Constituents and Denotation in Russell*

The notion of about in Russell

According to a common and rather naive view, what we talk about are the referents of the subjects of our statements. Frege, who was sharply aware of the limited scope of subject-predicate statements, and who had no qualms about higher order quantification, extended this maxim and held that what we talk about are the referents of our terms – subjects as predicates.

More recently, when Frege's theory became almost commonsense, people have suggested that what we talk about are the values of our quantified variables. Some have even thought that in any quantified statement we talk about everything, that is, everything in our domain of quantification (Hempel 1965, p. 18; Boole 1958, chap.3; prop. 1; Sellars 1974, p. 59).

In between comes Russell who was much troubled by this idea of about. According to him every meaningful statement must be about something, and this means that the denotations (referents) of our terms cannot be, in general, what we talk about, because we may talk meaningfully even when our terms do not denote. A paradigm example, which prompted a "paradigm of philosophy" (as Ramsey crowned Russell's theory of descriptions), is our use of definite descriptions: "the King of France does not exist" is meaningful (and true) even though "the King of France" does not denote anything. This particular example presents some special difficulties because ascribing existence to individuals was problematic for Russell on different grounds (Russell, *Logic and knowledge*, ed. R. Marsh 1956, henceforth LK). But these difficulties are immaterial for our present concerns: our problem pertains equally to "the King of France is bald." Indeed, it pertains even to cases like "the author of Waverley was Irish," where the denoting phrase "the author of Waverley" - does in fact denote (LK, p. 191). The reason is that Russell thought that the problem of determining what we talk about is tied up with the problem of the logical form of our statements; and also, that such fundamental questions must be settled independently of contingent facts such as whether there is, in fact, at present, a king in France, or whether one and only one person wrote Waverley (LK, p. 247).

For related, though somewhat more complicated reasons, Russell also thought that regular proper names—"Scott", "Russell" "Jerusalem"- are just "truncated descriptions",

and hence he concluded that, in general, it is never the case that what we talk about are the denotations of the terms we use (LK p. 253). The problem, then, of anchoring the notion of about in some well-understood semantical theory seems the more pressing and difficult.

In trying to explicate such a basic notion one may proceed by looking for a plausible criterion for a sentence being about something. Such a criterion should, of course, accord with the hard core of our pre-theoretical intuitions about the notion. This is the course Goodman, for instance, takes (Goodman1961, pp. 1-24). He presumes a theory of logical form and of denotation, and asks what would be, relative to them, a proper criterion for a sentence being about an object. But one may proceed otherwise: instead of trying to formulate such a criterion, one may endeavor to clarify the conceptual relations between the notion in question and other fundamental concepts and principles of one's theory. Needless to say, these two courses do not exclude each other; on the contrary, they may often be complementary. Yet, when the notion in question is as fundamental as that of about, it seems to raise a kind of philosophical bewilderment that may be left almost untouched by explications of the first kind, and a more general elucidation may be required. This at least was the attitude Russell had, I believe, towards the notion of about. And some aspects of such an elucidation will be aimed at in the following.

We shall confine our discussion to some of Russell's ideas in his "logical atomism" period, viz. from Russell's PoM of 1903 to his Philosophy of logical atomism lectures of 1918. We shall have to distinguish between two notions of about, both of which will appear to be important in Russell's position: what I shall call 'denotational about', and 'constituent-about'. Understanding the inter-relations between these two notions, it will he shown, is important for understanding Russell's general ideas about logical form and denotation, because logical form is, basically, what carries us from constituents of a proposition to the things the proposition is denotationally about.

The significance of the notion of about in Russell

In *My Philosophical Development* (1959, p. 169) Russell wrote: "I have maintained a principle which still seems to me completely valid, to the effect that if we understand what a sentence means, it must be composed entirely of words denoting things with which we are acquainted..." The principle, in one form or another, is repeated in most of his major works of the period with which we are concerned here (e.g. LK p. 56; PP, p. 32; 1963, p. 159).

The chief reason for holding the principle, according to Russell, is that "it seems scarcely possible that we can make a judgment, or entertain a supposition without knowing what it is that we are judging or supposing about". (1963, pp. 159, 160; 1927 pp. 32, 60) If that is really so, we cannot understand a central doctrine of Russell's as long as we do not understand what it means to say that a proposition is about something, and as long as we cannot tell what exactly is it that a given proposition is about.

