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The Ontology of Wittgenstein's *Tractatus*

Contents

This part of the section Ontologists of 19th and 20th centuries includes of the following pages:

Introduction

"The *Tractatus* comprises four parts, which correspond to stages of its rocky development: the theory of logic (1912-14), the picture theory (1914), the discussion of science and mathematics (1915-17), and the discussion of the mystical (1916-17). The structure of the book is as follows: *Ontology* (1-2.063): although the Tractatus is concerned with symbolic representation (*Preface*), it starts with ontology, since the nature of representation, and of what represents (thought/language), is isomorphic with the nature of what is represented (reality).
Depiction (2.1-3.5): having claimed that the world is the totality of facts, the Tractatus proceeds to investigate a subset of that totality, namely pictures, in particular PROPOSITIONS, that is, facts which are capable of representing other facts.
Philosophy (4-4.2): unlike science, philosophy does not consist of propositions, since the logical form shared by language and reality cannot be expressed in meaningful propositions, but shows itself in empirical propositions (see SAYING/SHOWING).
Theory of logic (4.21-5.641, 6.1-6.13): Wittgenstein uses truth-functional operations to explain the construction of molecular propositions out of elementary ones -- thereby providing an account of the GENERAL PROPOSITIONAL FORM -- and to establish that logical propositions are tautologies.
Mathematics (6-6.031, 6.2-6.241): mathematics is also explained as an aspect of the logical operations by which propositions are derived from each other.
Science (6.3-6.372): science is treated along Hertzian lines as containing a priori elements, the network of our description of the world. Mysticism (6.373-6.522): ETHICAL and AESTHETICAL value is ineffable. Kicking away the ladder (6.53f.): the Tractatus aims to indicate the limits of the sayable, but acknowledges that its own pronouncements are on the far side of the limit. They should be used as a ladder which can be kicked away once climbed. 'Whereof one cannot speck, thereof one must be silent' (7)." (p. 364)

From: Hans-Johann Glock, *A Wittgenstein Dictionary*, Oxford: Blackwell 1996.

Frege and Wittgenstein

"For Frege there is some kind of connection between the categories of ontology and the categories of signs. The two primary ontological categories, namely object and function, (39) are in fact linked to the two principal categories of signs, namely saturated expressions and unsaturated expressions.

All the different types of objects are linked to saturated expressions and all the types of functions are linked to unsaturated expressions. In what follows we will consider the two main kind of saturated expressions: names and propositions. As we all know, they have both sense and reference. The sense of the name is its *Sinn*, the mode in which reference is given to us, while reference itself, the *Bedeutung*, is the object denoted by the name. As regards propositions, their sense is the *Gedanke*, while their reference is their logical value. It is immediately apparent, therefore, that both categories of signs are articulated into an object (respectively the *Bedeutung* and the logical value) and into the mode whereby this object is presented to us (respectively the *Sinn* and the *Gedanke*). (40) The most debatable aspect of this position concerns propositions.

To understand Frege's account we have to distinguish between 'true' and 'false' as properties (that is as unsaturated expressions) from 'the True' and 'the False' as objects (that is as saturated expressions). When speaking of a logical value as the object referred to by a proposition, we are considering the True and the False as objects and not true and false as properties.

Using a suggestion coming from the last works by Suszko we can distinguish two different kinds of valuation: logical valuation and algebraic valuation. Logical valuations involve what are conventionally called the values of truth and falsity (as unsatured expressions), while those that Suszko termed algebraic valuations assign a referent. (41) By admitting the existence of only two referents, Frege's position collapses logical and algebraic valuations together and thus renders them indistinguishable. (42)

Wittgenstein took up a completely different position, where he rejected –this being the difference whence most of his subsequent distinctions stemmed –what Perzanowski called the principle of semantic homogeneity. According to this principle, the problem of the reference of names and the problem of the reference of propositions are both resolved using similar structures. This is Frege's case, therefore. For Wittgenstein, however, the solution to the nominal reference problem is different from that of the propositional reference problem. For names, the semiotic triangle (name-sense-reference) is reduced by eliminating sense, so that names refer directly to objects and do not require the intermediation of sense. This gives rise to an extremely simple one-to-one correlation. It also means that both names and objects are simple, the one in language the other in reality. By contrast, the simplicity of the name-object semantic relation generates an extremely complex semantic representation for propositions that involves the concepts of 'proposition', 'propositional sign' (preceivable sign of the proposition), 'sense of the proposition' (situation in the logical space connected to the proposition), 'thought' (logical picture of the fact related to the proposition) and 'fact depicted by the proposition'. (43)

It seems, therefore, that there are at least two main different strategies to adopt: if we accept Frege's position that names and propositions are semantically homogeneous entities, we can represent their structures by using the relative semiotic triangles. In this case the procedure is straightforward, and we encounter no major obstacles as long as we accept the idea that Truth and Falsity are in every respect objects of our ontology. If, instead, we follow Wittgenstein and reject the principle of semantic homogeneity, we are stressing that there is an univocal relationship between name and object. On the basis of this relationship each entity is an atom of its universe (the ontological universe in the case of objects, the universe of signs in the case of names). This absolute simplicity as regards names, however, generates major complexity among propositions.

