Russell on Ontological Fundamentality and Existence

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Until recently, many have perhaps assumed that metaphysics, or at least that branch of it called *ontology*, is concerned with issues of existence, and that one's metaphysical position is more or less exhausted by one's position on what entities exist. In his "On What There Is", Quine argued that the *ontological commitment* of a theory or set of views is determined by what things its quantifiers range over: "To be is to be the value of a variable", as he succinctly put it (Quine 1948: 15). Quine's views were never universal, but the weaker assumption that one's ontological commitments are at the center of one's metaphysics is very widespread. Recently there has been some pushback against this broad Quinean framework. Kit Fine has suggested that "we give up on the account of ontological claims in terms of existential quantification" (Fine 2009: 167). Jonathan Schaffer claims that the Quinean approach has created a "tension in contemporary metaphysics" (Schaffer 2009: 354), one that can only be resolved by returning to a more "Aristotelian" conception of metaphysics. The positive proposals of

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such figures vary, but often they suggest we focus our ontological investigations on what is *fundamental*, or "what grounds what" instead.

Quine was the first to point out the ways in which Russell was both an inspiration and a forerunner of his position. Notably, there was Russell's analysis of existence claims using the existential quantifier, and his well-known arguments that one can resist positing Meinongian unreal objects by accepting his theory of descriptions. However, it would be a mistake to read Russell as nothing more than a proto-Quinean. This will perhaps already be conceded for the periods when Russell still thought there were notions of "existence" not explicable by means of the quantifier, or embraced a distinction between existence and mere being or subsistence (e.g., *PoM*: §427; *EIP*: 486–489; *PoP*: 156). However, I shall argue that this is true for *mature* Russell, even when (starting roughly 1913) he officially held the position that all existence claims are to be understood quantificationally. In particular, while mature Russell understood "*F*s exist" as expressing ⌜$(\exists v)Fv$⌝, he would not have taken this necessarily to settle the metaphysical or ontological status of *F*s. Russell had, running alongside his account of existence, a conception of belonging to what is, as he variously put it, "ultimate", "fundamental", the "bricks of the universe", the "furniture of the world", something "really there". This contrasts with that which has only a "linguistic existence", which he also described as "logical fictions" or "linguistic conveniences". This hints at something like an Aristotelian conception of metaphysics in Russell, though he would prefer to speak of "analysis" rather than "grounding" for the relationship between the derivative and the fundamental. The overall position is explicit in his late 1957 paper, "Logic and Ontology", but is evident earlier, including in the 1918 *Philosophy of Logical Atomism* lectures. His Aristotelian conception of metaphysics is not entirely divorced from his quantificational analysis of existence, though the relationship is somewhat complicated. It does not help that Russell's way of speaking on these issues is often unclear, and seemingly inconsistent. I attempt to sort things out below.

1   "LOGIC AND ONTOLOGY"

His position is presented most clearly in one of Russell's last philosophical writings, "Logic and Ontology" (1957). This piece was a response to G. F. Warnock's "Metaphysics and Logic", and represents Russell's reaction to later developments in analytic philosophy concerning the relationship between logic and metaphysics, including some of Quine's work. At the center of Russell's position is the claim that the connection between

language and the world requires a *meaning* or *naming* relationship between words or symbols and things in the world. However, only *some* words or symbols need have this relationship, depending on the kinds of words or symbols they are:

> The relation of logic to ontology, is, in fact, very complex. We can in some degree separate linguistic aspects of this problem from those that have a bearing on ontology. … Sentences are composed of words, and if they are to be able to assert facts, some, at least, of the words must have the kind of relation to something else which is called "meaning". If a waiter in a restaurant tells me, "We have some very nice fresh asparagus", I shall be justly incensed if he explains that his remark was purely linguistic and bore no reference to any actual asparagus. This degree of ontological commitment is involved in all ordinary speech. But the relation of words to objects other than words varies according to the kind of word concerned … A large part of the bearing of mathematical logic upon ontology consists in diminishing the number of objects required in order to make sense of statements which we feel to be intelligible. … (*LO*: 628)

In ordinary speech most words bear "ontological commitment": the asparagus must really be there. However, mathematical logic has a deflationary effect on ontological commitment. Later in the essay he writes:

> What mathematical logic does is not to establish ontological status where it might be doubted, but rather to diminish the number of words which have the straight-forward meaning of pointing to an object. (*LO*: 629)

He interprets his own work as having shown that terms "for" classes, numbers, and perhaps other "abstract" or "logical" symbols needn't have "reference"; such discourse apparently *can be* "purely linguistic". Surely he does not mean to *equate* numbers, classes, and so on, with linguistic expressions, so how is this to be understood?

In the essay, he reiterates his well-known view that existence claims are to be interpreted by means of the existential quantifier.

> I come now to the particular question of "existence". … I maintain that the only legitimate concept involved is that of ∃. This concept may be defined as follows: given an expression *fx* containing a variable, *x*, and becoming a proposition when a value is assigned to the variable, we say that the expression $(\exists x).fx$ is to mean that there is at least one value of *x* for which *fx* is true. I should prefer, myself, to regard this as a definition of "there is", but, if I did, I could not make myself understood. (*LO*: 627)

He writes here that this is the "only legitimate concept" of existence, so he is not returning to an existence/being or existence/subsistence distinction. However, he *immediately* goes on to deny that the truth of an existentially quantified statement always suffices to bring about ontological commitment or establish the reality of the apparent "things" quantified over:

> When we say "there is" or "there are", it does not follow from the truth of our statement that what we say there is or there are is part of the furniture of the world, to use a deliberately vague phrase. Mathematical logic admits the statement "there are numbers" and metalogic admits the statement "numbers are logical fictions or symbolic conveniences". Numbers are classes of classes, and classes are symbolic conveniences. An attempt to translate ∃ into ordinary language is bound to land one in trouble, because the notion to be conveyed is one which has been unknown to those who have framed ordinary speech. … we find that if we substitute for *n* what we have defined as "1", we have a true statement. This is the sort of thing that is meant by saying there is at least one number, but it is very difficult, in common language, to make clear that we are not making a platonic assertion of the reality of numbers. (*LO*: 627–628)

Russell defines a cardinal number as a certain kind of class, that is, a class of classes including all and only those classes cardinally similar to a given class. He might write "there are numbers" in *PM*'s notation as follows:

$$(\exists\beta)(\exists\alpha)(\beta = \mathrm{Nc}`\alpha)$$

This claim follows almost immediately, as Russell suggests above, from something such as:

$$1 = \mathrm{Nc}`0$$

To see that this formula does not "ontologically commit" us to numbers, recall that class-terms in Russell's logic are "incomplete symbols" defined using higher-order quantification. The quantifiers used in existential claims about classes are eliminable in virtue of higher-order quantifiers as well (for details, see *PM* *20). These claims only ontologically commit us to whatever such higher-order quantifications commit us to, and nothing further. Nonetheless, it is true to say "numbers exist" if we mean (∃N).