A different source of the centrality of the notion of about in Russell's philosophy has to do with his celebrated distinction between "knowledge by description", and "knowledge by acquaintance". I shall have to say something about acquaintance later on, but meanwhile it will suffice to point out that the main bulk of our knowledge is not knowledge of objects, which in its strict sense is acquaintance, but knowledge about objects which is, basically, knowledge of certain propositions. Such knowledge - by description – pertains to objects, as the term implies, only derivatively: it is knowledge of a proposition to which the object is somehow related (we shall explain this 'somehow' in the sequel). There is, therefore, something misleading in the contrasting pair "knowledge by acquaintance" vs. "knowledge by description", for it may suggest (and that is how Russell present it) that these are two ways of knowing objects, which are on the same "level", so to speak. But in fact, Russell's theory implies that there is only one way of knowing objects, viz. by acquaintance; all the rest is propositional knowledge, which may tell us something about an object, yet will never give us knowledge of the object itself. We could, it might seem, "save" Russell's distinction maintaining that knowing something about an object is just one way of knowing the object. But then, first, the whole distinction between propositional knowledge, and knowledge of objects, which is vital for Russell, would be blurred. And secondly, Russell's approach to the problem of knowing objects would depend entirely upon explicating the notion of a proposition being about a particular object. Moreover, and this is the third point, it can be shown that the gist of Russell's theory of descriptions implies that the object described, the object about which a certain proposition containing a description is, has no epistemic role whatever in the propositional knowledge that may be expressed by that proposition.

It thus seems that Russell had two different notions of about:

Constituent-about – in this sense, which is connected with his principle of acquaintance, the "objects", or constituents, about which we talk, are the objects with which we must be acquainted in order to be able to understand the proposition.

Denotational-about – in this sense, the object about which we talk is not an object with which we need be acquainted; we "know it" in a derivative way by knowing a proposition which is about it.

In the sequel I shall discuss these two notions in turn. I shall try to explain their systematic significance within the framework of Russell's views at that time, and to argue that the connection between them marks the focus of some of Russell's key notions in the philosophy of language, in general, and the theory of descriptions, in particular. The discussion will also shed some light on the notions of logical form, and (of) "constituents" in Russell's philosophy. My main thesis may be put very briefly thus: the connection between "constituents" and "denotation" (Russell's to notions of about) forms a basic constraint on a theory of the logical form of sentences. The constraint is motivated by the desire to marry an empiristic epistemology of the classical humean type, with a realistic ontology, such as Russell advocated at the time we are concerned with.

Constituent about

It has already been mentioned that there is a sense it which the denotation of a term (regular proper name, or description) is not, in general, what we talk about when we use the term in a sentence. (LK p. 250) Now I think that in order to grasp the full meaning of this thesis it is important to understand the significance of Russell's theory of "incomplete symbols", according to which definite descriptions, like other incomplete symbols, "do not have meaning in themselves." In interpreting this theory many people attach, I believe, too much importance to problems of existence – what if the denotation of the term does not exist – and thus distort the real contents of the theory. Let me explain.

When we apply Russell's theory to, say, "The author of Waverley was Irish", it apparently turns out, according to Russell, that the actual denotation of "the author of Waverley", namely Scott, does not "occur in the proposition." Now, this is a little bit puzzling, for the "author of Waverley" has denotation; moreover, in "Scott was Irish", "Scott" does denote a constituent that "occurs in the proposition", but "Scott" and "the author of Waverley" denote the same thing. So, evidently, the propositions expressed by the two sentences are different. But in what can this difference consist if the truth conditions of the two sentences are exactly the same (as they in fact are)?

The answer is that the notions of a proposition, and of a constituent of a proposition, unlike the notion of truth conditions, were, for Russell, epistemic notions. If we regard these notions – of proposition and constituent – as the key vehicles of Russell's

semantics, we can say that the denotation of "the author of Waverley" unlike that of "Scott" does not have a semantic role in Russell's theory. The characteristic feature of Russell's position here is that such a notion of semantic role should be epistemically constrained: something has a semantic role, for a given sentence, if knowing it is necessary for understanding the sentence. (For some reason, which I cannot discuss here, Russell thought that this knowledge must be "knowledge by acquaintance", and thus we get to his "principle of acquaintance").

