New work on Russell's early philosophy

by William Demopoulos[1]

Bertrand Russell's Early Philosophy, Part I. Edited by Jaakko Hintikka. *Synthese*, vol. 45, no. 1 (Sept. 1980). 188 pp. US$23.00.

ROUGHLY COVERING THE period which begins with *The Principles of Mathematics* (1903) and extends through the unpublished 1913 manuscript *Theory of Knowledge*, this is an excellent volume on the development of Russell's logical theory and philosophy of language.

There is a very nice essay by Rosalind Hursthouse giving the philosophical motivation for Russell's concept of denoting in the *Principles*, and thus clarifying the theory of "On Denoting". The problem which struck Russell in the *Principles* may be introduced as follows: Consider the sentence, 'Humanity belongs to Socrates'. Preanalytically, this seems clearly to be "about" the concept *humanity*.[2] But the concepts *humanity*, *man*, and *all men* are all in some sense "equivalent". So how comes it that 'Man is mortal' is not in any sense about *man*? Russell's solution was to hold that among concepts there is a twofold division. There are those which, like *man*, *all men*, *some men*, etc., are denoting concepts, and there are those (e.g. *humanity*) which are not: "A concept denotes, when, if it occurs in a proposition, the proposition is not *about* the concept, but about a thing connected in a certain peculiar way with the concept" (*Principles*, p. 53, quoted by Hursthouse, p. 37). Following Blackburn and Code *1978*,[3] Hursthouse argues that this "peculiar connection" of denoting concepts with their denotation is just Frege's *determining* which, on Frege's view, holds between the sense and reference of names and descriptive phrases. Although Russell differs from Frege in holding that names are not denoting phrases, i.e. they do not indicate denoting concepts, he agrees with Frege on the question of denoting phrases involving 'all', 'some', 'the', 'a', 'any', 'every', etc. The denoting concepts of such denoting phrases denote their denotations.

What is given up in "On Denoting" is, first of all, the mistaken conception of generality which holds that, e.g., 'all men' refers to the

1 I wish to thank John Rowe, Dean of the Faculty of Arts, University of Western Ontario, for support of research through a SSHRC Faculty of Arts grant.

2 While discussing Hursthouse's paper I shall adopt Russell's convention in the *Principles* of using italics for names of concepts.

3 *Cf.* p. 39n.3. Unless otherwise identified, all page references are to the volume under review.

class of men. This undercuts the motivation for a notion of denoting at least so far as 'all' and 'some' sentences are concerned. But in the case of sentences involving definite descriptions, it still appears that by their use we indicate concepts which denote their denotation. Russell's classic resolution of the problem is of course the theory of descriptions—the contention that definite descriptions achieve their purpose, not by their association with a denoting concept but "because such things as Scott have unique properties" (p. 41).

This of course is only the briefest summary of Hursthouse's argument. Even so, I think one unclarity is evident: If Hursthouse is right, how can *denoting* possibly be indentified with Frege's *determining*? Denoting arises only because of Russell's confusion regarding quantification. Although Frege is committed to there being *some* relation between the sense and reference of a designating expression, it seems completely unwarranted to suggest that this relation is the relation of denoting. So far as I can see, neither denoting nor determining is an *arbitrary* relation between its terms. But for Frege, this feature is rather straightforwardly explained by the *compositional* structure of designating expressions. This explanation clearly does not suffice for the sense in which denoting is non-arbitrary. This suggests that Hursthouse's paper should yield an important qualification of the argument of Blackburn and Code.

The longest paper (seventy-two pages) in the issue is Nicholas Griffin's very ambitious contribution, "Russell on the Nature of Logic (1903–1913)". It is not possible to do justice to Griffin's paper in a short review such as this one. Especially useful is Griffin's discussion (the first in print, to my knowledge) of Russell's 1912 manuscript "What Is Logic?", and his discussion of *Theory of Knowledge*. I will confine my remarks to three issues raised by Griffin: (1) the interpretation of Russell's claim (in the *Principles*) that mathematics is the class of all propositions of the form 'if p then q', (2) the certainty of logic, and (3) the relation of epistemological to logical doctrines during this period (1903–13) of Russell's thought.

