Russell's Relations, Wittgenstein's Objects, and the Theory of Types

Giorgio Lando

RESUMEN

Discutimos aquí una semejanza –sobre la que no se ha hecho hincapié hasta ahora– entre la teoría de relaciones y predicados de *The Philosophy of Logical Atomism* [TPLA] de Russell y la teoría de los objetos y los nombres en el *Tractatus Logico-Philosophicus* [TLP] de Wittgenstein. Se detectan puntos de semejanza en tres niveles: en el de la ontología, en el de la sintaxis y en el de la semántica. Esta analogía explica las similitudes *prima facie* entre la presentación informal de la teoría de los tipos en TPLA y las secciones del TLP dedicadas al mismo tema. Eventualmente, extraemos algunas consecuencias que conciernen a ambos lados de la analogía: por lo que a Russell concierne, la pertienencia contextual de este sorprendente fragmento de la metafísica y la semántica tractariana es cuestionada en base a distintos fundamentos. Por lo que respecta a Wittgenstein, los intérpretes que no identifican los objetos tractarianos con particulares están en una posición mejor para dotar de sentido la analogía aquí descubierta.

PALABRAS CLAVE: *relaciones, teoría de tipos, Russell, Wittgenstein,* Tractatus*, atomismo lógico, principio del contexto*.

ABSTRACT

We discuss a previously unnoticed resemblance between the theory of relations and predicates in *The Philosophy of Logical Atomism* [TPLA] by Russell and the theory of objects and names in the *Tractatus Logico-Philosophicus* [TLP] by Wittgenstein. Points of likeness are detected on three levels: ontology, syntax, and semantics. This analogy explains the *prima facie* similarities between the informal presentation of the theory of types in TPLA and the sections of the TLP devoted to this same topic. Eventually, we draw some consequences concerning both sides of the analogy: for what concerns Russell, the contextual pertinence of this surprising fragment of Tractarian metaphysics and semantics is questioned on several grounds; about Wittgenstein, the interpreters who do not identify Tractarian objects with particulars are in a better position to make sense of the analogy here discovered.

KEYWORDS: *Relations, Type Theory, Russell, Wittgenstein,* Tractatus*, Logical Atomism, Context Principle*.

It is well-known that the lectures delivered by Russell in 1918 and later published as *The Philosophy of Logical Atomism* are influenced by Wittgenstein's ideas. In the brief foreword to the first three lectures, Russell declares his debt with the following words:

> The following [is the text] of a course of eight lectures delivered in [Gordon Square] London, in the first months of 1918, which are very largely concerned with explaining certain ideas which I learnt from my friend and former pupil Ludwig Wittgenstein. I have had no opportunity of knowing his views since August, 1914, and I do not even know whether he is alive or dead. He has therefore no responsibility for what is said in these lectures beyond that of having originally supplied many of the theories contained [Russell (1918), p. 177].

It is less known and quite surprising that these words were almost literally taken from the third lecture, where the declared debt is quite specific: it concerns the theory of relations and its link with the theory of types. Why is this surprising? We know that Russell and Wittgenstein debated at length about relations, in particular in the context of the so-called multiple relation theory of judgement, which Russell had set forth in his unpublished *Theory of Knowledge* [Russell (1984)]. In fact, the only other explicit acknowledgement to Wittgenstein in TPLA concerns the theory of judgement.[1]

However, the context of the quoted emphatic acknowledgement to Wittgenstein in the third lecture is not connected with the multiple relation theory of judgement: right after the acknowledgement, Russell discusses the semantics of predicates and its ontological commitments, and declares that a correct understanding of this issue is needed in order to grasp the philosophical significance of the theory of types. In particular, one feature is deemed to be common to relations (including properties, since properties can be seen as monadic relations) and their linguistic counterparts (predicates) and fundamental for the theory of types: as relations have in their essence the class of objects of which they can hold, so are predicates essentially connected with the class of names which can saturate them. Moreover, the mirroring of these combinatorial properties between relation and predicate is a necessary condition for the semantic connection between them.