The problem addressed by Wittgenstein was certainly not a new one. The basic issue was whether it was possible to construct an ontologically neutral language. Before Wittgenstein the problem had exercised several other thinkers: Brentano, for example, particularly during his so-called 'reist phase.' The fundamental theoretical problem was how to use language without being trapped by the symbolic features of language itself." (pp. 19-21)

Notes

(39) Note that function make up a number of other categories (1st level concepts, 2nd level concepts, ..., 1st level dyadic relations, etc.).
(40) I follow Perzanowski's 1993 exposition here. See also Perzanowski 1984 and 1990.
(41) See Suszko 1975.
(42) The principle according to which there are only two referents for propositions I shall call, following Suszko, Frege's axiom. It is interesting to note that the independence of Frege's axiom was demonstrated by Tarski in his doctoral dissertation (1923), where he explicitly compared it with

Euclid's Fifth postulate. For a brief treatment see Suszko 1977. If all true propositions denote exactly one and the same entity, this means that the real philosophical position underlying the theory is an absolute monism of facts. Suszko's rejection of Frege's axiom prompted him to elaborate his so-called non-Fregean logic. See Suszko 1975 and the paper by Omyla in this volume. [*Formal ontology of situations*, pp. 173-187]
(43) For details see Perzanowski 1993.

[For the complete Bibliographical references, see the pages about Perzanowski, Suszko and Wolniewicz].

From: Roberto Poli, "Res, Ens and Aliquid", in: Roberto Poli and Peter Simons (eds.), *Formal Ontology*, Dordrecht: Kluwer 1996, pp. 1-26.

Ppolish philosophers about the *Tractatus*: Bogluslaw Wolniewicz

"The present set of studies was started long ago in an effort to grasp more clearly the metaphysical system sketched out in Wittgenstein's "Tractatus", and to evaluate its implications. The basic tenets of that system are the theses:
1.1 The world is the totality of facts, not of things.
1.2 The world splits into facts."
Thesis 1.1 propounds an ontology of facts; thesis 1.2 propounds a variant of it, known as Logical Atomism.
The studies are based on two concepts. One is that of an "elementary situation", intended as an intermediary between Wittgenstein's "*Sachverhalt*" and "*Sachlage*". ("*Sachverhalte*" are those elementary situations which are atomic and "*Sachlagen*" are certain sets of the former.) The other is that of a proposition being "verified" by an elementary situation. It has soon turned out that the key to the former concept is lattice theory; and that the latter has to be characterized via the meta-logical concept of a complete set of propositions. The link between them is the concept of a "realization" (or a "possible world"), generalizing Wittgenstein's "*Wahrheitsmöglichkeiten der Elementarsätze*": realizations are maximal sets of elementary situations, and complete sets of propositions are their images.
In all of the following our point of departure is a universe SE of elementary situations. We consider it at three levels of generality, corresponding to the course our investigations have taken in time. At the first level the universe SE is a lattice, conditionally distributive and of finite length. (Conditional distributivity means here that the identity $x \grave{U} (y \acute{U} z) = (x \grave{U} y) \acute{U} (x \grave{U} z)$ holds only under the proviso that $y \acute{U} z \ ^1 \ 1$.) At the second it appears as an arbitrary join-semilattice with unit. And at the third one it forms merely a quasi-ordering induced by a closure system." (p. 11)

From: Bogusław Wolniewicz, *Logic and Metaphysics. Studies in Wittgenstein's Ontology of Facts.* Warsaw: Polskie Towarzystwo Semiotyczne 1999.

"The Tractatus is a masterpiece of rare power and ravishing beauty. Its content is a profound and highly coherent philosophy of language, based upon a radically new kind of metaphysics: the metaphysics of facts and situations. (Meinong, with his notion of the 'objective' of a proposition, apparently was moving in the same direction. But he never came near asking himself any of the two crucial questions: (1) When, if ever, are the objectives of different propositions identical? (2) What, if any, is the relation of the objective of a compound proposition to the objectives of its components?) Moreover, the *Tractatus* anticipated many of the later developments of logical semantics, especially those commencing around 1950 and connected with its algebraization. The kernel of its message may be put down as follows.
The fundamental problem of the *Tractatus*, as of all philosophy, concerns the relationship of thought and reality. This relationship is mediated by language, and so it may be decomposed into the relative product of two relations: one between thought and language, the other between language and reality. Let us mark the latter by ' φ ', the former by ' ψ '.

