15. Russell on definite descriptions

Martín Abreu Zavaleta

July 30, 2015

Russell was another top logician and philosopher of his time. Like Frege, Russell got interested in denotational expressions as a result of his work in logic. He recognized the force of Frege's puzzle about cognitive significance and attitude ascriptions, but thought that Frege's view wasn't exactly right. In his paper 'On denoting' he offers his own view of a certain class of denotational expressions, namely, definite descriptions. We'll assume that, for Russell, proper names are just definite descriptions in disguise, so that his analysis of the former is the same of his analysis of the latter.

1   Preliminaries

Russell had a special view about propositions, different from Frege's view. According to Russell, propositions are a kind of structured abstract entity. For Russell, it makes sense to say that some object or property is part of a proposition, and to ask what each element of a sentence contributes to the proposition that the sentence expresses. Russell thinks that we can only grasp propositions all of whose elements we are acquainted with.

This is where the distinction between knowledge by acquaintance and knowledge by description comes in. The distinction between knowledge by acquaintance and knowledge by description is concerned with our knowledge of objects. For Russell, acquaintance is a sort of relation that one has to an object when one *immediately* knows the object.

Russell's preferred example of something that we can know by acquaintance is what he calls a *sense datum*. Sense data are something like raw experiences, if you like. For instance, when you see a red carpet, you know the color red by acquaintance. There is no need for any mediation between you and the color red in order for you to know that color. As such, knowledge by acquaintance is not based on any knowledge of truths or facts, though it often entails the knowledge of some truth.

Knowledge by description, on the other hand, is indirect. Here is an example by Russell:

> My knowledge of the table as a physical object, on the contrary, is not direct knowledge. Such as it is, it is obtained through acquaintance with the sense-data that make up the appearance of the table. We have seen that it is possible, without absurdity, to doubt whether there is a table at all, whereas it is not possible to doubt the sense-data. My knowledge of the table is of this kind which we shall call "knowledge by description". (p. 74)

According to Russell, we are not directly acquainted with the table. Instead, we know the table by means of something like the description "the object that causes in me such and such sense data".

Russell thought that there were very few things that we could know by description: sense data, universals (e.g. properties) and the self are among the few things that we can know by acquaintance. Everything else we must know by description. So, for instance, we only know other minds or other people by description, and not by acquaintance.

Ultimately, Russell thought, all of our knowledge must rest on knowledge by acquaintance. In fact, even the propositions that we grasp must be based on some sort of knowledge by acquaintance. Recall that Russell thought that propositions were structured kinds of entities, so that it made sense to talk about the constituents of a proposition.

According to Russell, in order for us to grasp a proposition, we must be acquainted with all of its components. For this reason, he doesn't think that the contribution that a name makes to a sentence in which it occurs can be its referent or denotation. Instead, it must be some sort of description ultimately composed of elements with which we are acquainted.

For instance, if the sentence 'Venus is pretty' is to express a proposition that we can grasp, it can't express a proposition that has the planet Venus as a constituent. For in order for us to grasp such proposition, we would need to know the planet Venus by acquaintance, which we don't. This is why he thinks that in 'Venus is pretty' the name 'Venus' must contribute something like a description. For instance, the proposition expressed by this sentence may be something like: *the object that produces the sensation as of shining in the evening is pretty*.

In other words, the contribution that a proper name makes to a sentence must be something like a definite description: a description that starts with the definite article 'the' and requires the uniqueness of the thing that satisfies it. We'll see Russell's theory of definite descriptions more thoroughly in what follows.

2   Russell's view of definite descriptions

Unlike Frege, Russell thought that definite descriptions didn't have a meaning by themselves. However, every grammatically correct sentence in which a definite description occurs is meaningful. In particular, Russell thought that a sentence like 'The morning star is pretty' really meant: *there is one and only one thing that is the morning star, and that thing is pretty*. The details are a bit more complicated than that, and will be easier to explain after introducing some logical terminology.

Aside: Quantifiers

Sentences can have expressions like 'every', 'some', 'none' and the like. These expressions are called *quantifiers*. In classical logic (the logic developed by Frege), there are two quantifiers that people care about for the most part: the logical analogs of 'everything' and 'something'.

The symbol '∀' is called the *universal quantifier*. The symbol '∃' is called the *existential quantifier*. If you have taken an introductory logic class, you probably know these two symbols by now.