We may say that Russell's whole theory of logical form was governed by the basic idea that any sentence, which we can understand, must be analyzed in such a way that the only (extra-logical) terms that occur in it are terms whose denotations do have semantic role in the above sense. The notion of an expression having "meaning in itself" can be explained as saying much the same thing – that the denotation of the term has a semantic role in any sentence in which it occurs.

This epistemic constraint, and the idea that the truth conditions of sentences should be represented in a way that is governed by epistemological principles, are fundamental, it seems to me, for understanding Russell's notions of proposition, constituent, and the "principle of acquaintance".

We can now understand why Russell says that denoting phrases (like descriptions) do not have meaning in themselves. (LK p. 51, 53) They, indeed, do not: Knowing their denotations (even when they exist) is not necessary for understanding the sentences in which they occur. This is tantamount to saying that these denotations are not constituents of the propositions which these sentences express. If the notion of about is construed now in light of the view that "it is scarcely possible that we . . . entertain a supposition without knowing what is it that we are supposing about" (Russell, 1963, p. 159), then we can see that things which we are supposed to know here, the things about which we judge, suppose, etc., are the constituents of the proposition, the things that have a semantic role in understanding the proposition, and not the denotations (even if they exist) of the terms of the proposition. There is, therefore, a straightforward sense in which a sentence like "the author of Waverley was Irish" is not about the denotation of the phrase "the author of Waverley", but about the constituents of its deeper analysis - of the proposition it expresses. These constituents must be objects with which we are acquainted; moreover, they must be objects acquaintance with which is necessary for understanding the sentence in question.

Denotational about

I turn now to the other notion of about, according to which a proposition is about the denotation of its terms (or of some of them). This is, On the face of it, a much simpler and more intuitive notion. It is, also, what we seem to mean by the more common uses of 'about'. My main concern here, again, is not so much in clarifying and explicating the notion itself, as in trying to understand the systematic role it plays in Russell's own thought. Having introduced the notions of constituent, and of constituent-about, it might seem that the only thing which remains for Russell to do with the notions of denotation, and denotational about, is to define them in terms of the first, more systematic notion. The notion of denotation would, accordingly, have no significant role to play within the framework of Russell's systematic theory, and could basically be dispensed with. The only significant notion of about would then be that of constituents; denotational about would seem as a residual of our commonsensical, vague, and unsystematic conception, which has no place in a mature semantic theory.

I wish to argue that this is an oversimplified view of Russell's conception, and that the notion of denotational about, and of denotation in general, is of crucial importance in understanding his theory. This seems to oppose the previous argument that the denotation of a term does not, in general, have a semantic role in understanding a sentence (because only constituents do). But the opposition is only apparent: it is true that knowing the particular denotation of a particular term in a proposition may not be necessary for understanding the proposition, and in that sense the denotation in question may lack "semantic role" (in the above sense); yet, understanding the general notion of the denotation of a term, and knowing what kind of an object this denotation is, as well as knowing that the proposition is about the denotation of the term (if it has any), are necessary ingredients of understanding the proposition, according to Russell. In order to show that, I shall trace some lines in the development of Russell's theories of denotation in (Russell, On Denoting, 1905) and (Russell, Principles of mathematics, 1903).

The notion of about is constitutive, in Russell's theory of (1903), of the notion of denotation. Denoting is in that theory a relation between two non-linguistic entities: a concept and a term. Every meaningful sentence consists of words which mean something; and what some of them mean (in fact, all, excluding proper names) are concepts, which are the meaning of these words. In some miraculous way, however, by using these words, and meaning these concepts, we succeed in making and understanding propositions

which are not about the words and the concepts, but about totally different things, which are collectively called "terms". This remarkable achievement is accomplished according to the PoM of 1903 theory, due to special concepts – "denoting concepts", where "A concept denotes when if it occurs in a proposition, the proposition is not about the concept but about a term, connected in a certain peculiar way with the concept" (PoM, p. 53). This is not to deny that sometimes we talk not about terms but about the very concepts which we mean: "Humanity belongs to Socrates" is about the concept "Humanity" itself, which in this case, does not denote. This feature of a proposition being about something is definitive of the very notion of proposition: "Socrates is human", and "Humanity belongs to Socrates" are "two distinct propositions... the difference being that in the latter case, but not in the former, the proposition is about this notion (of Humanity) (PoM, p. 45).

