is a genuine denoting expression we mean that it is an expression which has the role, both syntactically and semantically, of a singular term.

truth statements in which "*d*" occurs as a variable whose substituends are definite descriptions. I follow Kaplan in taking "bald" as a sample predicate.

The Modified Frege-Carnap Theory

The thrust of the Frege-Carnap proposal is that if we are to retain definite descriptions as singular terms together with bivalence for the sentences they serve to form, we must insure that a definite description always designates some one object. On the stipulations of *Grundgesetze*, however, "The President of the United States in 1970 has exactly two members" would turn out, counterintuitively, to be true. To better align Frege's proposal with our intuitions, atomic sentences, with improper definite descriptions should turn out false. Thus the modified Frege-Carnap theory:

$\neg d$ is bald \neg is true if and only if *d* denotes something which is bald and is within the domain of discourse,

with improper definite descriptions taken to denote the domain of discourse.

I have two objections to this theory.

First, Russell thought already in "On Denoting" that he had a good objection to this view; namely, that "though it may not lead to actual logical error, it is plainly artificial and does not give an exact analysis of the matter."⁶ This objection seems to be as good in the present case as it was in the original instance.

Second, consider the modified Frege-Carnap truth statement for definite description *d* and negative predicate "not bald":

$\neg d$ is not bald \neg is true if and only if *d* denotes something which is not bald and is within the domain of discourse.

Clearly $\neg d$ is bald \neg and $\neg d$ is not bald \neg are contraries, not contradictions, so that there is a crucial distinction between the propositional negation \neg not (*d* is bald) \neg and the predicate negation $\neg d$ is not bald \neg .

⁶ In *LK*, pp. 41-56 (at 47).

The Modified Frege–Strawson Theory

I present the view through the following truth statements:

- (i) $\neg d$ is bald \neg is true if and only if d denotes something which is bald.
- (ii) $\neg d$ is bald \neg is false if and only if it is not true.

The modification is found in (ii) which serves to stipulate a truth value for the cases in which d fails to denote.

Since predicate negation yields a new predicate, “not bald” receives the same treatment as does “bald”. Thus, not only

- (i) $\neg d$ is bald \neg is true if and only if d denotes something which is bald,

but also

- (i') $\neg d$ is not bald \neg is true if and only if d denotes something which is not bald.

Hence, it is not the case that $\neg d$ is not bald \neg is true if and only if \neg not (d is bald) \neg is true. It can happen that the latter is true though both $\neg d$ is bald \neg and $\neg d$ is not bald \neg are false. Like $\neg d$ is bald \neg , $\neg d$ is not bald \neg is true only if d denotes.

This is strong evidence that the modified Frege–Strawson view cannot represent definite descriptions in a manner which accords with those semantical intuitions and grammatical conceptions to which Kaplan alludes. Indeed, so far from being a view alternative to Russell’s, it seems to be a view which threatens to collapse into Russell’s; for the distinction of predicate and propositional negation which smooths the way for the Russell theory of indefinite descriptions exists also for definite descriptions on the modified Frege–Strawson theory.

v

Recently the Frege–Strawson theory has been adopted by Ermanno Bencivenga, Karel Lambert and Bas C. van Fraassen in their attempt to provide a logic for languages some of whose sentences lack a truth-value.⁷

⁷ Ermanno Bencivenga, Karel Lambert and Bas C. van Fraassen, *Logic, Bivalence*

In their system (which I shall refer to as “BLVF”) singular terms are either names or definite descriptions. Both may fail to denote. As before a definite description \neg the Φ \neg fails to denote just in case Φ fails to be satisfied by exactly one thing.

The gist of relevant features of the BLVF view can be presented through the following truth statements:

- (i) $\neg d$ is bald \neg is true if and only if d denotes something which is bald.
- (ii) $\neg d$ is bald \neg is false if and only if d denotes something which is not bald.
- (iii) $\neg d$ is bald \neg is neither true nor false if and only if d does not denote something.⁸

Part of the point of the modified Frege–Strawson view is to preserve the property of bivalence. Thus “false” is understood simply as “not true”. In contrast, BLVF allows for truth–value gaps. So falsehood has to be defined independently of truth.

BLVF is superior to the modified Frege–Strawson theory in this respect. For the choice of falsity when denotation is lacking seems arbitrary. We say that a universal generalization that all A’s are B is true if there are no A’s, and that a material conditional is true if it has a false antecedent. Sometimes these are called vacuous truths. In a similar vein, if $\neg d$ is bald \neg is deemed to have a truth-value even when d fails to denote, why not say that it is true on the grounds that d does not denote something which is not bald?

A second advantage BLVF has over the modified Frege–Strawson view is that in BLVF $\neg d$ is not bald \neg and \neg not (d is bald) \neg are logically equivalent. Both are true just in case d denotes something that is not bald. Both are false just in case d denotes something that is bald. Both are neither true nor false otherwise. Thus the BLVF view of $\neg d$ is bald \neg as an atomic sentence is more coherent than its treatment as an atomic sentence by the modified Frege–Strawson view. If $\neg d$ is bald \neg is to be treated as an atomic sentence then $\neg d$ is not bald \neg should be its contradictory, not its mere contrary.

and *Denotation* (Atascadero, Calif.: Ridgeview, 1986).

⁸ *Ibid.*, pp. 237–8.