It has been maintained that according to the Tractatus the projective relation φ between language and reality has to be an isomorphism. This, however, is not borne out by the text. To satisfy the conditions laid down by Wittgenstein it is enough for φ to be a *homomorphism*, and this already makes a lot of a difference. In the first place, we are confronted now with two delicate questions: (1) Which is the direction of that homomorphism: from language to reality, or the other way round? (2) Is it a homomorphism *onto*, or merely one *into*? Neither of these questions has a trivial answer in the context of the *Tractatus*.

We assume here that the relation φ is a homomorphism on the language L onto the reality R, i.e., that $\varphi : L \to R.$. Thus reality is a homomorphic image of language. But language is the totality of propositions, and the reference of meaningful propositions are possible *situations*. Consequently, reality is not the world, but the logical space; i.e., it is not the totality of facts, but the totality of possibilities. Thus language is more capacious than the world, and the number of propositions is greater than even that of situations.

The simplest non-trivial homomorphism of that kind is the well-known Fregean one. Language is mapped under it onto the set of the two classic truth-values, and the corresponding two-element Boolean algebra is then the logical space. Thus for Frege there are just two possible situations: the True and the False. This is so because his only stipulation with regard to the reference of propositions is that *contradictory* propositions cannot have the same reference. In the *Tractatus*, however, it is stipulated further that logically independent propositions cannot have the same reference either. This move is the gist of its logical atomism, transforming the Fregean homomorphism $\varphi : L \{ 1, 0 \}$ into the composition of two other ones: φ ' on L onto logical space, and φ " on logical space onto the set of truth-values.(1)

The aim of the *Tractatus* was to stake out the boundaries of clear thought:

> Philosophy (...) should trace the unthinkable from within by means of the thinkable. By presenting clearly what may be expressed it will point to the inexpressible. (2)

The positivistically-minded members of the Vienna Circle deemed to recognize in these words their own 'demarcation problem', together with their own hostility towards 'metaphysics' and their cult of 'science'. It was a monumental misunderstanding. To Wittgenstein the metaphysical is indeed the inexpressible, but this is not to mean that it is regarded as some kind of delusion or hoax. On the contrary, the hoax is the idea of a 'scientific philosophy'.

In the *Tractatus* the tracing of the boundaries of the inexpressible was to be accomplished at one stroke. Logical space R fills the realm of the expressible E completely, i.e., we have $E = R$. Consequently, the homomorphism φ ' is onto the expressible, and what is left, evidently, is only the inexpressible. This grandiose project, however, was soon to encounter grave technical difficulties, and then Wittgenstein simply dropped it. This was rash. Not all the difficulties were quite as insuperable as they might have seemed, and the *Tractatus* left room for manœuvre. It might have been helpful, for instance, to weaken the homomorphism φ ' to one into the expressible. Then instead of the one language L we could consider a whole series of languages $L0$, $L1$,;..., and a corresponding series of logical spaces $R0, R1,...$. The realm of the inexpressible would be approximated by the latter 'from within' starting from what is expressible in the language $L0$ at hand. Certainly, the series of logical spaces need not be monotonic, and in advance there would be no telling whether what is inexpressible at a given stage $L1$ is absolutely or only relatively so. Thus the final tracing of the boundaries of the inexpressible would recede to infinity, but for theory this could hardly count as an objection." (pp. 13-15)

Notes

(1) For details cfr. B. Wolniewicz, "A Wittgensteinian Semantics for Propositions", in: Cora Diamond and Jenny Teichman (eds.), *Intention and intentionality. Essays in Honour of G. E. M. Anscombe.*, Ithaca: Cornell University Press 1979, pp. 165-178.
(2) L. Wittgenstein, *Tractatus logico-philosophicus* 4.113-4.114.

From: Bogusław Wolniewicz, *Logic and Metaphysics. Studies in Wittgenstein's Ontology of Facts.* Warsaw: Polskie Towarzystwo Semiotyczne 1999.

Part I.

More than once Professor Anscombe has expressed doubt concerning the semantic efficacy of the idea of an 'elementary proposition' as conceived in the Tractatus. Wittgenstein himself eventually discarded it, together with the whole philosophy of language of which it had been an essential part. None the less the idea is still with us, and it seems to cover theoretical potentialities yet to be explored. This paper is a tentative move in that direction.