These notions of denoting-concept, and of proposition, are among the basic analytical tools of Russell's theory in PoM; moreover, he is at pains to emphasizing their logical, in contrast to psychological, character. (PoM p. 53) Hence we should ascribe all these properties to the notion of about as well.

Now, it should be clear that in all this talk of the "terms" a proposition is about, the notion of about that Russell had in mind was our "denotational about", not "constituent about". It is not by denoting a constituent that a denoting concept makes a proposition be about something. "The author of Waverley", as a denoting concept, makes the proposition "The author of Waverley was Irish" be about Sir Walter Scott, and not about any "constituent" of the proposition. Analogously, by being a denoting concept, the concept "all cats" makes the proposition "all cats are animals" be about all cats, and not about any concept. So it is clear that whatever the merits of this theory are, one of its key notions is that of denotational about.

It is not very difficult to guess why Russell was unhappy with this explanation of the way we succeed in talking about things that are different from the concepts we "mean". Besides many problems of detail, the very notion of "denoting concept", whose "intrinsic nature" is to denote, looks more like naming a problem than solving it. And in fact only two years elapsed since the appearance of PoM until Russell came up with his radically new theory of "On Denoting" of 1905.

Among the many merits of this theory, the most important one, from our present point of view, is the following: the main burden of the notion of denoting, and of the explanation of the "denotational about" of propositions, was shifted in (1905) from the

notorious and mysterious "denoting concept" to an entirely new thing – the logical form of the proposition. The fact that "The author of Waverley is Irish" is about Scott - i.e., about a certain man, – and not about some concept(s), is not ascribed now to any "intrinsic property" of a concept, but to the logical form of the proposition. We still have a reminiscence of the PoM theory in the form of "the principle of acquaintance", namely, it is required that in order to be able to understand the sentence we must be acquainted with all its constituents. But these constituents are not what we mean to talk about, and the transition from the constituents we must know, to the object about which we are talking, is carried out by means of the logical form of the sentence: $(\exists x)((y)(Ay \leftrightarrow x = y)\ \&\ Ix)$; only the basic, simple constituents appear in the proposition; it is, however, its logical form that determines what it is about (if at all).

This undoubtedly, is a fine step forward. But for our present concerns the point to be emphasized is different yet. We are more interested in the systematic status of the notion of denotational about, and from this perspective we should look at the situation from "behind", so to speak: in order to grasp the logical form of the proposition we must have a clear conception of what the proposition is supposed to be denotationally about. It is not required, of course that, we should in fact know the object (or objects) which the proposition is about; we may be completely ignorant of it, or of its nature, and still understand the proposition perfectly. But we must have a clear conception of what it means to say that the proposition is about (in the denotational sense) a certain object, or else we would not understand a fundamental feature of it - its logical form.

If we follow the 1905 OD theory and regard the logical form of a proposition as that feature of it which determines the denotational about of the proposition, then it seems that understanding the general notion of the denotational about of a proposition is necessary for grasping the significance of it logical form. In other words (if I may use quite loosely a more technical vocabulary), the logical form of a proposition seems (in OD theory) to be what "maps" the concepts, or constituents of the proposition, with which we are required to be acquainted, on the truth conditions of the proposition, couched in terms of its denotational about. In our previous sentence, for instance, we seem to be dealing with the constituents author, Waverley, Irish, and the logical form in which they are embedded determines on their basis (or "maps" them on) the truth conditions of the sentence, namely, that there should be one and only one man who was the author of Waverley and was Irish. This man, if there is one, is what the proposition is

denotationally about (he is not a constituent of the proposition, as Russell emphasizes over and over again and hence, cannot be what the proposition is "constituently" about). We would not be able to understand this essential role of the logical form of the proposition had we not grasped the general idea of the denotational about of a proposition (or, at least, of a proposition of that kind). Thus, we see that the notion of denotation, and of denotational about are formative aspects of Russell's mature theory of OD just as they were of his earlier theory of PoM.