Russell seems to admit that when we read this in ordinary language as "numbers exist" it can mislead and suggest a platonic reality of numbers that ($\exists$N), when properly understood, doesn't require.

Russell insists that *some* symbols must have reference to external reality in order for language to express facts. Still, given his account of "incomplete symbols", he thinks it is possible for languages to include certain *apparently* unified symbols which are not meaningful in this way. They may have *parts* that make contact with reality without doing so themselves. They do not, as wholes, *name* anything. Nonetheless, as the no classes theory shows, he thinks one can introduce variables that take the place of such expressions, and use them to make true existence claims. He somewhat sloppily words this by saying that "numbers are symbolic conveniences", but it is apparent what he means. It is perfectly intelligible to speak of numbers, use symbols that *seem* like names of them, and even make existence claims about them, but once we understand how the symbols are being used, it becomes apparent that there is no need to posit entities that the symbols name or variables range over.

In the case of numbers and other classes, it might seem that Russell escapes commitment to them only by committing himself instead to special entities as the values of higher-order "propositional function" variables. But here too, Russell is poised to deny that any such entities really are "there" as part of the "furniture of the world". Some existential quantifications using these variables will come out as true, but again, this is not enough to guarantee genuine ontological status. In the same essay Russell presses the point, distancing himself from Quine:

> Quine finds a special difficulty when predicate or relation-words appear as apparent [bound] variables. Take, for example, the statement "Napoleon had all the qualities of a great general". This will have to be interpreted as follows: "whatever f may be, if 'x was a great general' implies fx, whatever x may be, then f(Napoleon)". This seems to imply giving a substantiality to f which we should like to avoid if we could. … We certainly cannot do without variables that represent predicates or relation-words, but my feeling is that a technical device should be possible which would preserve the difference in ontological status between what is meant by names, on the one hand, and predicate and relation-words, on the other. (*LO*: 629)

I shall try to clarify the position Russell is taking here in what follows. I hold that, despite some minor changes, this 1957 position was already in place during the core "logical atomist" period of the 1910s. I start by

discussing Russell's views on quantification—the heart of his account of existence—to make it clearer why existence claims do not always guarantee metaphysical status for what exists.

2   RUSSELL'S VIEWS ON QUANTIFICATION

In previous works, I have argued for interpreting Russell as endorsing a "substitutional" semantics for quantification, as opposed to an "objectual" semantics (Klement 2004, 2010, 2013). I have been surprised by the pushback on this (e.g., Soames 2008, 2014), because the textual evidence strikes me as conclusive. However, there are legitimate worries about what this commits Russell to in terms of the requirements of any adequate language, and whether or not it undermines any alleged advantages of the theory of descriptions. Let us first sort out the interpretive issue, and leave discussion of the alleged problems for the next section. It is perhaps a tad anachronistic to attribute to Russell a clear understanding of the difference between objectual and substitutional semantics. It would be decades before the difference was described in the literature. Nonetheless, I think there is enough evidence to make it clear that Russell's views were *extremely close* to what we would now call substitutional semantics, on which the truth of a formula of the form $\ulcorner(\exists v).\varphi v\urcorner$ is to be understood in terms of the truth of at least one substitution instance $\ulcorner\varphi c\urcorner$, and the truth of $\ulcorner(v).\varphi v\urcorner$ understood in terms of the truth of *all* such instances. What is even clearer, however, is that Russell had a *truth-based*, rather than a *satisfaction*-based, understanding of quantification.

On the modern "objectual" understanding of quantification, the truth of $\ulcorner(v).\varphi v\urcorner$ is specified not in terms of the *truth* of anything else, but rather in terms of a distinct notion of *satisfaction*. Whereas truth is a property, a sentence, proposition or other truth-bearer, either has or lacks, satisfaction is a *relation* between an object (or *n*-tuple or sequence of objects) and something else (either an open sentence, or the semantic value thereof). The objects entering into this relation are the objects being "quantified over", and hence, there must *be* such objects to make sense of the semantics. Russell himself used the word "satisfy" or "satisfaction" in an analogous way (*PoM*: §24; *IMP*: 164), but unlike later thinkers he defined satisfaction in terms of truth rather than vice versa. He always understood quantification as involving an open sentence, or what an open sentence represents—a "propositional function"—the role of which was to represent *all propositions* of a certain form. The quantified proposition

is understood as true if all these propositions are true, which explains in part his occasional tendency to prefer the wording "$f(x)$ *always*" over "$f(x)$ for every x", though he used both (*ML 5*: 593; *PM*₁: 127; *IMP*: 158). This basic description of a quantified statement as involving the truth of *all instances* of a class of propositions alike in form is consistently found throughout his writings (*PoM*: §42; *PM*₂: xx; *PLA*: 203; *IMP*: 158; *IMT*: 164; *LP*₂: 164). This truth-based account is incompatible with the kind of objectual semantics that makes the satisfaction relation prior to truth.

