Russell's 'On denoting'

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1 Denoting phrases and names

Russell defines the class of denoting phrases as follows:

> "By 'denoting phrase' I mean a phrase such as any one of the following: a man, some man, any man, every man, all men, the present king of England, the centre of mass of the Solar System at the first instant of the twentieth century, the revolution of the earth around the sun, the revolution of the sun around the earth. Thus a phrase is denoting solely in virtue of its *form*." ('On Denoting', 479)

Russell's aim in this article is to explain how expressions like this work — what they contribute to the propositions expressed by sentences involving them.

1

A natural first thought in the construction of a theory of denoting phrases is that they work in much the same way as names like 'Bob'. Both indefinite descriptions (which Russell sometimes calls 'ambiguous descriptions'), like 'a man', and definite descriptions, like 'the tallest man in this room' seem to play the same grammatical role as proper names; just as we can say

> Bob is happy.

we can say

> A man is happy.

> The tallest man in this room is happy.

On the view Russell defended two years earlier in *The Principles of Mathematics*, we should let the significance of such expressions be the term for which they stand.

2 Meinong's theory of objects

This is more or less also the theory of Meinong.

Russell presents Meinong's theory as follows:

> "Of the possible theories which admit such constituents the simplest is that of Meinong. This theory regards any grammatically correct denoting phrase as standing for an *object*. Thus "the present King of France," "the round square," etc. are supposed to be genuine objects. It is admitted that such objects do not *subsist*, but nevertheless they are supposed to be objects." ('On Denoting,' 482)

Russell then immediately gives the following objection:

> "...the chief objection is that such objects, admittedly, are apt to infringe the law of contradiction. It is contended, for example, that the present King of France exists, and also does not exist; that the round square is round, and also not round; etc. But this is intolerable ..."

Why does Russell think that Meinong's view is committed to there being objects with contradictory properties?

In his later paper, 'Descriptions', Russell emphasized another worry about views like Meinong's:

"It is argued, e.g. by Meinong, that we can speak about 'the golden mountain', 'the round square', and so on; we can make true propositions of which these are the subjects; hence they must have some kind of logical being, since otherwise the propositions in which they occur would be meaningless. In such theories, it seems to me, there is a failure of that feeling for reality which ought to be preserved even in the most abstract studies. Logic, I should maintain, must no more admit a unicorn than zoology can; for logic is concerned with the real world just as truly as zoology, though with its more abstract and general features. To say that unicorns have an existence in heraldry, or in literature, or in imagination, is a most pitiful and paltry evasion. What exists in heraldry is not an animal, made of flesh and blood, moving and breathing of its own initiative. What exists is a picture, or a description in words. Similarly, to maintain that Hamlet, for example, exists in his own world, namely, in the world of Shakespeare's imagination, just as truly as (say) Napoleon existed in the ordinary world, is to say something deliberately confusing, or else confused to a degree which is scarcely credible. There is only one world, the 'real' world: Shakespeare's imagination is part of it, and the thoughts that he had in writing Hamlet are real. So are the thoughts that we have in reading the play. But it is of the very essence of fiction that only the thoughts, feelings, etc., in Shakespeare and his readers are real, and that there is not, in addition to them, an objective Hamlet. When you have taken account of all the feelings roused by Napoleon in writers and readers of history, you have not touched the actual man; but in the case of Hamlet you have come to the end of him. ...If no one thought about Hamlet, there would be nothing left of him; if no one had thought about Napoleon, he would have soon seen to it that some one did."

Is this argument convincing?

3   Frege's distinction between sense and reference

A natural move in response to these difficulties is to concede that not all names or definite descriptions stand for objects. But this raises a problem; for a name which does not stand for an object still seems clearly to have a meaning. We want to say that

Pegasus exists.

is false, but not that it lacks a meaning.

In response to this problem, one might think that the meaning of a name or definite description is something other than what the name or definite descriptions stands for. That way, we can let 'empty' names and descriptions have a meaning without being committed to objects of the sort that Meinong believed in. This was the view of Frege, who distinguished between the sense and reference of expressions. Russell summarizes Frege's view as "the view that denoting phrases *express* a meaning and *denote* a denotation" ('On Denoting,' 483).

Russell's principle argument against Frege is Russell's discussion of Gray's elegy, which is sufficiently confusing that it merits a separate handout.