Having explained the notions of constituent, and denotational about, and the respective roles they play in Russell's thought, we may also be in a better position to appreciate one of his arguments against Frege in OD. Frege, as is well known, treated definite descriptions more or less like proper names, both having, in his theory, sense and reference. An important feature of Frege's position is that he did not have anything like the Russellian duality of about: the referents of our terms are the things that have semantic role (in our previous sense); they are the elements in terms of which the truth conditions of our sentences are couched, they are what our propositions are about. In his (1905) Russell argues that "the present King of France is bald" is on Frege's theory, not about anything, and consequently, should be nonsense, which it is not (LK p. 46). Frege escapes this undesirable result by supplying the term ("The present King of France") with an artificial referent, and Russell objects that this procedure "is artificial and does not give an exact analysis of the matter" (LK p. 47). The full force of this argument can be now formulated thus: by Frege's basic assumption, where there happens to be no object about which a certain proposition is, one of its terms must lack a referent, and hence be devoid of semantic role in that proposition. Russell, in contrast, can avoid this conclusion because in his theory, knowing what a proposition is about is not necessary for knowing the elements which have semantic role in understanding the proposition. Such a move is blocked for Frege, in principle, due to a deep feature of his theory, namely, that the referents of the terms of a proposition (and hence, what the proposition is about) are determined by the senses of these terms, namely, by those objects whose knowledge is necessary to understanding the proposition. In Russell's theory, on the other hand, those things whose knowledge is necessary for understanding the proposition (namely, its constituents) do not determine what the proposition is about (for such a determination it is necessary to consult the logical form of the proposition).

That Russell considered this argument seriously, becomes evident when he says (some lines further on) that his own solution consists in an open admission that "the

denotation is not what is concerned in such cases"; i.e., that what the proposition is about, is not determined by anything whose knowledge is necessary for understanding the sentence.

Constituents and Logical Form

We may sum up the relations between constituents and logical form in Russell's theory in the following way. The "principle of acquaintance" has two aspects - epistemological and logical; the epistemological aspect consists in the requirement that the constituents of a proposition must be known by acquaintance, while the logical aspect is that the logical form of a proposition must be such as to enable us to reconstruct its meaning (= its truth conditions) in terms of its constituents (which are known by acquaintance) only. Thus we may say that the principle of acquaintance imposes an epistemological constraint on the logical form of propositions.

In order to appreciate the significance of this observation for Russell's view on logical form, let us examine its consequences in greater detail. on various occasions Russell speculated about the exact nature of logical form and about the role of our knowledge of logical form in understanding a sentence (LK pp. 237-241; 1960, p. 41). Is it another "constituent" of the proposition, which we have to know by acquaintance? Can it be detached and abstracted from the actual proposition in a way that enables us to know 1t apart from the proposition whose form it is? If yes - how, after all, do we relate, or combine it to the proposition itself? In other words, if logical form is an abstract "scheme", how exactly do we fill the constituents into it to form a proposition? Is this operation of embedding the constituents in the logical scheme an "independent operation", which is not part and parcel of our understanding the logical form itself?

Consider, for instance, the difference between:

(1) Desdemona loves Cassio,

(2) Cassio loves Desdemona.

Do they have the same constituents? If so, they must differ in logical form (for they evidently differ in meaning). But then, what exactly are the respective logical forms which are different here? By Russell's explanation of the notion of logical form, it seems that the respective logical forms in the two cases are the same, namely "Rxy" (LK, p. 238).[1]

It might be suggested that there is, after all, a difference in the constituents of the two propositions; that the 'loves' of (1) is not (does not express the same as) the 'loves' of

(2). There are hints in Russell for such an idea, but the idea is plainly untenable. The number of constituents must be finite, and relatively small, for they are supposed to be objects of acquaintance. Learnability considerations of the Davidsonian sort also compel such a restriction. And above all, if the constituent in question is not merely the relation in the ordinary sense but the manner in which Desdemona and Cassio are related, then the whole distinction between constituents and logical form would be blurred.

We are here dealing with the very problem that prompted Wittgenstein's theory of relations in the (Wittgenstein, Tractatus logico-philosophicus, 1961), according to which the alleged relation of love is indeed not a constituent of the propositions at all, but part of their "pictorial structure", of the manner in which the constituents are situated (Wittgenstein, 1961; 3,1432, 4.1222). But such a view was persistently rejected by Russell (PP, p. 253; LK, pp. 333, 337-338; see Sellars 1974, pp. 76-84) even after he was well acquainted with the *Tractatus*.