According to Professor Anscombe, Wittgenstein's 'elementary propositions' may be characterized by the following five theses:

(1) They are a class of mutually independent propositions.

(2) They are essentially positive.

(3) They are such that for each of them there are no two ways of being true or false, but only one.

(4) They are such that there is in them no distinction between an internal and an external negation.

(5) They are concatenations of names, which are absolutely simple signs.

We shall not investigate whether this is an adequate axiomatic for the notion under consideration. We suppose it is. In any case it is possible to modify it in one way or another, and for the resulting notion still to preserve a family resemblance with the original idea. One such modification is sketched out below.

Part II

Let us assume the reference of contingent propositions to be possible situations. This fundamental notion is really an offshoot of the correspondence theory of truth. For let a be any true proposition, and let the line *R* represent all *reality* in Wittgenstein's sense (i.e., the totality of facts) as shown in Fig. 1:
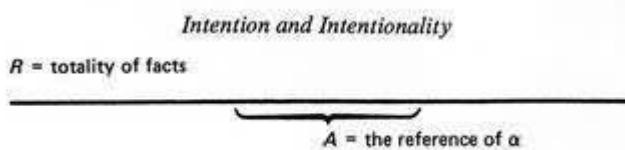

Fig. 1

Being true, a corresponds to reality, but not all reality is relevant to that. Consequently, *R* splits up into the segment *A* referred to by a, and into the vague remainder indifferent to it. Thus *A* represents here the smallest fragment of reality warranting the truth of a. This is the reference of a, but obviously its truth is warranted also by any fragment *A'* greater than *A*. In that case we shall say: a is verified by *A'*. And any fragment of reality fit to verify a proposition is to be called a situation.

This much is just common sense. The next step, however, is an extremely controversial one, for we expand now the notion of reference so as to cover false propositions as well. Since there are no facts (i.e., real situations), to correspond to them, we postulate to that purpose imaginary ones. Both are possible, and so the totality of facts is embedded in the totality of possibilities. This consists of all the situations which can be described in the language considered. In a Pickwickian sense we shall still say that a proposition a is verified by a possible situation *A*, but now that only means that if *A* were real, a would be true.

An imaginary situation is a non-being. Hence to admit them as the reference of false propositions is to infringe what Plato had called 'the ban of the great Parmenides' : 'Keep your mind from this way of enquiry, for never will you show that non-being is'. (2) In this, however, we follow in the steps of the great Frege, whose minimal semantics for propositions still admits of two situations: (3) the one real (*das Wahre*), the other one imaginary (*das Falsche*). The former corresponds to 'the One' of Parmenides and to the totality of facts' of Wittgenstein; the latter obviously has no counterpart in Parmenides, and no clear-cut counterpart in Wittgenstein." (pp. 165-166)

From: Bogulasw Woloniewicz, "A Wittgensteinian Semantics for Propositions", in: Cora Diamond and Jenny Teichman (eds.), *Intention and intentionality. Essays in Honour of G. E. M. Anscombe.*, Ithaca: Cornell University Press 1979, pp. 165-178.

Roman Suszko

"Ludwig Wittgenstein attempted in the Tractatus to build a theory of the epistemological opposition:
Mind (language) - Reality (being)
One may distinguish in the Tractatus the three following components:
1. Ontology, i.e., a theory of being,
2. Syntax, i.e., a theory of the structure of language (mind),
3. Semantics, i.e., a theory of the epistemological relations between linguistic expressions and reality.
I present below the formalized version of Wittgenstein's ontology. The syntax and semantics contained in Tractatus will be not considered here.
Wittgenstein's ontology is general and a formal theory of being. It may be called here shortly: ontology. It concerns (independently of time and space) (*), situations (facts, negative facts, atomic and compound situations) and objects. Thus, the ontology is composed of two parts:
1. s-ontology, i.e., the ontology of situations (*Sachlagen*),
2. o-ontology, i.e., the ontology of objects (*Gegenstände*).
The link between the two parts of ontology consists in the somewhat mysterious concept of a state of affairs (*Sachverhalt*) and that of a configuration of objects. The s-ontology is an original theory of Ludwig Wittgenstein.
It is related in a sense to certain conceptions of G. Frege and to the formalized system of protothetics of St. Leśniewski. The theories of Frege and Leśniewski make use of sentential variables and of operators (e.g. quantifiers) binding them. The s-ontology is also to be formalized by means of sentential variables and corresponding operators binding them.
This is the cause of a certain strangeness of s-ontology and, consequently, of the whole of Wittgenstein's philosophy. Firstly, most formalized languages of contemporary mathematical logic do not use bound sentential variables. On the other hand, the Tractatus essentially uses natural language and the notions and statements of s-ontology formulated in this language may seem to be produced by hypostatising thinking. Certainly, thinking in natural language is much more appropriate to the o-ontology than to s-ontology. Consequently, mathematical thinking in its historical development up to today is concerned with (abstract) objects and not situations." (p. 8)

Notes

(*) There is an opinion that mereology, a formal theory built by St. Leśniewski, is a suitable basis for the theory of spatiotemporal relations.