This is not yet enough to show that Russell held a substitutional theory of quantification in the modern sense. I have been speaking of quantified *propositions* and their relationship to a class of *propositions* all sharing a form, deliberately sidestepping the complications arising from Russell's changing views on the nature of "propositions". On his early view of propositions as language- and mind-independent complex objects, to say that the proposition $(x).\varphi x$ requires the truth of the propositions φa, φb, φc, and so on, is not to say that the truth of the linguistic formula "$(x).\varphi x$" is to be understood as involving the truth of the linguistic formulas "φa", "φb", and so on, which is what one would expect on a modern substitutional semantics. It probably would be a mistake to interpret very early Russell as understanding quantification substitutionally. However, sometime around 1907 Russell abandoned "Russellian propositions". Thereafter, he used "proposition" in a variety of ways, sometimes tying it to his ever-changing theories of judgment (*TK*: 114–115; *PLA*: 196; *OP*: 296), sometimes defining a proposition as an assertoric sentence (*TK*: 80 footnote 1; *PLA*: 166; *OP*: 281), unfortunately sometimes both in the same work.

Russell focuses nearly all his work on theories of judgment and belief on those whose content would be expressed by *elementary* or *atomic* sentences. We never get a clear account of how the infamous multiple-relations theory of judgment would be applied to general or existential judgments.[1] This lacuna in his theories of judgment is perhaps best explained by his assumption that it is only the words occurring in atomic or elementary judgments that "refer" or "mean" things in objective reality, and hence an account of the kind of truth involving the relationship between the mind and the world need only tackle atomic or elementary judgments.[2] More complex logical forms—quantified forms, molecular forms, and so on—presuppose atomic forms, and their truth and falsity is derivative upon that of the simpler forms. Russell is explicit about this dependence in *Principia*:

Whatever may be the instances of propositions not containing apparent [bound] variables, it is obvious that propositional functions whose values do not contain apparent variables are the source of propositions containing apparent variables, in the sense in which the function $\varphi\hat{x}$ is the source of the proposition $(x).\varphi x$. For the values for $\varphi\hat{x}$ do not contain the apparent variable x, which appears in $(x).\varphi x$ ... this process must come to an end ... (PM_1: 50)

... it follows that "φx" only has a well-defined meaning ... if the objects φa, φb, φc, etc., are well-defined. (PM_1: 39)

Quantified propositions depend for their significance on propositional functions not containing quantifiers, which depend in turn on the significance of their non-quantified values. This dependence is reiterated many times in Russell's later writings:

... propositions containing non-logical words are the substructure on which logical propositions are built ... (*V*: 151)

Let us begin with purely linguistic matters. There are certain words which are called "logical words"; such as "not", "or", "and", "if", "all", "some". These words are characterized by the fact that sentences in which they occur all presuppose the existence of simpler sentences in which they do not occur. (*PoU*: 267)

Notice that the dependency mentioned here is explicitly one between *sentences.*

This dependence is arguably a cornerstone of logical atomism itself. I find it difficult to understand what sort of dependence is involved her except a *semantic* one: the truth or falsity of non-atomic (or non-elementary) statements depends recursively on the truth or falsity of atomic/elementary statements. In *Principia* itself one even gets the impression that the dependence is, ultimately, *only* on them. *Principia* speaks of "complexes" or facts corresponding only to elementary judgments, and explicitly denies that quantified statements point to single complexes (*PM_1*: 46). Only elementary propositions connect to the world. Later on, Russell does introduce *general facts*, as in (*PLA*: Lecture V), but he provides little insight into their nature, as he admits himself (*PLA*: 207–208). They seem to be "meta-facts" about what atomic facts there are, not involving any new "things" or "entities" beyond those in the atomic facts. The official position in 1914s *Our Knowledge of the External World* is that knowledge of all atomic facts, along with the knowledge *that*

they are all the atomic facts, fixes the truth or falsity of all propositions (*OKEW*: 50). The same is suggested in the 1925 second edition of *Principia* (*PM*$_2$: xv). Perhaps this one meta-fact about atomic facts is the *only* general fact we need countenance. If so, then it seems that Russell's metaphysics should admit no more entities than those involved in making atomic statements true, and the general "totality" fact that the ones there are are all there are. Of course, Russell accepts many "existence" claims regarding things not involved in atomic or elementary judgments (classes, numbers, etc.). These employ higher-order quantifiers. Assuming the restrictions of ramified type-theory are obeyed, the truth-conditions of a statement involving quantifiers of order $n+1$ can be defined in terms of the truth or falsity of their values, which can only involve further quantifiers of order n; these are defined in terms of the truth or falsity of those of order $n-1$, and so on, until one gets to elementary, non-quantified propositions. It is pretty clear that if Russell *had* accepted an objectual understanding of higher-order quantification, he would be committed to many entities besides simple individuals and their properties and relations, entities entering into satisfaction relations unanalyzable into facts about simple individuals and their simple properties. But, in fact, Russell's picture of the world during his logical atomist period seems only to countenance simple individuals, their properties and relations, the atomic facts made therefrom, and meta-facts thereabout (e.g., *OKEW*: 47).

Since he accepts existentially quantified higher-order claims, in some sense, "propositional functions" (as he calls their values in informal discussion) "exist". Nonetheless, this does not mean that they are part of the "furniture of reality". They too may have a mere "linguistic existence", like classes and numbers. Russell is fairly clear about this in a number of places: he says a propositional function is "an incomplete symbol" (*T*: 498), "not a definite object" (*PM*$_1$: 48), "nothing but an expression" (*MPD*: 53), "a mere schema, a mere shell" (*IMP*: 157), "nothing" (*PLA*: 202). There is some sloppiness about use and mention here, but the point is that although we can speak about open sentences as making existentially quantified higher-order formulas true, they are not meaningful by *naming* entities. An open formula which is a substituend of a higher-order variable may contain names as parts, and these names hook onto the world, even if the open sentence as a whole does not. If the open sentence does not contain such names, it may also contain further quantifiers, with variables whose substituends will contain names (or their instances will, and so on). Eventually such higher-order quantified statements will make reference to the world, but not simply by using a *name*.