As a first approximation, one could say that the universal quantifier is the logical analog of the English word 'everything' and the existential quantifier is the logical analog of the English word 'something'. However, this is a bit misleading. These two expressions by themselves are usually not taken to have meanings, or at least not in the sense in which a word like 'cat' has a meaning. However, it makes sense to talk about the meaning of the sentences in which they occur.

When a quantifier occurs in a logical formula, it is followed by a variable. The most common variables are x, y, z. Immediately after that first variable, we have some further formula in which

the variable that was right after the quantifier may or may not occur. Since this is not a logic class, we'll be a bit sloppy when it comes to the logical notation, and we'll use a combination of a standard logical language that includes quantifiers together with some terms of English.

For instance, we will translate the sentence 'Every cat is on the mat' into our new quasi-formal language as: $\forall x$ (if x is a cat, then x is on the mat). Notice that our translation has a conditional form: this is because we want to restrict our claim that x is on the mat to the objects x that satisfy the condition of being cats. You should also notice the parentheses. The parentheses are used to indicate that every occurrence of x inside them is *bound* by the quantifier that precedes the parentheses. The parentheses are something like a device to keep track of the objects that we are talking about. We will translate the sentence 'Some cat is on the mat' as $\exists x$ (x is a cat and x is on the mat).

Exercise: Translate the following sentences into our new quasi-formal language:

(1) Every brick on the wall is red.

(2) Some person likes apples.

(3) Everyone loves her mother.

(4) Every farmer who owns a donkey beats it.

Think of the last two as extra credit.

Back to definite descriptions

We said that, according to Russell, a sentence like 'the evening star is pretty' meant something like *there is one and only one evening star, and that thing is pretty*. Using our new quasi-formal language, this becomes: $\exists x$(x is an evening star and x is pretty and $\forall y$ (if y is an evening star, then $y = x$)).

With his new theory of definite descriptions in place, Russell is ready to face three puzzles. He thinks that any good theory of denotational phrases must solve these puzzles. As an important reminder, recall that Russell thought we could only grasp propositions all of whose components we are acquainted with. So he thought that proper names were to be analyzed as definite descriptions, and so, even a sentence like 'Venus is pretty' will have a form similar to that of 'the evening star is pretty'—though perhaps the descriptive content will be different.

Before presenting his puzzles, Russell discusses at some length two competing theories: Meinong's and Frege's. We won't examine his criticisms, but you should still read them very carefully. **Question:** Can you make sense of the objection to Frege's view involving Grey's elegy?

3   Russell's three puzzles

(i) Russell's first puzzle is really just Frege's puzzle about attitude ascriptions. We already discussed this puzzle at length, so I won't present it here again.

(ii) The law of excluded middle claims that every formula of the form $(p \vee \neg p)$, where p is a variable ranging over propositions, is true. However, there seem to be some problems for the law of excluded middle once we consider denotational phrases that don't have a referent. For instance, consider the sentence 'The present king of France is bald'. By the law of

excluded middle, it would seem that either the present king of France is bald or the present king of France is not bald. But there is no present king of France! In Russell's words: "if we enumerated the things that are bald, and the the things that are not bald, we should not find the present king of France in either list" (p. 485). The puzzle is to explain how the law of excluded middle can still hold in the presence of denotational phrases that in fact lack a referent.

(iii) Denotational phrases without a referent cause another problem. We may call it the problem of *negative existentials*. Consider the sentence 'the man who did all the heroic deeds described in the Odyssey doesn't exist'. Because no one did such heroic deeds, the description 'the man who did all the heroic deeds described in the Odyssey' doesn't denote anything. But then, how can the sentence saying that such a person doesn't exist be true? Frege thought that in order for the sentence to be true, the description must have a referent. But given that the sentence is true, such referent must be a non-existent entity. How can there be an entity that doesn't exist? This just sounds like a contradiction. In Russell's words "it must always be self-contradictory to deny the being of anything" (p. 485)

4   Solving the puzzles

First puzzle

Russell's solution to the puzzles involves an important distinction. One of the reasons we introduced a special notation for the quantifiers is that Russell's distinction can only be precisely formulated using that notation.

Compare the following two sentences of our quasi-formal language:

(a) $\exists x$ (x wrote Waverley and George wants to know whether x = Scott, and $\forall y$(if y wrote Waverley, then $x = y$))

(b) George wants to know whether $\exists x$ (x wrote Waverley and x = Scott, and $\forall y$(if y wrote Waverley, then $x = y$)

These two sentences mean different things. The first could be used if, for instance, George sees the author of Waverley from afar and asks himself 'is that Scott?' The second is more in line with the ordinary meaning of 'George wants to know whether Scott is the author of Waverley'.