VI

We have seen three treatments of definite descriptions, according to which they function semantically as do proper names. On each of the three treatments proper definite descriptions are assigned objects as their references. On the Frege–Carnap view, improper definite descriptions are assigned a denotation, the same denotation for all improper definite descriptions. On the Frege–Strawson view, improper definite descriptions are not assigned a denotation. The Frege–Strawson view bifurcates at this point. One version, propounded by Kaplan, preserves bivalence. A second version, propounded by Bencivenga, Lambert and van Fraassen, allows truth–value gaps.

The Frege–Strawson view which allows truth–value gaps is the best of the three. On each of the other two views $\neg d$ is not bald \neg and \neg not (d is bald) \neg are not equivalent; whereas, they are equivalent on the Frege–Strawson view which allows truth–value gaps. And this is just how names function. If definite descriptions are to be treated as names, then the language in which they are so treated must allow for truth–value gaps and the improper definite descriptions should be assigned no denotation.

So *if* definite descriptions function semantically as names then there is no logical difference between

It is not the case that the present King of France is bald

and

The present King of France is not bald.

On the other hand, if Russell is right these sentences are not equivalent; in fact, on Russell's account, they have different truth-values.

Why think Russell has this wrong and Bencivenga, Lambert and van Fraassen have it right? What argument leads them to adopt the Frege–Strawson view of the matter, rather than Russell's?

Bencivenga, Lambert and van Fraassen have the following to say of Russell's approach:

[Russell's theory], in our opinion suffers from two serious difficulties. First, it

is generally granted now that Russell's arguments to show that expressions of the form "The so and so" are not singular terms are unacceptable. Second, it is also generally agreed that treating definite descriptions as nonterms introduces unnatural and complicated inferential procedures in well ordered disciplines such as Mathematics. We, therefore, eschew the Russell approach.⁹

Construed as an argument that Russell got definite descriptions wrong, this leaves a lot to be desired. *First*, I do not agree that Russell's theory poses any problem for mathematics. Nor is it generally agreed that it does. On the contrary, there is general agreement that the utility of Russell's theory "has been demonstrated over and over again by the employment of the theory in the logical analysis of mathematical and scientific arguments."¹⁰ *Second*, even if the three authors are correct about Russell's not having provided a good argument for his view that definite descriptions are not singular terms, that is hardly a good argument that definite descriptions *are* singular terms.

VII

Our issue is whether definite descriptions function as singular terms when used attributively. An expression s functions as a singular term only if, for any expression α which functions both as a statement forming operator (an expression which forms statements from statements) and a predicate forming operator (an expression which forms predicates from predicates), $\neg s$ is $\alpha F \neg$ and $\neg \alpha$ (s is F) \neg are equivalent.

So far we have focused on the operator for negation and have reached an impasse. For Russell "It is not the case that the present king of France is bald" and "The present king of France is not bald" are logically distinct. For Bencivenga, Lambert and van Fraassen they are equivalent. No decisive argument has been given for either side.

This suggests that we shift our focus to intensional operators such as "necessarily".

Consider the pair of sentences "It is necessary that the number of

⁹ *Ibid.*, pp. 248–9.

¹⁰ E. J. Lemmon, "Sentences, Statements and Propositions", in *British Analytical Philosophy*, ed. Bernard Williams and Alan Montefiore (New York: Humanities P., 1966), pp. 87–107 (at 107).

planets is greater than eight" and "The number of planets is necessarily greater than eight". Are these sentences equivalent?

Predicates extend over different things in different worlds. The set of things satisfying " x is red" in W_1 might be different from the set of things satisfying " x is red" in W_2 . But "Socrates" designates Socrates no matter what world one is focusing on. The referent of "Socrates" is fixed at a world independently of the nature of that world.

Assume, for the moment, that definite descriptions are singular terms. Then what does "the number of planets" designate, for example? Clearly the answer depends upon the nature of the world at issue. Relative to the actual world it designates the number nine. Relative to a world in which there are eight planets it designates the number eight.

Consider again, then, the sentence

The number of planets is necessarily greater than eight.

Is this sentence true relative to the actual world? It is, because

Nine is necessarily greater than eight

is true in the actual world. That is, in any world W possible relative to the actual world

Nine is greater than eight

is true in W . Now consider

It is necessarily the case that the number of planets is greater than eight.

Is this true in the actual world? Well, consider a world W , possible relative to the actual world, in which there are eight planets. Clearly

The number of planets is greater than eight

is false relative to W . Thus

It is necessary that the number of planets is greater than eight

is false relative to the actual world.

Here, then, is my argument for Russell's analysis. An atomic sentence is a sentence whose necessitation can be regularly formed by predicate necessitation. Thus, propositional necessitation is otiose for atomic sentences. The need for propositional necessitation shows itself only when we advance to sentences formed from sentential functions by variable binding operators, e.g., sentences which give the logical form of traditional subject-predicate sentences with indefinite descriptions as subject terms, i.e., sentences which mark a distinction between propositional and predicate necessitation. Subject-predicate sentences with definite descriptions also mark this distinction. There is a logical difference between, e.g.,

The number of planets is necessarily greater than eight

and

It is necessarily the case that the number of planets is greater than eight.

The first is true because nine is necessarily greater than eight. The second is false because there could have been less than nine planets. Thus, as is the case with subject-predicate sentences with indefinite descriptions, subject-predicate sentences with definite descriptions must also be interpreted in terms of sentential functions and variable binding operators. And this, however, exactly worked out, is the heart of Russell's analysis of sentences deploying definite descriptions.¹¹

¹¹ My thanks to Philip Hugly for much help.