In *Inquiry into Meaning and Truth*, Russell makes his substitutional understanding of such quantifiers explicit when he writes, "In the language of the second order, variables denote symbols, not what is symbolized" (*IMT*: 202). This way of putting it is somewhat misleading; as I have argued elsewhere, substitutional quantification is not the same as objectual quantification over expressions (Klement 2010: 648–653), but Russell was writing for an audience that likely would not pick at this nit. In the same context (*IMT*: Chap. 13), he sometimes rewords a quantified sentence back into English as "all sentences of the form … are true" or claims that they may be interchanged with the infinite conjunctions (if universally quantified) or infinite disjunctions (if existentially quantified) of their values. Throughout, Russell speaks of *sentences*, not propositions. This is clearly an endorsement of the view that the truth-conditions, at least, for a formula of the form $\ulcorner (v)\varphi v \urcorner$ consists in the truth of all the instances $\ulcorner \varphi c \urcorner$ where c is any closed symbol of the appropriate logical type. Russell here limits his remark to "the language of the second-order", though presumably the same would hold for higher orders. This suggests that something is different about higher-order variables as opposed to first-order variables. Another indication that he sees a difference comes where he speaks of different meanings of "there is" or "there are" as early as *The Philosophy of Logical Atomism*. He claims that of the different meanings of "there are", "[t]he first only is fundamental" (*PLA*: 233), by which he means the first-order quantifier $(\exists x) \ldots x \ldots$. Moving only one type up, to classes of individuals, Russell says "you have travelled already just as much away from what there is" as if you have gone up any number of types (*PLA*: 233), since "[t]he particulars are there, but not classes". Clearly, Russell thinks that first-order quantification is ontologically committing in a way that higher-order quantification is not. It is perhaps this difference that has led Gregory Landini to argue that Russell accepts a "nominalistic" or substitutional semantics for variables of most higher-types, but not for individual variables.[3]

However, I believe the evidence suggests that Russell accepts a substitutional account for all types. When discussing the hierarchy of different senses of truth in *Principia*, he writes:

Let us call the sort of truth which is applicable to φa "*first* truth." (This is not to assume that this would be first truth in another context: it is merely to indicate that it is the first sort of truth in our context.) Consider now the proposition $(x).\varphi x$. If this has truth of the sort appropriate to it, it will mean

that every value of φx has "first truth." Thus if we call the sort of truth that is appropriate to $(x).\varphi x$ "*second* truth," we may define "$\{(x).\varphi x\}$ has second truth" as meaning "every value for φx has first truth," … (PM_1: 42)

Russell means this example to illustrate how to think about the truth or falsity of quantified formulas of *any* given order in terms of the truth or falsity of formulas in the order just below it. Hence, his remark is not *specifically* targeted at first-order quantification. However, the use of the variable "x" and constant "a" strongly suggests that first-order quantified formulas are included in his remarks. If the remark meant to apply *only* at higher levels, he likely would have used "f" or "φ", rather than the conventionally first-order "x" and "a". Russell has already abandoned Russellian propositions by this point, so this passage suggests that we should understand the truth of the sentence "$(x)\varphi x$", where x is an individual variable, as meaning that every sentence "φn", for every "logically proper name" n, has (elementary) truth.

The position is even clearer in later works, such as *An Inquiry into Meaning and Truth*, where he writes:

The next operation is *generalization*. Given any sentence containing … a name "a", we may say that all sentences which result from the substitution of another name in place of "a" are true, or we may say that at least one such sentence is true. … For example, from "Socrates is a man" we derive, by this operation, the two sentences "everything is a man" and "something is a man", or, as it may be phrased, "'x is a man' is always true" and "'x is a man' is sometimes true". The variable "x" here is to be allowed to take all values for which the sentence "x is a man" is significant, i.e., in this case, all values that are proper names. (*IMT*: 196)

"Everything is a man" *means* that every *sentence* differing from "Socrates is a man" by the substitution of a proper *name* for the *name* "Socrates" is true. Russell's wording is clearly substitutional at the linguistic level, and he clearly has in mind a first-order variable.

This is not to say that there is no important difference between the first-order quantifier and others. The first-order quantifier carries existential import with it, because unlike other quantifiers, the substituends for its variable are proper names, and proper names *must* refer to something outside language in order to have meaning. It is in the name/name-bearer relationship that Russell thinks "the rubber meets the road", or language confronts reality.

A Quinean might argue that Russell's own theory of descriptions makes genuine proper names unnecessary: one can use a description such as "the *x* such that *x* Socratizes" instead of "Socrates".[4] For this to work, Socrates himself must be a value of a variable. Accepting an objectual semantics, the Quinean thinks that *quantification* can make a connection between language and the world. Russell himself, employing a substitutional semantics, explicitly denies that his theory of descriptions makes proper names unnecessary. Famously, Russell analyzes "an *F* exists" as stating that "*Fx*" is true for at least one *x*, and "the *F* exists" as stating that there is at least one and at most one such *x*. Given his understanding of first-order quantification, this means that there must be a *name* that can be substituted for this "*x*". He says so explicitly:

> An object ambiguously described will "exist" when at least one such proposition is true, i.e. when there is at least one true proposition of the form "*x* is a so-and-so," where "*x*" is a name. … With definite descriptions, on the other hand, the corresponding form of proposition, namely, "*x* is the so-and-so" (where "*x*" is a name), can only be true for one value of *x* at most. (*IMP*: 172)

Russell himself argues that his theory of descriptions cannot make the study of names superfluous, because the truth of quantified statements, *including* those using descriptions, presuppose instances of the quantified formulas with names in place of the variables:

> In connection with certain problems it may be important to know whether our terms can be analysed, but in connection with names this is not important. The only way in which any analogous question enters into the discussion of names is in connection with descriptions, which often masquerade as names. But whenever we have a sentence of the form,
>
> > "*The x* satisfying *φx* satisfies *ψx*"
>
> we presuppose the existence of sentences of the forms "*φa*" and "*ψa*", where "*a*" is a name. Thus the question whether a given phrase is a name or a description may be ignored in a fundamental discussion of the place of names in syntax. (*IMT*: 96)

Russell thinks even first-order quantification cannot be made sense of without presupposing names as the values of the first-order variables, which of course would only be true if he understood them substitutionally as well. It also underscores how fundamental he thinks names are to how language connects to the world. To re-invoke "Logic and Ontology", names are those symbols that *do* point to something outside words, that

make it so our asparagus must really be there. Russell finds it possible to imagine languages in which names do not stand for particulars, but only for universals (*HK*: 84; *IMT*: 95), but professes himself "totally incapable" of imagining a language without names (*IMT*: 94).[5]

In conclusion, (1) Russell's substitutional semantics for variables also applies to first-order variables, and (2) despite this, there is something special about these variables compared to others, in that the substituends for them must be the kinds of symbols that are meaningful by pointing to extra-linguistic entities. This is why Russell at times speaks of them as more "fundamental" than others, and doesn't speak of their values as if they were "nothing but an expression" or as having a mere "linguistic existence", as he does with higher-order variables.