Griffin gives a rather unusual account of Russell's "if-thenism". If I have understood him correctly, his view is that the doctrine is required to preserve the *universality* of logic. By turning an ordinary propositional tautology like $\approx (p \cdot \approx p)$ into a hypothetical with $p \supset p$ as antecedent, we preserve its truth even when an improper substitution is made for the propositional variable p. For example the substitution:

$$\text{Socrates}/p$$

will not refute

$$(p \supset p) \supset \approx(p \cdot \approx p)$$

since

$$\text{Socrates} \supset \text{Socrates}$$

is false.

I fail to see why this account is either required or to be preferred over such traditional and straightforward formulations of the view as, for example, that given by Quine in "Truth by Convention". As is well known, on this rather natural interpretation, the relation of logic to mathematics is the same as that which holds between logic and any other articulated body of knowledge.

Actually Russell holds that there is in fact more to mathematical propositions than their hypothetical form. Consider the following passage (quoted by Griffin): "[W]e shall find always in all mathematical propositions, that the words any or some occur" (*Principles*, p. 6). To the obvious objection that this is false of atomic propositions like '$1+1 = 2$' Russell replies that "the true meaning of this proposition is: 'If x is one and y is one, and x differs from y, then x and y are two'" (*Principles*, p. 6). Initially this seems unhelpful, for surely any proposition, say 'Othello loves Desdemona', contains *all* or *some* in *this* sense: the true meaning of this proposition is 'If x is Othello and y is Desdemona and R is *loves*, then xRy'. The difference for Russell, between '$1+1 = 2$' and 'Othello loves Desdemona' is that one can give an "analysis" of 1, 2 and + using only the concepts of logic. Of course if an analysis is simply a definition of '1', '2', and '+' which preserves the structural properties of the natural numbers under addition and multiplication, then we can do this for persons under the relation of loving too! The difficult task for Russell scholarship is to clarify the (implied) belief that the numbers are *constituted* by their "structural" or "logical" properties.

Griffin maintains that Russell's view of logical laws underwent an important shift. Around 1903 Russell believed that logical laws were "metaphysically necessary". Sometime after 1908 he came to hold a more epistemologically based view of logical truths: rather than emphasize their necessity he sought to expose their *certainty*. Griffin offers no direct textual evidence in support of this claim; this is not surprising since there are published statements which directly contradict it. Consider the following passages from the Introduction to the first edition of *Principia Mathematica*:

> The proof of a logical system is its adequacy and its coherence. That is: (1) the system must embrace among its deductions all those propositions which we believe to be true and capable of deduction from logical premisses alone, though possibly they may require some slight limitation in the form of an

increased stringency of enumeration; and (2) the system must lead to no contradictions. (*Principia*, I: 12–13)

> ... [I]n fact self-evidence is never more than a part of the reason for accepting an axiom, and is never indispensable. The reason for accepting an axiom, as for accepting any other proposition, is always largely inductive, namely that many propositions which are nearly indubitable can be deduced from it, and that no equally plausible way is known by which these propositions could be true if the axiom were false, and nothing which is probably false can be deduced from it. If the axiom is apparently self-evident, that only means, practically, that it is nearly indubitable; for things have been thought to be self-evident and have yet turned out to be false. And if the axiom itself is nearly indubitable, that merely adds to the inductive evidence derived from the fact that its consequences are nearly indubitable: it does not provide new evidence of a radically different kind. Infallibility is never attainable, and therefore some element of doubt should always attach to every axiom and to all its consequences. In formal logic, the element of doubt is less than in most sciences, but it is not absent, as appears from the fact that the paradoxes followed from premisses which were not previously known to require limitations. In the case of the axiom of reducibility, the inductive evidence in its favour is very strong, since the reasonings which it permits and the results to which it leads are all such as appear valid. (*Principia*, I: 59)

Notice that a logical system is said to be justified by its capacity to yield the known truths of mathematics! But now compare this with Griffin's claim that Russell "thought that logicism would demonstrate the certainty of the propositions of mathematics, by showing that they could be derived from logical axioms which were certain" (p. 118).