4   Russell's theory of denoting phrases

4.1   Propositions and propositional functions

A key to understanding Russell's theory of denoting phrases is the distinction between propositions, on the one hand, and propositional functions, on the other. Confusingly, he only points out the difference in a footnote of 'On denoting.' In 'Descriptions', he describes propositional functions as follows:

> "A 'propositional function,' in fact, is an expression containing one or more undetermined constituents, such that, when values are assigned to these constituents, the expression becomes a proposition. ... Examples of propositional functions are easy to give: "x is human" is a propositional function; so long as x remains undetermined, it is neither true nor false, but when a value is assigned to x it becomes a true or false proposition." ('Descriptions,' 155-156)

Here Russell is not faithful to his own view that propositions are not sentences, but what sentences express. But we can put his point in terms of the theory of propositions in *The Principles of Mathematics*. Think about the proposition which ascribes to you the property of being human. This proposition includes you and the property, and is expressed by the sentence

N is human.

Now imagine that we remove you from the proposition. Intuitively, what we have left is the property of being human, and an empty 'slot.' This might be expressed using the variable 'x':

x is human.

or, just as easily, by

___ is human.

This is what Russell thought propositional functions were. He called them this because they were functions from objects to propositions: they were things which, when you add an object to them, give you back a proposition. So propositional functions are not themselves true or false; they need to have something added to them to make them true or false.

4

One way to get from a propositional function to a proposition is to fill in the empty slot with an object; to replace 'x' with a name. But there is another way as well, and Russell thought that it held the key to understanding denoting phrases. Rather than completing the propositional function with an object, we can, so to speak, say something about the propositional function.

We can, for example, say that the propositional function is *always true*: that it is true no matter what object you fill into the empty slot in the proposition. In the case of the propositional function

x is human.

Russell would write this as

human (everything)

or

human (x) is always true

and in our logical notation, we would write it as

$\forall x$ (x is human)

i.e.,

For all x, x is human.

We can also talk about propositional functions which are sometimes true — i.e., true when at least one object slotted into the proposition makes it true — and propositional functions which are never true.

Russell summarizes this theory as follows:

> "*Everything*, *nothing*, and *something*, are not assumed to have any meaning in isolation, but a meaning is assigned to every proposition in which they occur. This is the principle of the theory of denoting I wish to advocate: that denoting phrases never have any meaning in themselves, but that every proppsition in whose verbal expression they occur has a mean- ing."

So it is *not* assumed that there is some propositional constituent corresponding to words like 'everything' and 'something'; but we do know how to understand the propositions expressed by sentences involving them.

We now have to see how Russell uses propositional functions to explain denoting phrases like 'a man' and 'the tallest student in the class.'

4.2   Indefinite descriptions

In his later article 'Descriptions', he explains a point of puzzlement about indefinite descriptions as follows:

> 'Our question is: What do I really assert when I assert "I met a man"? Let us assume, for the moment, that my assertion is true, and that in fact I met Jones. It is clear that what I assert is *not* "I met Jones." I may say "I met a man, but it was not Jones"; in that case, though I lie, I do not contradict myself, as I should do if when I say I met a man I really mean that I met Jones. ... not only Jones, but no actual man, enters into my statement. ...
>
> ... when we have enumerated all the men in the world, there is nothing left of which we can say, 'This is a man, and not only so, but it is *the* 'a man', the quintessential entity that is just an indefinite man without being anybody in particular." (Russell, 'Descriptions')

This is puzzling; if the value assigned to 'a man' is not an object, what could it be? This is already a worry for the theory of the *Principles*, in which every significant expression should stand for a term which is its meaning.

Russell explains how to handle this puzzle as follows:

> "Suppose now we wish to interpret the proposition, "I met a man." If this is true, I met some definite man; but that is not what I affirm. What I affirm is, according to the theory I advocate; –
>
> " 'I met x, and x is human' is not always false".
>
> Generally, defining the class of men as the class of objects having the predicate human, we say that: –
>
> "C (a man)" means " 'C(x) and x is human' is not always false".
>
> This leaves "a man," by itself, wholly destitute of meaning, but gives a meaning to every proposition in whose verbal expression "a man" occurs.."