3   OBJECTIONS TO A SUBSTITUTIONAL SEMANTICS FOR RUSSELL

I think it is fair to say that a substitutional semantics for quantification is relatively unpopular, and indeed, prior to Kripke (1976), many thought it too problematic to be taken seriously. In Russell's case, it is natural to worry about whether the approach is compatible with other views he held. I here focus on two worries, one dealing with the application of Russell's theory of descriptions in his epistemology, another dealing with the requirement that there be infinitely many simple proper names and the coherence of a language with so many names. Both these issues are pressed by Scott Soames in his recent book.[6]

These worries involve a presupposition to the effect that it would be impossible for someone to understand a quantified statement, interpreted substitutionally, unless that someone understood *all* the expressions that were substituends for the variable. This is not a presupposition Russell shared. Soames writes:

> A remark in Russell [*IMP*] shows that he did not think of the quantification employed in his logical system as substitutional. On pp. 200–201 he says, "It is one of the marks of a proposition of logic [which contains no nonlogical vocabulary] that, given a suitable language, such a proposition [sentence] can be asserted by a person who knows the syntax without knowing a single word of the [nonlogical] vocabulary." Although the remark is true on an objectual understanding of quantification, it is incompatible with treating quantifiers in a "proposition of logic" substitutionally. (Soames 2014: 528–529 footnote)

If it were true that one could not understand a quantified statement without understanding all the vocabulary involved in its instances, this would surely pose a problem for Russell. Russell employed his theory of descriptions in his epistemology to make a distinction between "knowledge by acquaintance" and "knowledge by description" (*KAKD*: 147–161). If "the *F* is *G*", means, as the theory of descriptions says it does, "$(\exists x)((y)(Fy \equiv y = x) \, . \, Gx)$", and the quantifier here is understood substitutionally, then if it is true, one of the proper names of the language, "*c*" say, must be a name of the thing that is uniquely *F*. Russell is clear that a proper name can only be understood by direct acquaintance with its meaning. If understanding "the *F* is *G*" meant that I needed to understand the name "*c*", knowledge of something by description would be impossible without also having knowledge by acquaintance of the same thing. This, clearly, would be disastrous for Russell's epistemology.

To solve this, one must either drop the assumption that the quantifiers in the analyzed descriptive statement are substitutional, or reject the supposition that understanding such quantifiers even when substitutionally interpreted requires understanding all the names that are their substituends. Soames cites the following remark from Hodes in favor of the latter supposition:

> If a quantifier prefix in the sentence … is to be interpreted substitutionally, and a relevant substituend contained an un-understood word, the speaker would not understand a relevant substituend and so would not understand that quantifier prefix and so would not understand that sentence! (Hodes 2015: 397)

I must confess, however, that this assumption seems to me to be wholly without merit. Understanding the truth-conditions of ⌜$(x).\varphi x$⌝—substitutionally understood—means that I must know that it is true just in case ⌜φn⌝ is true for all proper names, *n*. This does not require that I have examined or understand each such instance ⌜φn⌝, or name *n*. It requires at most that I understand the *difference* between a symbol that is a proper name and a symbol that is not, a difference in logical form. As Russell makes clear in the passage from *Introduction to Mathematical Philosophy* Soames mistakenly quotes in favor of his view, there's no reason to think I need to understand any specific proper names in order to understand the *form*, that is, the *syntax*, of a proper name. (Compare: if someone tells me that every sentence in so-and-so's article on quantum gravity is true, I can

understand well enough what is required for *that* to be true, even if I don't understand half the words, and hence, half the sentences, in the article. If it's in another language, I might understand none. At most I need to understand the difference between what are sentences in the article, and what aren't.)

In the following passage Russell comes close to addressing the issue head on:

> There remains one question concerning generalization, and that is the relation of the range of the variable to our knowledge. Suppose we consider some proposition "$f(x)$ is true for every x", e.g., "for all possible values of x, if x is human, x is mortal". We say that if "a" is a name, "$f(x)$ is true for every x" implies "$f(a)$". We cannot actually make the inference to "$f(a)$" unless "a" is a name in our actual vocabulary. But we do not *intend* this limitation. We want to say that everything has the property "f", not only the things that we have named. There is thus a hypothetical element in any general proposition; "$f(x)$ is true of every x" does not merely assert the conjunction
>
> $$f(a).f(b).f(c)...$$
>
> where $a,b,c...$ are the names (necessarily finite in number) that constitute our actual vocabulary. We mean to include whatever will be named, and even whatever *could* be named. This shows that an extensional account of general propositions is impossible except for a Being that has a name for everything; and even He would need the general proposition: "everything is mentioned in the following list: $a,b,c...$", which is not a purely extensional proposition. (*IMT*: 203)

This comes only a few pages after the passage quoted earlier in which Russell gives an explicitly substitutional account of "generalization". Here, however, he is clear that the substitution instances that are involved in the general truth go beyond those names that are in my present *personal* vocabulary. Instead, the generalization includes all names used by others, names only used in the future, and even merely possible names. We need not have an "extensional" list of such names; it is enough if we understand "intensionally" the difference between a name and something else.