We must conclude, therefore, that, for Russell, (1) and (2) had the same constituents, which means that they cannot have the same logical form (granted the view we ascribed to Russell, namely, that the meaning of a proposition is a function of its constituents and of its logical form alone). Logical form is seen accordingly as consisting of two distinguishable aspects - the formal scheme ("Rxy") that is common to, e.g., (1) and (2) as well as to "3 is greater than 2", and "London is larger than Jerusalem"; and the particular manner in which the constituents of the proposition are embedded in this formal scheme, or the manner in which they are related to one another. This is the point at which (1) and (2) differ, though they have the same constituents, and the same "formal scheme". (It should be noted how close we come here to Wittgenstein's conception, for it seems that our 'first aspect' is part of Wittgenstein's "pictorial form" of the (Wittgenstein, 1961, 2.15) and our 'second aspect' belongs to the "structure of the picture".

All this becomes much more conspicuous when we turn from atomic sentences such as (1) and (2) to sentences like:

(3) A white cat sits under a brown table,

(4) A brown cat sits under a white table.

Again, it seems that the two have exactly the same constituents, and if our Previous interpretation of Russell's Views are correct, we must account for the difference in their meaning by broadening the notion of logical form to include not only the formal scheme involved $- (\exists x, y)(\varphi x \,\&\, \varphi' x \,\&\, \varphi'' y \,\&\, \varphi''' y \,\&\, \varphi'''' xy) -$ but also the manner in which

the particular constituents of the proposition are "arranged" in that scheme –
$(\exists x, y)(Cx \; \& \; Bx \; \& \; Ty \; \& \; Wy \; \& \; Sxy)$.

The crucial problem which Russell's position faces here is this: Can we adhere to this view of logical form (with the two aspects sketched above), while maintaining that relations are constituents of propositions? (Or, analogously, is there a necessary connection between Wittgenstein's notion of the pictorial structure, and his views about relations, namely, that they are not constituents of the proposition?2) This is a large question, and I cannot enter here into a discussion of it in any detail. I will just gloss its significance by mentioning some of its conclusions.

If one answers it negatively (and admit the above necessary connection in Wittgenstein's conception) then the whole Russellian conception of constituents seems to go bankrupt, and one is driven towards the centre of Wittgenstein's conception. For, it would seem arbitrary to draw a categorical demarcation between one-place and many-place functions, and hence one would have to construe properties, as well as relations, as part of the logical form of propositions, and not as part of their "substance". What then would be the constituents of a proposition? They could not be universals, nor relations, neither could they be the values of variables to which the proposition is "committed" (in Quine's sense). They would seem to be something like the notorious Wittgensteinian "objects", the knowledge of which is a prerequisite for understanding the language, even though their nature is epistemically inaccessible.

To sum up, my argument here is the following: Russell's basic Conception seems to imply that the constituents of a proposition plus its logical form determine its "meaning". One of the most conspicuous aspects of this is that "denotational about" should be definable in terms of "constituent about", and logic alone. This conception also imposes a severe epistemological constraint on the logical form of a proposition. For such a program to work, however, it seems that the notion of logical form should be broadly conceived here to include not only the abstract scheme of the formal structure of the proposition, but also, something analogous to Wittgenstein's "structure of the proposition", to wit, the particular manner in which the particular constituents of the proposition are put together in that formal scheme. But this broad conception of logical form may threaten Russell's very conception of constituents as the epistemic hard core of the proposition, for it may imply (and this, I believe was Wittgenstein's view) that relations, properties, and functions in general, are parts of the structure of the proposition (and hence, of its logical form), and not constituents in

that structure. If this argument is correct, it reveals, it seems to me, a fundamental inconsistency in Russell's philosophy of language and in his conception of the relationship between epistemology and logic.

Notes

* Based on my article by the same title, *Theoria*, vol. XLVI, 1980, pp.37-52

1 At the beginning of his "On Propositions", Russell makes a casual remark about the "position" of constituents in the logical form. But this amounts just to giving our problem a name rather than to explaining it. I have failed to find any explanatory remarks on this notion in his writings prior to 1919.

2 This difference between Russell's and Wittgenstein's attitudes towards the status of properties and relations has been pointed out by several authors. For an especially clear presentation (Griffin, 1964, pp. 13-17; Sellars 1974). My aim is to show, however, that Russell's own assumptions should have driven him towards the Wittgensteinian conception. Considerations of the sort might have led Wittgenstein to develop his own theory of relations and logical form.

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