The most explicit passage concerns more precisely the difference between understanding a predicate and understanding a name:

> Understanding a predicate is quite a different thing from understanding a name. By a predicate, as you know, I mean the word that is used to designate a quality such as red, white, square, round, and the understanding of a word like that involves a different kind of act of mind from that which is involved in understanding a name. To understand a name you must be acquainted with the particular of which it is a name, and you must know that it is the name of that particular. You do not, that is to say, have any suggestion of the form of a

proposition, whereas in understanding a predicate you do. To understand "red", for instance, is to understand what is meant by saying that a thing is red. You have to bring in the form of a proposition. You do not have to know, concerning any particular "this", that "this is red" but you have to know what is the meaning of saying that anything is red. You have to understand what one would call "being red." The importance of that is in connection with the theory of types [Russell (1918), p. 182].

It is not *prima facie* clear what is Wittgensteinian here, insofar as we look at the Tractarian or pre-Tractarian conception of relations. The details of this conception have been the subject of some exegetical controversy,[2] but nothing suggests that Tractarian relations and their linguistic counterparts (if any[3]) have features similar to those which TPLA attributes to relations and predicates.

Our proposal is that the semantics for predicates in TPLA is analogous to something else, namely to the Tractarian semantics for names, *i.e.* the only kind of designative linguistic expressions openly admitted in the TLP[4]. If this is the case, then the acknowledgement to Wittgenstein makes sense. In fact, the semantics of predicates was the real novelty in this phase of the development of Russell's thought. The semantics of names – apart from the trickier issue of the concrete identification of proper names[5] – is still grounded in the notion of knowledge by acquaintance: a long-term Russellian theme.[6] This is not the case for the semantics of predicates.[7] Therefore, it is plausible that Russell declares his debt making reference to what was actually new in his views.

The resemblance is not limited to semantics. Concerning objects, which are the meaning of names, Wittgenstein wrote:

> 2.01231 If I am to know an object, though I need not know its external properties, I must know all its internal properties.

Thus, the knowledge of an object x does not require to know, for any other object y, if x is connected or not in an actual fact with y (these are the external properties of x). On the contrary, we need to know which other objects *can* be combined with it (its internal properties).[8] There is an apparent analogy: according to TPLA, in order to understand the word "red", I do not need to know, for any particular, if it is red or not, but I need to know what can be said to be red.

The comparison between the knowledge of an entity and the understanding of a linguistic expression could seem hazardous: Russell's quoted passage concerns the understanding of predicates, while the Tractarian section 2.01231 is about the knowledge of objects. This asymmetry could seem to void the apparent analogy of any interest. It is not even clear if relations (the meanings of predicate) and names (the designators of objects) are really involved.

However, the asymmetry is specific to the quoted excerpts. As we are going to see, both philosophers held strictly corresponding theses on three levels:

1) on the ontological level, both Russell's relations and Wittgenstein's objects have essential combinatorial properties; Wittgenstein calls these combinatorial properties "forms" of the objects;

2) on the syntactic level, both Russell's predicates and Tractarian names have analogous combinatorial properties, *i.e.* they are essentially connected with the propositions where they can occur;

3) on the semantic level, the two linguistic categories share a sort of "context principle", *i.e* both Russell's predicates and Tractarian names have meaning only in the context of a proposition.

For what concerns Russell, his propensity to alternate syntactic and ontological lexicon with great freedom makes difficult to quote specific excerpts for each level of analogy. This freedom itself partially legitimates our extensive exegesis. We can also look at the following remark from *The Logical Atomism*, a later essay, notoriously akin to TPLA on these themes:[9]

> Attributes and relations, though they may be not susceptible of analysis, differ from substances by the fact that they suggest a structure, and that there can be no significant symbol which symbolizes them in isolation [Russell (1924), p. 337].

Relations are said to be simples, since they can not be further analysed, but different from substances (*i.e.*, the particulars which are the meanings of names), insofar as they "suggest" a structure: thus, our analogy is legitimate on the ontological level. Moreover, nothing can symbolize them standing alone ("in isolation"): thus, the Russellian predicates obey the semantic context principle.

On Wittgenstein's side, it is not difficult to show that the TLP maintains not only the ontological thesis about the independence and non-independence of objects, but also that:

a) names have meaning only in the context of a proposition (the semantic thesis), as Wittgenstein affirms in the following Fregean-flavoured section:

> 3.3 [...] Only in the nexus of a proposition does a name have meaning.

b) names, mirroring the forms of objects, are essentially connected with the propositions which can include them (the syntactic thesis). It is not chance that this last point is developed by Wittgenstein in some

sections which are (because of their numbering) comments to the context principle in 3.3.