This passage brings up the other alleged problem with Russell's adoption of a substitutional semantics. In order for every individual to be captured in the range of the quantifiers, every individual would have to have a name. If there are infinitely many individuals (as would be required by

the so-called axiom of infinity, which Russell at least does not reject), there would need to be infinitely many names (cf. Soames 2014: 528). No one person's vocabulary is infinitely large, as we have seen Russell admits in the previous quotation. It does not immediately follow from this that a language must contain only finitely many names, as even a fluent person need not understand every word in the language. Of course, if there are finitely many speakers, as there are for any actual languages, each of whom uses a finite vocabulary, the sum total of those vocabularies would still be finite. Russell intends that the names involved in the truth-conditions of quantified statements go beyond even the sum total of everyone's actual vocabulary. He writes:

> This principle of assigning names may be used to define various possible philosophies. Let our list of names consist of all those that I can assign throughout the course of my life. If, then, from the fact that "$P(a)$", "$P(b)$", … "$P(z)$" are all true, I do not allow myself to infer that "$P(x)$" is true for all values of x, that is a denial of solipsism. If my list of names consists of all those that sentient beings can assign, the denial of the inference is an assertion that there are, or may be, things that are not experienced at all. (*RC*: 29)

Russell is neither a solipsist, nor someone who thinks existence is limited to what is experienced. If we are to interpret his views of quantification substitutionally, whether or not there are infinitely many, we must acknowledge that in some sense there are, or can be, names no one does or ever will understand. This is puzzling.

The puzzle is lessened somewhat by the consideration that Russell usually had in mind a "logically ideal language". He was of course aware that this language had not been fully developed, and hence that no one *actually* used such a language. However, he actively and knowingly assumed about such a language that it would have a name for every simple thing. This comes across both in his later reminiscences about his early work, as well as in that work itself. In *My Philosophical Development*, he wrote:

> I thought, originally, that, if we were omniscient, we should have a proper name for each simple, and no proper names for complexes, since these could be defined by mentioning their simple constituents and their structure. (*MPD*: 166)

In *PLA*, he is explicit that each of us would understand only a small subset of the logically perfect language's total vocabulary, but that nonetheless, every simple object would have a name therein. He also bemoans

the fact that actual languages don't have names for true simples, true particulars, a complaint he also makes elsewhere (*AMi*: 193). He writes:

> In a logically perfect language, there will be one word and no more for every simple object, and everything that is not simple will be expressed by a combination of words, or a combination derived, of course, from the words for the simple things that enter in, one word for each simple component ....The language which is set forth in *Principia Mathematica* is intended to be a language of that sort. It is a language which has only syntax and no vocabulary whatsoever. ... It aims at being the sort of language that, if you add a vocabulary, would be a logically perfect language. Actual languages are not perfect in this sense, and they cannot possibly be, if they are to serve the purposes of daily life. A logically perfect language, if it could be constructed, would not only be intolerably prolix, but, as regards its vocabulary, would be very largely private to one speaker. ... I shall, however, assume that we have constructed a logically perfect language, and that we are going on state occasions to use it ... (*PLA*: 176)

Although Russell endorses a substitutional semantics even for first-order variables, he does so in the context of a theoretical language that in fact has a name for every simple object. He realizes that such a language not only isn't in use (even on "state occasions"), but could not practically be in use. One might worry whether or not Russell's intended semantics is intelligible if it requires making reference to a language of this sort. Must languages actually be in use to exist? Some might allege that languages are abstract objects as argued in (Katz 1980), or nothing more than pairings of possible expressions with semantic values à la (Lewis 1975), but such views do not seem very Russellian.

Clearly, however, Russell's acceptance of a substitutional theory of quantification involves not simply supposing that $\ulcorner(x).\varphi x\urcorner$ is true when $\ulcorner\varphi n\urcorner$ is true for every name *n* which *is or was* actually in use, or even every name *n* that ever will be in use: it must mean that it is true for every name *n* that *could* be in use, or *would* be in use *if* we had a logically perfect language. The modal terminology here could allow Russell to deflect certain worries some might have about his substitutional semantics. But it might create other worries. The only account of modality Russell himself provides is itself spelled out in terms of quantification, and so it could only circularly be applied here (*PLA*: 203). One common, and very compelling, interpretation of his logical atomism would exclude his countenancing any modal notions except *logical* possibility and necessity,

(Landini 2011: Chap. 4), and it is also unclear that these could be spelled out non-quantificationally. Can the modal or theoretical notions be dropped from the statement of the semantics? He claims more than once that "omniscience" might help, but as Russell is no theist, this does not quite help enough. Perhaps it is enough to suggest that understanding quantified statements with his intended semantics depends only on an understanding that it requires the truth of all statements that *would take a given form* if properly expressed or analyzed, which does not require being able to list, or even understand, all such sentences. This puts knowledge of logical form at the center of his account, which seems appropriate.

There are puzzles in this view remaining, and legitimate questions one may raise. But I think that some kind of substitutional view is clearly what Russell had in mind, even if he did not make it fully clear. Moreover, unless we attribute to Russell something like a substitutional account, not only do certain aspects of his logical atomism not make sense (e.g., the dependence of other propositions on the atomic ones), but Russell's entire metaphysical outlook, explicitly outlined in works like "Logic and Ontology", where he separates existence questions from those of genuine metaphysical status or ontological commitment, would fall apart.

4   Russell's Metaphysics: Why There Is What There Isn't

The title of the final lecture of *The Philosophy of Logical Atomism* is "Excursus into Metaphysics". Clearly, he thinks the subject was not exhausted by his discussion of existence in lectures V and VI. What's puzzling is that the subtitle is "What There Is", and assuming "there is" is a kind of quantifier, this suggests that quantification can be of some use in understanding Russell's metaphysics. Hopefully, we have seen enough of Russell's views to explain away this puzzle. Quantification is understood substitutionally. Some quantifiers use variables whose substituends are symbols that are not meaningful by *naming* or *representing* extra-linguistic entities. First-order quantifiers, ranging over particulars, use variables whose substituends *are names* of things. These variables carry metaphysical commitment; the other quantifiers don't.