Another thesis of Griffin's essay is that Russell hoped to justify the propositions of logic by appealing to epistemology. I cannot properly evaluate this claim here, but in so far as it underlies Griffin's view that type theory is "context sensitive" it seems to me to be definitely wrong.

Griffin argues that since Socrates knows himself by acquaintance, 'Socrates' denotes an individual for Socrates. But "for others with no acquaintance with Socrates, Socrates is not a possible value [of the function expressed by 'x is an individual']. ... In general, since different people are acquainted with different items, the range of total variation for [such] functions ... will be different for different people. Thus it is intolerable to treat such functions as propositional functions of logic" (p. 138). Griffin's claim is that given certain other principles to which Russell is committed—specifically, the principle of acquaintance—this is a good plausibility argument against "pseudo-functions" like 'x is an individual'. Now this argument can't be right; by this criterion even '$p \supset p$' would not be a propositional function of logic, since different people are acquainted with different propositions!

Notice, Griffin holds that 'Socrates' denotes an individual for Socrates but does not denote an individual for me. Suppose that for me 'Socrates' means the teacher of Plato. Then if Griffin were right, the Russellian analysis of my utterance of the sentence, 'The teacher of Plato was wise', should not contain quantification over individuals. In fact quantification over individuals would be the exception rather than the rule. But this complication of the theory seems quite easily avoided. Surely Russell would argue (and in fact *has* argued) along the following lines: Although my knowledge of Socrates is by means of knowledge of properties (of type 1) with which I *am* acquainted, Socrates is acquainted with Socrates, and thus has "knowledge" of the individual (of type 0) to which 'Socrates' refers. So our knowledge involves acquaintance with objects of different type, but this is perfectly compatible with the fact that I know properties which, in certain combination, are possessed by just one individual, in fact the same individual with which Socrates is acquainted. Thus for each of us it is true that Socrates is an individual, and that the teacher of Plato is an individual.

Coffa's contribution, "Russell as a Platonic Dialogue: the Matter of Denoting", is, as the title promises, a dialogue. There are three principals: Russell_1, Russell_2 and Russell_3. With the exception of some of the notes, the dialogue is by and large quotation or paraphrase of (published and unpublished) Russell against Russell on issues surrounding his theory of denoting. While amusing to read, I think the paper is seriously limited as a contribution to Russell scholarship and the philosophy of language. This may seem unduly harsh, for isn't it useful to have the passages collected before us? The difficulty is that as presented here they are fragmented, out of context, and interspersed with interpretative comments which are continuous with the text.

There is one criticism of the theory of "On Denoting" which Coffa does seem to endorse. This is the objection[4] which purports to find an incoherence in Russell's acceptance of (1) the principle of acquaintance, and (2) the analysis of sentences involving denoting expressions into general sentences (rather than subject–predicate sentences). The argument proceeds as follows: From (2) it follows that the propositions such sentences express are about everything. Since we obviously understand such sentences, it follows by (1) that we are acquainted with everything. But this is absurd. (See the first comment by A[udience] P[articipation]

4 Long urged by Sellars. *Cf.*, e.g., Sellars *1974* (quoted by Coffa).

#2 on p. 58.)