4.3   Definite descriptions

Later in the article, Russell gives his analysis of sentences containing definite descriptions. He says

> "It remains to interpret phrases containing *the*. These are by far the most interesting and difficult of denoting phrases. Take as an instance "the father of Charles II was executed". This asserts that there was an x who was the father of Charles II and was executed. Now *the*, when it is strictly used, involves uniqueness; we do, it is true, speak of "the son of So-and-so" even when So-and-so has several sons, but it would be more correct to say "a son of So-and-so". Thus for our purposes we take *the* as involving uniqueness."

The problem, though, is that so far we have no device for expressing the thought that a propositional function is uniquely satisfied, i.e. made true by exactly one object. We know how to say that it is satisfied by at least one object, by every object, and by no objects; but how can we use these devices to say that it is satisfied by exactly one?

In 'Descriptions', he gives the following analysis of 'the author of *Waverly* was Scotch':

(1) "x" wrote *Waverly*" is not always false;

(2) "if x and y wrote *Waverly*, x and y are identical" is always true;

(3) "if x wrote *Waverly*, x was Scotch" is always true.

(See also the discussion at the top of p. 482 of 'On denoting.') You can think of Russell as giving three conditions for 'the F is G' to be true: there must exist at least one thing which is F, there must exist at most one thing which is F, and whatever is F must be G. Thus we define 'the' in terms of 'every' and 'some.'

In our ordinary logical notation, we would translate

The F is G.

as

$$\exists x \ (Fx \ \& \ \forall y \ (Fy \rightarrow y = x) \ \& \ Gx)$$

5   The three puzzles of 'On denoting'

In 'On Denoting', Russell discusses a number of logical puzzles which any theory of denoting phrases should solve. He describes the role he thinks that these puzzles should play in the construction of a theory of denoting phrases when he writes,

> "A logical theory may be tested by its capacity for dealing with puzzles, and it is a wholesome plan, in thinking about logic, to stock the mind with as many puzzles as possible, since these serve much the same purpose as is served by experiments in physical science." ('On Denoting', 484-5)

Russell raises three important puzzles about the functioning of definite descriptions. One way of viewing these puzzles is as raising a difficulty, in the first instance, for the conjunction of the view that denoting phrases are to be grouped with names with the view that the significance of a name is exhausted by what it stands for. We want to understand both how the puzzles raise challenges for that view, and how the puzzles are resolved by Russell's theory of denoting phrases.

5.1   The substitution of identicals

Russell presents the first puzzle as follows:

> "If a is identical with b, whatever is true of the one is true of the other, and
> either may be substituted for the other without altering the truth or falsehood
> of that proposition. Now George IV wished to know whether Scott was the
> author of *Waverley*; and in fact Scott *was* the author of *Waverley*. Hence
> we may substitute *Scott* for *the author of "Waverley,"* and thereby prove that
> George IV wished to know whether Scott was Scott. Yet an interest in the law
> of identity can hardly be attributed to the first gentleman of Europe." ('On
> Denoting', 485)

A presentation of the puzzle in terms of Leibniz's Law, which says that for any x, y, if
$x = y$, then for any property F, $Fx \iff Fy$. (This is sometimes called the principle
of the indiscernibility of identicals, and should be sharply distinguished from the much
more controversial principle in metaphysics which is sometimes called the principle of the
identity of indiscernibles.)

How does Russell's theory solve this problem? Here is what he says:

> "When we say : "George IV. wished to know whether so- and-so," or when
> we say "So-and-so is surprising " or "So-and-so is true," etc., the "so-and-so
> " must be a proposition. Suppose now that "so-and-so " contains a denoting
> phrase. We may either eliminate this denoting phrase from the subordinate
> proposition "so-and-so," or from the whole proposition in which "so-and-so"
> is a mere constituent. Different propositions result according to which we do.
> I have heard of a touchy owner of a yacht to whom a guest, on first seeing it,
> remarked, "I thought your yacht was larger than it is"; and the owner replied,
> "No, my yacht is not larger than it is". What the guest meant was, "The
> size that I thought your yacht was is greater than the size your yacht is"; the
> meaning attributed to him is, "I thought the size Or of your yacht was greater
> than the size of your yacht." To return to George IV and Waverley, when we
> say, "George IV wished to know whether Scott was the author of Waverley,"
> we normally mean "George IV wished to know whether one and only one man
> wrote Waverley and Scott was that man;" but we may also mean: "One and
> only one man wrote Waverley, and George IV. wished to know whether Scott
> was that man."