Wittgenstein sets forth first of all the following definition of "expression":

3.31 I call any part of a proposition that characterizes its sense an expression [...].

Certainly, names do characterize the sense of the propositions including them, thus they are expressions. Consistently, Wittgenstein states that:

An expression is the mark of a form and a content.

From previous Tractarian sections, we know that objects make up the substance of the world (2.021) and that the substance of the world is form and content (2.025). Leaving the content aside, the form determines the syntactic non-independence of names, just as the form of objects determines their ontological non-independence. In fact:

3.311 An expression presupposes the forms of all the propositions in which it can occur. [...]

A previous section states more explicitly a link between the two level of non-independence (ontological and syntactic). The syntactic non-independence of words is here affirmed as a parenthetical comment to the non-independence of objects:

2.0122 Things are independent in so far as they can occur in all *possible* situations, but this form of independence is a form of connexion with states of affairs, a form of dependence. (It is impossible for words to appear in two different roles, by themselves and in propositions).

The only remaining asymmetry is determined by Russell's reference to the "understanding" of names and predicates. Under this specific point of view, one may legitimately think that Tractarian names are more similar to Russell's names of particulars than to predicates. In fact, in order to understand a Tractarian name, it is plausibly sufficient to know which object is its referent;[10] we do not need to know also the syntactic form of the name, or the form of the designated object. An adequate characterization of Wittgenstein's stance on this issue would go well beyond our aims in this paper, and would involve the possibility of seeing Wittgenstein – and Russell[11] – as forerunners of the so-called direct reference theories. From our point of view, it is safe to omit this particular level from our comparison.

The relevant semantic level is not the understanding of linguistic expressions, but the general conditions under which a name can be a name of an object and a predicate can express a relation. On this level, the comparison is successful. According to the TLP, a name can be a name of an object at the following necessary condition: a name has to mirror the form of the object ("signalizing form" principle[12]). However, this condition is not sufficient, since many objects share the same form.[13] Thus, the name needs to be arbitrarily associated with that specific object.

We have seen that the TPLA semantics for predicates includes a similar necessary condition. Is it sufficient too? Though TPLA tells us nothing about this aspect, the condition is unlikely to be sufficient, insofar as there are different predicates, which designate different relations, but are nonetheless connected with the same class of propositions. Building upon Russell's example, it is quite obvious that the predicate "red" and the predicate "green" do not designate the same monadic relation, although they can appear in the same propositions.

Thus, also on the semantic level, the analogy seems compelling. The exclusion of the point of view of linguistic "understanding" does not affect the other levels.

Now, we are ready to understand and appraise Russell's claim that his allegedly Wittgensteinian theory of relations embodies the philosophical significance of the theory of types. If our aim were to compare Russell's theory of types on the whole and the sections of the TLP devoted to the topic, then TPLA would not be the right text to be looked at. First of all, it is chronologically impossible that Wittgenstein had this text in mind when writing those sections: the most part of the TLP was written before Russell's lectures, and in any case Wittgenstein never came to know anything about them in time. Moreover, TPLA is not mainly concerned with the theory of types and does not discuss adequately its controversial and technical aspects.

What is specific to TPLA is the connection with the issue of relations. In TPLA Russell tries explicitly to ground the theory of types on the theory of relations and explicitly states that the theory of relations embodies the deep philosophical content of the theory of types. Moreover, the acknowledgement to Wittgenstein about relations corresponds in this text to the adoption of an openly Wittgensteinian lexicon and emphasis in the presentation of the theory of types itself, and actually the TPLA approach to the theory of types is strictly consonant with what Wittgenstein – having in mind a previous version of the theory – would have written in the TLP on the same topic. Therefore, the treatments of the theory in TPLA and in the TLP seem to be two distinct developments – each unaware of the other – of a common theoretical elaboration, in spite of an underlying difference in goals at a deeper level, as we are going to see below.

Let us sum up briefly the link between theory of relations and theory of types in TPLA. Russell needs to reconcile two different theoretical needs: the constitution of a hierarchy of classes, such that each class has as its members only objects of the immediately lower level; the idea that classes, classes of classes, classes of classes of classes and so on are all "logical fictions." Russell's approach is admittedly akin to that successfully applied to definite descriptions in "On Denoting": it is possible to paraphrase the sentences which seem to refer to classes in other sentences where no class is involved. The paraphrases exhibit the deep logical form of the sentences, and allow the theory of types to resort to the philosophical truth which is said to be at its roots. Russell expounds this truth in the seventh lecture with the following words:

> You can always only get at the thing you are aiming at by the proper sort of symbol which approaches it in the appropriate way. That is the real philosophical truth that is at the bottom of all this theory of types [Russell (1918), p. 269].