Russell is an ideal language philosopher, and thinks that our ordinary language expressions of existential statements, for example, "there are numbers", as we have seen, are "bound to land one in trouble". Ordinary language is ill-suited to represent properly the difference in form between

expressions of differing types. The infinitely many meanings of "there is" or "there are" (*PLA*: 232) are all pronounced or appear the same in ordinary language. Upon hearing "there are" in ordinary language, we are apt to interpret it as standing for the *ultimate* meaning of "there are"—the first-order meaning. When Russell is presenting his philosophical views in ordinary language, he is apt to claim that "there are" no such things as numbers, or classes, or to claim that propositional functions are "nothing". In those contexts, he means that there are no such things in the ranges of the ontologically committing quantifiers. At other times, however, he expects his reader to understand that his ordinary language quantification talk is to be adjusted in interpretation to something that would be more perspicuously represented with a different-type quantifier. The "no" in the title of Russell's "no classes" theory is a kind of quantifier, but that theory does not say there are no classes in the sense in which it best makes sense to quantify over classes: it is only that *no individuals*, no genuine things in the extra-linguistic world, are classes. Russell only *apparently* contradicts himself when, in one paragraph of *The Philosophy of Logical Atomism*, he says that "there are classes" and "there are particulars" can both be interpreted as true so long as one understands that these are two different meanings of "there are" (*PLA*: 230), but then in the next paragraph goes on to say his theory allows one to do without "supposing for a moment that there are such things as classes" (*PLA*: 231–232). Ordinary language renditions of his views cannot do them justice.

One might worry that Russell's ordinary language presentation of his metaphysical views is in "too much" trouble. By his own lights, the "there are" which is used in first-order quantification cannot even be meaningfully applied to classes, so the "no" of the title of the "no classes theory" is meaningless. Most likely, Russell would claim that what is meant is that there are no individuals which have the kinds of *formal properties* (cf. (*PLA*: 236)) which would make them appropriate to play the role classes play in logic. Russell is committed to a class for every propositional function:

$$(\varphi)(\exists\alpha)(x)(x\varepsilon\alpha \equiv \varphi!x)$$

Part of what he means when he says, in ordinary language, that "there are no classes" is presumably that there are no individuals suitably like classes for which there is a relation structurally *analogous* to ε which all and only satisfiers of certain functions bear to them, that is:

$$\sim\left(\exists R\right)\left(\varphi\right)\left(\exists y\right)\left(x\right)\left(xRy \equiv \varphi!x\right)$$

There are no individuals that can play the role classes play.

There are many places where Russell speaks as if "there are" no such things as physical bodies (tables, chairs, Piccadilly street)—and after his conversion to neutral monism, no such things as minds either (*PLA*: 170; *PaM*: 273–274). All of these he calls "logical fictions", and thinks that all there "really" are are simple particulars arranged in certain ways, and bearing certain relations to each other, such that we group them together in the same class. But these classes still *exist* in the sense in which classes exist; Russell would not *deny* that there are over a million people living in Britain, or that there are exactly three chairs in this room. He means that the symbols for these so-called things are not names; the truth or falsity of claims about them is reducible to the facts regarding ultimate, simple things. We need not presuppose there are things having their sort of formal properties at the *fundamental* level. For Russell, this is the true meaning of Ockham's razor, the sense in which, as he put it in "Logic and Ontology", his mathematical philosophy diminishes the number of objects in our ontology. It is not that a well-shaved philosophy will accept fewer existence claims, where those claims are interpreted in a derivative way. Rather, a well-shaved philosophy will posit fewer things at the "ultimate" or "fundamental" level: the level of those things involved in making true the real facts that, in a much more indirect fashion, ultimately make discourse about non-fundamental things possible.

In the metaphysics of *The Philosophy of Logical Atomism*, Russell considers the "simple" things that make up reality to be such things as sense-data, and their properties and relations. These are what are involved in atomic facts, which make atomic propositions true or false. These, he says, "have a kind of reality not belonging to anything else" (*PLA*: 234). Constructs out of them do not have the same kind of reality: there is some derivative sense in which they exist, but all this means is that we can use certain complicated symbols, and also regard these symbols as substituends of variables. The reality of constructs is thus reduced to "linguistic convenience". We thereby reduce our "metaphysical baggage", the apparatus our view of the world has to "deal with". He makes it clear that real metaphysical commitment involves regarding certain symbols as *names* of things:

> If you think that 1, 2, 3 and 4, and the rest of the numbers, are in any sense entities, if you think that there are objects, having those names, in the realm of being, you have at once a very considerable apparatus for your metaphysics to deal with … (*PLA*: 234)

Russell himself is happy to make claims about numbers, quantify over them and assert, for example, that for every number, *there exists* a higher one. He denies that doing so commits him (directly at least) to any kind of metaphysical outlook on what there is "ultimately". In a 1958 review of a work on mathematical infinity by E. R. Emmet, Russell writes:

> He [Emmet] comes to an astonishing conclusion (page 679): "An indefinite [infinite] number is not a positive 'thing' that is there, but a negative absence of definiteness." Does Mr. Emmet consider that the natural numbers are positive "things" that are "there"? If so, he is astonishingly Platonic; but if not, I am at a loss to see in what way the number of inductive numbers differs from any other number in respect of being "there". (*MI*: 364)

Russell's views had not changed much between 1918 and 1958. Russell is happy to admit that infinite numbers are not "positive things" that are "really there", but does not think this is any reason to ignore or downplay their mathematical properties, or treat them as any different from finite numbers.

For Russell, then, metaphysics addresses the question as to what the "ultimate constituents" of the world are, what is "fundamentally real". What sort of logical "fictions" or derived "objects" can be constructed from them is mainly of negative interest: if we can show that things we might take to be fundamentally real are logical constructions instead, we remove the need to take them as part of our metaphysics. Russell's "supreme maxim in scientific philosophizing", to "substitute constructions out of known entities for inferences to unknown entities" (*RSDP*: 11; *LA*: 164) is the directive to reduce one's conception of what there really is to as few things as possible, things easily known or experienced, and treat things with "smooth logical properties" (*PoM*: xi) as logical constructions. One is then left with the task of identifying the "smallest apparatus" (*PLA*: 235) or "minimum vocabulary" (*HK*: 242ff.) with which one can fully describe what is "really out there", or give a complete catalog of the world. Given Russell's general understanding of the logical forms of language, extra-logical vocabulary only occurs within atomic statements: so Russell's metaphysics is mainly the attempt to identify what

vocabulary is needed to account for the simplest of truths—atomic propositions—upon which the truth of all others ultimately rests. Russell's exact understanding of atomic propositions changes, but he consistently holds that in an analyzed language, the symbols making them up are those that represent some part of extra-linguistic reality.