I find it puzzling that this argument should be seriously offered as a criticism of Russell, since it so obviously depends on the interpretation of quantified propositions given in the *Principles*—precisely the theory from which Russell had freed himself by the time of "On Denoting". Even if we ignore subtle questions of Russell scholarship, it should be clear that there is something wrong with the inference that general propositions are about everything, since, if this were right, what would be the point of Russell's insistence that existence is correctly asserted of descriptive or propositional functions—never of individuals? This is in fact the key to the whole problem. From a mathematical point of view a quantifier is a functional which maps a propositional function onto a truth value, while a propositional function is a function mapping individuals onto truth values.[5] If a propositional function is naturally interpreted as expressing a property of individuals (just those individuals it maps onto truth), *a quantifier expresses a property of propositional functions, since it operates on propositional functions exactly as propositional functions operate on individuals*. Thus a general proposition is about (i.e. asserts a property of) the propositional function which the quantifier prefixes. Speaking metalinguistically, we would say '$(\exists x)Fx$' means something satisfies 'Fx'. For Russell, this is just the criterion for asserting of the function expressed by 'Fx' that it is *possible*. Since we are acquainted with the propositional function the sentence '$(\exists x)Fx$' is understood. Similarly the proposition expressed by '$(x)Fx$' means that everything satisfies 'Fx'. It also attributes a property to the propositional function and is in this sense "about" it. In fact Russell gives an explication of necessity which parallels his account of possibility: To say that everything satisfies 'Fx' is just to say that what the function 'Fx' expresses is necessary.

The point of this discussion is not a defence of Russell's account of modality. (That account has at best only a historical interest.) Rather, I take it to have been shown that Russell's understanding of quantification (as expressed in "On Denoting" and later writings) does not commit him to the absurdities claimed by Coffa and Sellars. The principle of acquaintance is no doubt vulnerable to deep and very likely insurmountable objections, but failure to cohere with our understanding of quantified

5 Actually, this is closer to Frege's view than to Russell's. For Russell, the value of the quantifier is a proposition, as is the value of a propositional function. I am simplifying somewhat. For Frege's view that quantification introduces a second-order concept of concepts, see e.g. "Concept and Object", pp.48f. of the Geach and Black anthology (Frege *1892*).

sentences is not one of them.

There are two essays which deal rather extensively with the prehistory of the theory of types. Nino Cocchiarella's paper is entitled "The Development of the Theory of Logical Types and the Notion of a Logical Subject in Russell's Early Philosophy". This is certainly a very capable essay, with copious references and textual material. Since it is a very detailed textual description of the development of Russell's thought, it requires a good deal of work on the part of the reader. I believe it is worth the effort, if only because of Cocchiarella's useful juxtaposition of Russellian texts.

The other essay on this topic is Peter Hylton's "Russell's Substitutional Theory". This is clearly the deepest paper in the collection; rather remarkably it is also one of the most readable. If the present essay is any guide, Hylton's forthcoming book, *Russell and the Origins of Analytic Philosophy*, promises to be major contribution to Russell scholarship.

Hylton's paper contains insights on many subjects. He argues convincingly that the view of mathematical truth of the *Principles* is Kantian—in the sense that propositions of mathematics are synthetic apriori. Russell differs from Kant in holding that the truths of mathematics coincide with the logical truths and that mathematics has nothing to do with intuition or the categories. Hylton also clarifies Russell's perception of the relevance of the theory of incomplete symbols to the resolution of the paradoxes. Roughly, it was the aim of the substitution theory to resolve the paradoxes with a minimum of stratification—basically just individuals and (one type of) propositions would be required. If p is a proposition and a an individual, a matrix—e.g., p/a—is an incomplete symbol defined only in use. (Here, p/a is read, "the result of replacing a in p by".) On the theory of descriptions, there are no denoting concepts to occur as constituents of propositions: under analysis the descriptive phrase breaks up into bound variables and propositional functions. Similarly, on the substitution theory only quantification over individuals and propositions need ever occur. Hylton maintains that, by its apparent avoidance of type restrictions, the substitution theory seemed to avoid the paradoxes while preserving the universality of logic. This proved illusory. Universality is a difficult doctrine. (E.g., the universality of logic should not be confused with a claim to its generality.) Although Hylton's discussion extends that of van Heijenoort's important paper, "Logic as Calculus and Logic as Language", I look forward to a more complete account in Hylton's forthcoming book.

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