Why is this principle relevant for the theory of types? Each sentence about classes needs to be paraphrased in a sentence about propositional functions. Details and problems of such paraphrasing do not concern us here. What matters is that propositional functions are constituted of predicates with their places of argument. These predicates – and the relations which are their meanings – have a form: this form determines the range of possible arguments of the predicate, and so the range of possible objects which can instantiate the relation.

Some sentences about classes lead to paradoxes. Russell's diagnosis is that the deep logical form of these sentences is unacceptable, because the combinatorial constraints determined by the predicates in the propositional functions are violated. For the sake of simplicity, we do not adopt here the Russellian terminology and do not deal directly with Russell's paradox. It is enough to consider the sentence according to which a certain class A belongs to itself:

$$A \in A$$

Any sentence concerning A has to be paraphrased in a sentence concerning the corresponding propositional function, say Φ, such that A is the extension of Φ. For an entity x, the sentence according to which x belongs to A becomes the sentence Φ (x). Therefore, $A \in A$ should be paraphrased in Φ (Φ). But the form of predicates in Φ does not allow Φ to have a propositional function as its argument. In general, the combinatorial constraints determined by the forms of relations render each sentence about classes belonging (or not belonging) to themselves – with typical Tractarian terminology – "neither true, nor false, but senseless."

It is significant that Russell, while grounding the theory of types on the theory of relations, does not only aim to fulfil the nominalistic *desideratum* of avoiding any commitment to the real existence of classes. This *desideratum* is part of a larger aim: Russell wants to avoid any reference to the meanings of specific symbols, presupposing only the general principles of reference for different syntactic kinds of expressions. The distinction between different types is not grounded on a hierarchy of classes, but has a semantic nature.

> The relation of the symbol to what it means is different in different types. I am not now talking about this hierarchy of classes and so on, but the relation of a predicate to what it means is different from the relation of a name to what it means [Russell (1918), p. 268].

The adoption of this general point of view leads Russell to make the following Tractarian-flavoured claim:

> The theory of types is really a theory of symbols, not of things. In a proper logical language it would be perfectly obvious. The trouble that there is arises from our inveterate habit of trying to name what cannot be named. If we had a proper logical language, we should not be tempted to do that [Russell (1918), p. 267].

We have now all the data for drawing the comparison with sections 3.33-3.334 of the TLP. This compact group of sections about the theory of types is introduced by a section concerning logical syntax in general. Logical syntax delimits the range of possible combinations of signs. At the atomic level, combinations are possible if and only if the formal combinatorial constraints, allowing names to refer to objects (mirroring their form), are respected. This delimitation has to be independent of the specific reference of each name. It can only presuppose "the description of expressions."

> 3.33 In logical syntax the meaning of a sign should never play a role. It must be possible to establish logical syntax without mentioning the *meaning* of a sign; *only* the description of expressions may be presupposed.

The exact nature of such "description of expressions" is debatable,[14] but another section sheds light at least on the main purpose of such a description:

> 3.334 The rules of logical syntax must go without saying, once we know how each individual sign signifies.

We are not required to know the meanings of names, but only the general principles of designation for different categories of names. In general, we know that names designate at the necessary condition of mirroring the forms

of the objects which are their meanings. Logical syntax should classify expressions in syntactic categories. Such classification requires that the combinatorial properties of expressions (the syntax) are specified, and the combinatorial properties of expressions mirror the combinatorial properties (the forms) of the designated objects.

The theory of types is seen by Wittgenstein in this context, as a chapter of a full-fledged logical syntax. This chapter, just like any other, has to avoid any reference to the specific meanings of signs. Wittgenstein makes the following claim, in polemics with Russell (by the way, this confirms that he had not in mind the TPLA version of the theory of types):

> 3.331 From this observation we turn to Russell's "theory of types." It can be seen that Russell must be wrong, because he had to mention the meanings of signs when establishing the rules for them.

The meanings of signs are not involved neither in Wittgenstein's theory of types nor in logical syntax in general. The contents of logical syntax are specified in 3.334, its aims in 3.33: it shows "how each individual sign signifies" – *i.e.*, which logical form is mirrored – in order to determine their possible combinations.