Russell calls occurrences of the existential quantifier like the one in (a) *primary occurrences*. Occurrences of the definite description like the one in (b) are *secondary*. These days, we would call (a) a *de re* reading, and (b) a *de dicto* reading. This distinction puts Russell in a position to solve the three puzzles.

Let's start with Frege's puzzle about attitude ascriptions. The problem was that in some cases we could substitute one denotational expression for another of the same referent, but this modified the truth value of the sentence. Russell thinks that, in a way, the puzzle relies on a misunderstanding. He has been very explicit that denotational phrases don't by themselves have a meaning; in particular, they don't *contribute* their denotation to the proposition expressed by a sentence in which they occur.

In that sense, the puzzle arises from a sort of confusion: we can't replace a definite description with another description that contributes the same denotation (i.e. the same object) because definite

descriptions don't contribute objects in the first place. So there is no failure of compositionally here. On the other hand, his view can still account for the difference between "George wants to know whether Scott is the author of Waverley" and "George wants to know whether Scott is Scott".

If 'Scott' contributed its denotation to a proposition in which it occurs, the second sentence would express the proposition: George wants to know whether Scott=Scott. But recall that Russell thinks we can only grasp propositions all of whose constituents we are acquainted with. So 'Scott' must really be a definite description in disguise. For the sake of simplicity, let's assume that the name 'Scott' is the description 'the man named Scott' in disguise. Then the two sentences in question mean the following, respectively:

- George wants to know whether $\exists x \exists y$ (x wrote Waverley and y is called Scott, and x = y, and $\forall z$(if z wrote Waverley, then x=z) and $\forall z'$(if z' is called Scott, then y=z')).[1]

- George wants to know whether $\exists x$ (x is called Scott, and x=x, and $\forall y$(if y is called Scott, y=x))

Notice that the occurrence of the descriptions in this cases is *secondary* or *de dicto*.

On the other hand, there are certain cases in which we think we can substitute a definite description for another with the same denotation. As Russell points out, we can still get those cases right, but in those cases the definite description will occur *de re*.

Second puzzle

Consider 'the present king of France is bald'. Russell thinks that the law of excluded middle entails that that sentence should be either true or false.[2] Since not all definite descriptions have denotations ('the present king of France' is an example of this), Russell's conclusion would be difficult to adopt if a definite description contributed its denotation to sentences in which it occurs.

However, Russell delivers his preferred result easily. The solution has to do with the distinction between de dicto and de re occurrences of a description. Consider the following two ways of negating the sentence 'the present king of France is not bald':

(n1) *It is not the case that* the present king of France is bald.

(n2) The present king of France is *not* bald.

On Russell's analysis, these two sentences correspond to:

(n1⋆) It is not the case that $\exists x$(x is presently king of France, and x is bald, and $\forall y$(if y is presently king of France, then y=x))

(n2⋆) $\exists x$(x is presently king of France, and x is **not** bald, and $\forall y$(if y is presently king of France, then y=x))

---

[1]Alternatively: George wanted to know whether one and only one man wrote Waverley, and one and only one man is called Scott, and the former is the same as the latter.

[2]Russell is not quite right about this. Some logics take the law of excluded middle to hold, but reject the claim that every sentence is either true or false (this claim is called *principle of bivalence*. Supervaluationist logics are of this kind. Classical logic endorses both bivalence and the law of excluded middle.

In (n1⋆) the definite description 'the present king of France' occurs de re, and the sentence is true because there is no present King of France—i.e. it's not the case that there is one and only one present king of France and that person is bald, because there is no present king of France. In (n2⋆), on the other hand, the description occurs de dicto, and the sentence is false because it claims that there is one present king of France and that person is bald, yet there is no present king of France.

Thus, if 'The present king of France is bald' means that *there is one and only one present king of France, and that person is bald*, its negation must be *it is not the case that there is one and only one present kind of France and that person is bald*. Since there is no present king of France, the former is false and the latter true. Problem solved.

Third puzzle

The final problem concerned negative existentials: if the use of a denotational expression presupposes that it has a denotation, then there would be something self-defeating about using those phrases to say that their denotation doesn't exist. For instance, it would seem to be self-defeating to say 'the present king of France doesn't exist'. But on Russell's analysis, the latter is equivalent to simply saying: 'there is nothing that has the property of presently being king of France', which should be true as long as there is no present king of France. **Exercise:** 'the present king of France doesn't exist' into our quasi-formal language.