Early on, when he held that "individual" or "term" was the "widest word in the philosophical vocabulary" (*PoM*: §47), he held that all words expressing an atomic proposition stand for individuals and these are all included in the range of the first-order quantifier (*AIT*: 261; *PoL*: 290). On this view, all metaphysically real things would be individuals. Hence, during this period, Russell writes that individuals are "[s]uch objects as constitute the real world as opposed to the world of logic" (*STCR*: 529), "being[s] in the actual world" (*AIT*: 44), entities which "exist on their own account" (PM_1: 162) and "do not disappear on analysis" (PM_1: 51).[7]

Later, under Wittgenstein's influence, he came to think that particulars and universals had different logical types (*PLA*: 182; for discussion, see (Klement 2004)), and hence that there would be no one logical type, and thus no one style of variable, encompassing both. It is for this reason, presumably, that in the 2nd edition to *Principia* (PM_2: xxxii), he discusses adding a new style of variable for the universals in atomic propositions (though ends up deciding it is not necessary)—a clear indication that he does not consider the "propositional function" variables of *Principia* already as objectual variables over universals. Presumably if he had added such a variable, it too would be ontologically committing. Still later, he came to doubt particulars altogether and to think that *all* the "names" in atomic propositions might be taken to stand for universals. Then the only ontologically committing variables would be those whose substituends would be names of universals rather than "proper names" in the usual sense (*HK*: 84; *IMT*: 95). Naturally, as his overall metaphysics changed, so did his account of the kinds of symbols entering into atomic propositions, as well as the kinds of variables that might replace those symbols.

One might object that this is "too linguistic" a conception of metaphysics. What is metaphysically real is one thing; what is involved in our unanalyzed sentences is another. The way we set up our languages is to some extent a matter of convention: what counts as primitive vocabulary in one language might not in another. Is metaphysics itself language-relative? Again, one must bear in mind that Russell has in mind primarily a *logically ideal* language where the logical forms of its expressions closely mirror the logical forms of the reality they depict. Even after Russell backed away

from the view that a logically "perfect" language was anything like a real-istic aim to search for, he seems to have been confident that the minimum vocabularies of *adequate* languages for scientific research would not differ much concerning what counts as fundamentally real. He writes:

> The theory of incomplete symbols shows that it is possible to construct a minimum vocabulary for logic which does not contain the word "class" or the word "the". I incline to think—though as to this I have some hesita-tion—that the contradictions prove, further, the impossibility of construct-ing a minimum vocabulary containing the word "class" or the word "the", unless highly complicated and artificial rules of syntax are imposed upon our language. For similar reasons, no acceptable minimum vocabulary will con-tain words for numbers, i.e. every acceptable minimum vocabulary will be such that numbers are defined by means of it. (*RC*: 23)

This commits Russell to a fairly narrow conception of "acceptability" that he doesn't spell out, at least not here, and it shows that he does not think such issues are completely "conventional" or "relative to language choice" in a broadly Carnapian vein.

So we can see the many ways in which, in spite of his proto-Quinean views on the relationship between existence and quantification, Russell's metaphysics can be understood as broadly Aristotelian, in Schaffer's sense. He is interested in what is *fundamental*. But his metaphysics also has cer-tain features that differentiate it from contemporary forms of neo-Aristotelian metaphysics. First, as we have seen, existence questions are not entirely divorced from questions about what is metaphysically real or "ulti-mate": some, but not all, quantifiers, are ontologically committing, and sometimes metaphysical theses are best expressed using those quantifiers. Related to this is the even more important point that Russell is very defla-tionist about the non-fundamental: he is willing to say that in at least *some* sense, non-fundamental things are "nothing", not "there", mere "fic-tions" and so on. Fine's, Schaffer's, and other contemporary "Aristotelian" approaches to metaphysics focus largely on the *relation* of grounding: but the mere fact that grounding is a relation presupposes that there are, really are, relata of this relation. Some understand grounding as a relationship between objects, some as a relationship between facts, but generally, they accept that both the grounders and the groundees are fully "there" to enter into this relation. Russell would of course prefer to speak of "analy-sis" rather than "grounding", and the things that are "analyzed" are, in a

sense, analyzed "away". Their existence is *merely* linguistic, and so are the relations into which they enter: all truths about them ultimately resolve into truths about the ultimate things. Only the ultimate things can enter into genuine relations. The rest is just, as Russell often says, a *façon de parler*, or way of speaking.

Notes

1. Of course, such accounts exist in the secondary literature. At (*PM*₁: 45), there is an obscure passage suggesting that a general judgment "collects together" a number of elementary judgments, but he clearly does not mean that someone who makes a general judgment makes *each* of the specific elementary judgments collected together individually. Soames (2014: 526) cites this passage as something that doesn't "sit well" with the interpretation of Russell as having a substitutional theory of quantification, but also doesn't explain how it sits any better with any other interpretation.
2. Among elementary judgments, Russell did not make a distinction between atomic and molecular in *PM* itself, but did soon thereafter. For a proposed explanation for this, see Klement (2015: 213–214).
3. See Landini (1998: Chap. 10); Landini (2011: Chap. 3). There are no formulas of *PM* expressible only using individual variables. To get the hierarchy of senses of "truth" up and running, Landini must also allow predicative second-order variables to be interpreted objectually, which seems to undermine Landini's own conclusion that Russell's understanding of higher-types is purely "nominalistic".
4. Quine's own attitude about this strategy is more complicated than common lore would suggest; see Fara (2011).
5. This remark sits a bit uneasily with his claim that the logical language of *PM* represents the core of a logically ideal language, but only including its syntax, not its vocabulary. *PM* does not use any specific names in it: can he not imagine it? This tension is relieved by the fact that Russell seems to think that although *PM* does not use any particular names, the intended semantics of its formula presuppose that names *should be added* to round it out, and that without them we do not have a full "logically ideal language"; see (*PLA*: 176; *IMP*: 201).
6. Soames presses other worries in his earlier (Soames 2008), which I have responded to in Klement (2010). It is sometimes not altogether clear whether Soames objects to *interpreting* Russell as having a substitutional view of quantification, or objects to Russell's *having* such a view, but these are separate issues.
7. *Principia*'s theory of types, even in the first edition, is often wrongly read as implying that universals would not be values of *Principia*'s individual variables; I correct this misunderstanding in Klement (2004).

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