The common general points with TPLA are apparent. Theory of types – according to Russell – does not concern the meanings of signs, but, once discovered the deep logical form of sentences about classes, provides only syntactic criteria. These criteria banish some sentences, since they violate the formal constraints determined by predicates (directly) and by relations designated by predicates (indirectly). The unacceptable sentences are singled out without taking into account specific meanings: we need only to consider the combinatorial properties of the involved predicates. These combinatorial properties govern the semantic behaviour of predicates: predicates succeed in designating relations, only if they mirror their combinatorial properties. Therefore, theory of types can avoid making reference to specific meanings. It is enough to know "how each individual sign signifies", in exact conformity with Wittgenstein's claims in section 3.331- 3.334.

Thus, the TLP is committed to that "philosophical truth" which, according to Russell, is at the basis of the theory of types:

> You can always only get at the thing you are aiming at by the proper sort of symbol which approaches it in the appropriate way [Russell (1918), p. 269].

Wittgenstein wrote also a more specific section about the theory of types. It is plausible that Russell – while lecturing in 1918 – could have subscribed it too. We have seen that the semantic distinctive feature of predicates is connected with their combinatorial properties. These combinatorial proper-

ties forbid the formation of certain sentences, e.g. the sentences where a predicate is predicated of itself. This is strikingly analogous to what Wittgenstein writes in 3.333:

> 3.333 The reason why a function cannot be its own argument is that the sign for a function already contains the prototype of its argument, and it cannot contain itself. [...]

The semantic relation between functional letter ("the sign for a function") and function is not a mere arbitrary association. The mirroring of form is a necessary condition for the designation, just as happens in Russell's semantics for predicates and in Wittgenstein's own semantics for names.

It could be objected that Wittgenstein does not talk here of names and objects, but only of functions and signs for functions. However, in that same section, the mention of the *form* of a function suggests that Wittgenstein is applying the core principles of his own semantics for names. Why does he talk of functions instead?

This can be explained on the basis of the Tractarian notion of "propositional function." As the range of possible arguments of Russell's propositional functions is determined by the combinatorial properties of the included *predicates*, so the range of possible arguments of Wittgenstein's propositional functions is determined by the combinatorial properties of the included *names*; insofar as the forms of the names mirror the forms of the designated objects, the formal features of objects determine the field of possible arguments of the propositional functions.

But what is a propositional function according to the TLP? A propositional function can be obtained from a proposition, replacing one or more names with variables. It is not easy to provide an example, since the interpreters disagree about the actual form of a Tractarian atomic proposition. For the sake of simplicity, let us concede that the following section should be meant literally and extensively (*i.e.*, including the pragmatic implicature that an elementary proposition consists *only* of names):

> 4.22 The elementary proposition consists of names. It is a connexion, a concatenation, of names.

Then, if "*a*", "*b*", "*c*" are names of the simple objects *a*, *b*, *c*, the combinatorial constraints of *a* allow *a* to be combined with *b* and *c* and the combinatorial constraints of *b* and *c* are analogously respected, then "*abc*" is an atomic proposition. If "*x*", "*y*" and "*z*" are variables, we can obtain from "*abc*" the following propositional functions: "*abx*", "*axc*", "*xbc*", "*axy*", "*xby*", "*xyc*", "*xyz*". In each of these propositional functions, the class of names which are allowed

to replace the variables is determined by the form of the other names. In the extreme case "*xyz*", each variable constrains the substitutability of the others.

A complete account of this reading should analyse carefully the Tractarian sections 3.311-3.318, with a special focus of 3.315 where the extreme case "*xyz*" is discussed. This analysis is beyond our aims, but it is enough to rely on a quite clear point: the forms of objects determine the syntactic combinatorial properties of their names. Therefore, the field of possible arguments for the propositional function, constituted by that name with the suitable number of variables, is completely determined by the form of the object designated by that name. When a propositional function (*e.g.*, "*axc*") includes more than one name (in this case "*a*" and "*c*"), the field of possible arguments is determined jointly and exclusively by the forms of the objects (*a* and *c*) designated by those names. This is enough to show that 3.333 is a consistent application of the Tractarian semantics for names to propositional functions. Therefore, we can say that, also in this technical section, Wittgenstein grounds his view of the theory of types on his theory of objects, while Russell in TPLA grounds his corresponding view on his theory of relations. The analogy between Russell's theory of relations and Wittgenstein's theory of objects is at the basis of the apparent similarity between their conceptions of the theory of types.