This illustrates what Russell calls the distinction between primary and secondary occurrences of denoting phrases. We can also (not coincidentally) illustrate this distinction
with sentences involving 'everyone' and 'someone' like

> Everyone loves someone.

5.2   The law of the excluded middle

Russell's third puzzle involves the law of the excluded middle, which says (in one version) that for every significant sentence, either it or its negation must be true:

> "By the law of the excluded middle, either 'A is B' or 'A is not B' must be true. Hence either 'The present King of France is bald' or 'The present King of France is not bald' must be true. Yet if we enumerated the things that are bald, and then the things that are not bald, we should not find the present King of France in either list. Hegelians, who love a synthesis, will probably conclude that he wears a wig." ('On Denoting,' 485)

How does Russell's theory solve this problem? Again, he invokes the distinction between primary and secondary occurrence which his theory of denoting phrases makes available:

> "The distinction of primary and secondary occurrences also enables us to deal with the question whether the present King of France is bald or not bald ... If "C" is a denoting phrase, say "the term having the pro- perty F," then

> > "C has the property ϕ"

> means

> > "one and only one term has the property F, and that one has the property ϕ".

> If now the property F belongs to no terms, or to several, it follows that "C has the property ϕ" is false for all values of ϕ. Thus "the present King of France is bald" is certainly false; and "the present King of France is not bald" is false if it means

> > "There is an entity which is now King of France and is not bald,"

> but is true if it means

> > "It is false that there is an entity which is now King of France and is bald."

> That is, "the King of France is not bald" is false if the occurrence of "the King of France" is *primary*, and true if it is *secondary*. Thus all propositions in which "the King of France" has a primary occurrence are false; the denials of such propositions are true, but in them "the King of France" has a secondary occurrence. Thus we escape the conclusion that the King of France has a wig."

Russell asks us to consider sentences like:

The round square is unreal.

The round square is nonexistent.

These sentences are called 'negative existentials' because they can be understood as the negation of an existence claim.

If it were the case that definite descriptions were to be understood as a kind of name, and names were understood as mere proxies for their bearers, then it may seem that we could give an account of these sentences using the elementary theory of reference sketched above: that is, the sentences would be true just in case there was some object referred to by 'the round square' which was, respectively, among the unreal things or the nonexistent things.

Russell does not think that this is plausible; there is, after all, no object — the round square — which could be the referent of the 'the round square.' What we need is an account of how definite descriptions work which can explain the truth of some negative existentials without the 'pitiful and paltry evasion' of claiming that such things do exist, or at least are around to serve as the referents of definite descriptions.

Russell thinks that his theory is such an account:

"The whole realm of non-entities, such as "the round square," "the even prime other than 2," "Apollo," "Hamlet," etc., can now be satisfactorily dealt with. All these are denoting phrases which do not denote anything. A proposition about Apollo means what we get by substituting what the classical dictionary tells us is meant by Apollo, say "the sun-god". All propositions in which Apollo occurs are to be interpreted by the above rules for denoting phrases. If "Apollo " has a primary occurrence, the proposition containing the occurrence is false; if the occurrence is secondary, the proposition may be true. So again "the round square is round " means "there is one and only one entity x which is round and square, and that entity is round," which is a false proposition, not, as Meinong maintains, a true one."

6   Objections to Russell's theory

6.1   Incomplete definite descriptions

Consider what Russell's view says about the truth conditions for:

The book is on the table.

Can this sentence be true even if there is more than one book in existence?

6.2   Referential uses of definite descriptions

6.3   Other uses of 'the': generics

How would you apply Russell's theory to 'The whale is a mammal.'?

6.4   The contrast between descriptions and names

Implicit in Russell's exposition of his theory is a contrast between names, which are expressions whose function is just to stand for an object, and denoting phrases, which at first sight seem to work just like names, but really do not. The problem: it looks like each of the logical puzzles discussed above can arise for names, as well as for denoting phrases.

7   The importance of Russell's theory

The divergence of logical form from surface (grammatical) form.

Russell's theory as a way of eliminating entities from one's metaphysics.

Importance for epistemology: Russell's claim that "It is possible to have much knowledge concerning a term described, *i.e.* to know many propositions concerning 'the so-and-so', without actually knowing what the so-and-so is ..." ('Descriptions,' 178). The distinction between 'knowledge by acquaintance and knowledge by description.'