We can now draw some conclusions. In the TLP the range of possible arguments of propositional functions is determined by the forms of objects. We do not know how Wittgenstein would have faced the real paradoxes which the theory of types was primarily expected to avoid, insofar as the TLP does not say anything on this issue.[15]

On the contrary, it is much easier to see what happens on the atomic level: the admitted classes would be only classes of objects having the same form, or classes of couples of objects having respectively the same form, and so on. The resulting restrictions are heavy and utterly alien from the usual, anti-paradoxical goals of the theory of types. The sentences about certain classes of objects of heterogeneous forms will be deemed unacceptable by logical syntax, even in absence of a precise pre-theoretical motivation to banish them.

Perhaps the strength (even if not the arbitrariness) of the restrictions was to be expected. After all, we have seen that the theory of types is for Wittgenstein just a chapter of a full-fledged logical syntax: it does not come as a surprise that there are other chapters too. The real problem concerns Russell and his reception of Wittgenstein's suggestions.

Russell claims in TPLA to adopt a specific theory of relations because of certain Wittgensteinian suggestions. Moreover, he claims that this theory of relations is highly relevant for the theory of types. However, he seems to misunderstand something and underestimate something else. It is difficult to demarcate misunderstanding from underestimation, due to lack of adequate historical

sources. Russell claims to have been influenced by Wittgenstein till 1914, but we do not know what Wittgenstein thought of these issues before 1914. As a consequence, the historical reconstruction is unavoidably speculative.

Nonetheless, as a matter of fact, the results of this Wittgensteinian influence on Russell are partial and unsatisfying. Russell adopts in TPLA ontological, syntactic and semantic views about relations and predicates strictly akin to Wittgenstein's corresponding views about names and objects. However, Russell's theory of relations does not seem to determine the logical syntax on the whole. Russell tries to develop only those consequences which are pre-theoretically required by the theory of types and its anti-paradoxical aims. The overall picture remains unclear. For example, the respective roles of names and relations – endowed with radically different syntax, ontology and semantics – is quite obscure. How is it possible that predicates and relations have combinatorial properties, while objects do not? The combinatorial properties of redness determine what can be red and can be said to be red. But then it seems that, e.g., a surface can be red, while a sound can not: they are particulars and they get certain combinatorial properties. Russell could reply that these combinatorial properties are semantically irrelevant in the case of particulars, but the problem can be replicated on the syntactic level, making the semantic irrelevance *ad hoc*.

On the Wittgensteinian side, the comparison can be of some help in dealing with a *vexata quaestio*: the role of universals and predicates in the TLP. Are universals among Tractarian simple objects or among the constituents of states of affairs? Are there predicates in the atomic sentences of an ideal language? Our point of view on these questions is external and unavoidably speculative, because of the already mentioned obstacles to historical reconstruction. At any rate, Russell translates Wittgenstein's views from names and objects to predicates and relations. This translation is undeclared and seems to happen quite naturally, to the point that Russell ascribes his theories to Wittgenstein himself. The historical gaps in this transition can be filled in different ways. A simple and attractive hypothesis is to admit that Tractarian objects are not as extraneous to universals as it has been sometimes thought.[16]

This hypothesis has been set forth by several Wittgensteinian interpreters with different nuances, but always for reasons completely independent of the analogy with Russell. In 1976,[17] Peter Geach showed that Tractarian objects are much more similar to Frege's concepts than to Frege's objects, since their combinatorial properties make them essentially unsaturated (*ungesättig*). In this paper we have seen that, analogously, Tractarian objects are more similar to TPLA relations than to TPLA objects of deixis. These comparisons, if successful, support the hypothesis that objects have some deep affinity with metaphysical universals.

In 1986, Merrill and Jaakko Hintikka proposed that both universals and particulars are objects, though their names work in a different way. The adequacy of this proposal can be criticized on the following ground, among others:[18] in the TLP there is no trace of two metaphysical macrocategories of entities (universals and particulars), connected by a relation of instantiation; at the same time, it seems that every designation works in the same way and that, for example, the "signalizing form" principle needs always to be respected. If this line of criticism is sound, then this is exactly the difference between the TLP and TPLA, where on the contrary the semantics of predicates is opposed to the semantics of names. Hintikkas' proposal risks concealing this difference.

According to a radical proposal set forth by Pasquale Frascolla in 2004,[19] all the Tractarian objects are repeatable phenomenal qualities, and thus they are universals. I can not discuss here the intrinsic merits and difficulties of this interpretation. From our limited point of view, Frascolla's reading is able to ground the affinity between Tractarian objects and Russell's universals, without making the domain of objects too heterogeneous. Therefore, it is a plausible basis to make sense of the similarity with TPLA we have outlined in this paper.

Scuola Normale Superiore
Piazza dei Cavallieri 7
56126 Pisa, Italy
E-mail: giorgio.lando@sns.it

NOTES

[1] TPLA, p. 226. See Pears (1977), Somerville (1980) and Griffin (1985) for some different views about the tie between Russell's multiple relation theory of judgement and the TLP. See also Hanks (2007) for yet another alternative reading, more centered on TPLA than on Russell (1984).

[2] See Lando (forthcoming) for an introduction to the interpretative debate about relations in the TLP.

[3] In fact, it is not clear whether Tractarian atomic propositions include predicates or more sophisticated counterparts for universals.

[4] Some readers of the *Tractatus* – e.g. Hintikka (1986), ch. 2 – think that the Tractarian semantics admits two kinds of designators. Nonetheless, it seems that both of them should meet the conditions for names in general and our comparison hinges on these conditions exclusively. Thus, it is safe to ignore this alternative reading from our specific point of view.

[5] TPLA, p. 201.

[6] The first explicit formulation of the principle of acquaintance as a semantic principle is in Russell (1912), while the idea is probably older.

[7] In Russell (1984), the attention was focused on another problem: have we some kind of acquaintance with relations?

[8] This identification of the internal properties of an object with its combinatorial properties (*i.e.* with its form) is quite unanimously accepted by the literature (see the discussion in the essay on "Internal Relations" in Glock (2000)). On the contrary, the nature of external properties is more controversial. Here I rely on the interpretation according to which the external properties of an object are determined by the atomic facts of which it is a constituent. This reading is defended by several authors, including Frascolla (2006), p. 167-168. An alternative reading of material and external properties in the TLP is Hochberg (1971). It is worth noting that a different understanding of the notion of external property risks being incompatible at most with the negative part of our comparison: in fact, if external properties are something else, then what is *not* required by Wittgenstein's semantics for names would be different from what is *not* required by Russell's semantics for predicates.

[9] Bonino (2003), pp. 155-156 explains why Russell provided a new exposition of his past "logical atomism" in 1923, when his philosophical views were already substantially changed.

[10] On the contrary, knowledge *by acquaintance* is probably not a necessary condition for understanding names. While no explicit declaration on this topic is to be found in the TLP , it is possible to argue that acquaintance is not required on the following grounds: 1) an *ex silentio* argument (the TLP does not say that it is required); 2) a controversial remark in the *Notebooks 1914-1916*, dated 24.5.1915. The issue is discussed in depth in Bradley (1992), pp. 45-49.

[11] In this case, the reference is to Russell's theory of proper names.

[12] See Bradley (1992), pp. 78-97, for a justification of this principle and a general account of the Tractarian theory of reference. Also the label "signalizing form principle" is due to Bradley.

[13] The admission of many objects with the same form can be inferred from the denial of the identity of indiscernibles for simple objects, *cfr.* section 2.0233 of the TLP. See also section 5.5302. *Cfr.* Frascolla (2004) for details about the importance of this thesis in the Tractarian metaphysics.

[14] See Carruthers (1989), pp. 30-33 for an extensive discussion of this notion.

[15] An application to paradoxes of the Tractarian theory of types should consider carefully the difference between functions which can take complexes as arguments and functions which can not. However, this would require an overall clarification of the contentious Tractarian notion of complex. According to some scholars, there are actually two notions of complex in the TLP. See in particular Simons (1985).

[16] Copi (1958) and Anscombe (1959) were mostly influential in setting forth the identification between Tractarian objects and individuals.

[17] Geach (1976).

[18] See Lando (forthcoming), ch. 7 for a wide list of objections to Hintikkas' view of the Tractarian objects.

[19] This proposal has been originally set forth in Frascolla (2004) and is now included in a general introduction to the TLP, Frascolla (2006), ch. 3.

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