From: Roman Suszko, "Ontology in the *Tractatus* of L. Wittgenstein", *Notre Dame Journal of Formal Logic* 9, 1968, pp. 7-33.

Jerzy PerzanowskiI

"The main aim of my paper is to supply evidence that ontology and semantics of the Tractatus (as well as further philosophical theories which are to be found therein) are much more coherent and interconnected than it is usually believed.
2. One evidence comes from the history of Wittgenstein's working on the Tractatus which is now well-known due, mainly, to the efforts of Professors G. E. M. Anscombe and G. H. von Wright. Wittgenstein started with the basic question of the philosophy of logic: Why does logic (4) work? The study of this problem led him to questions concerning the nature of language and next to ontological considerations. In Wittgenstein's own words ". . . Yes, my work has extended from the

foundations of logic to the nature of the world. . . " (*Tractatus* 2.8; *Notebooks 1914-1916* p. 79). The final text of the Tractatus is logically ordered, i.e. from ontology via theory of language to philosophy of logic, which is the reverse of the historical order of Wittgenstein's investigations. It may be interesting to add that the conversion of the first philosophy of Wittgenstein into the second one may be outlined as passing from basing philosophy of language and philosophy of logic upon ontology to grounding it on pragmatics and/or epistemology.

3. Surely, essential evidence would be more welcome than a historical one. It may come from a careful, point-by-point reading of the Tractatus, with emphasis put on, let's say; the "deductive closure" of it: on the logical connections between particular Tractarian theses, on their consequences, on looking for arguments and interpretations which eliminate apparent inconsistencies of the Tractatus. For such a method of reading it is really important to solve "puzzles" found in the text. But before discussing several puzzles I wish to present, the most important data concerning the Tractatus ontology should be recalled.

4. The ontological part of the Tractatus occupying its first few pages consists of 49 theses: 1-2063 and concerns 65 notions --from "the world" and "what is the case" in 1 to the "independent" in 2.061 -- introduced with the frequency vrying from 21 uses of one notion (object -- Gegenstand and state of affairs--Sachverhalt) to notions mentioned only once. From the frequency point of view the ontology of the Tractatus is the ontology of objects and states of affairs, but understanding it as the ontology of objects, states of affairs and facts is more common and reasonable.

A very brief account of the Tractatus ontology is as follows: The world is the totality of facts, facts are constituted by states of affairs consisting of objects standing in relations to each other. Objects are simples, the rest consists of complex items (states of affairs, facts, situations, the world): What is complex has a structure, i.e. the way objects hang together in the item and the stuff (or substance), i.e. a collection of objects included in the item: The object is the item which is constant; fixed and necessary, whereas the configuration of objects (complex item!) is the item which is changeable and contingent. Which configuration is possible is determined by internal (essential) properties of objects entering into a given configuration, by their nature. Let me recall 2.012: In logic nothing is accidental, if a thing can occur in a state of affairs, the possibility of the state of affairs must be written into the thing itself." (p. 224-225)

(...)

"10. Now let me pass to the most discussed question of the Tractatus ontology: What are Tractarian objects? Universals? Particulars? Objects of acquaintance? Colours? Geometrical points? and so on. Many authors, basing their opinion on very few examples, and rather cryptic Tractarian, comments, try to state a general view on Tractatus objects. This seems to be rather hopeless, mainly because the ontology of the Tractatus is indeed a purely "logical" construction, what, according to Wittgenstein's opinion from the time of Tractatus' writing (12), relieve him from a duty to decide a purely empirical question--whether this thing or that is a simple thing or a complex thing.

Therefore, I do not look for concrete examples of objects and I won't hazard establishing a general view on Tractarian objects. Instead, I should like to write a few words of warning, listed in five points below.

(i) Tractarian objects are simples, items which are opposed to complex ones. These two notions: simple--complex are conjugate. Hence any theory of objects must at the same time be a theory of complexes, and any family of concrete objects generates a family of connected complexes. To say which items are objects means to solve the analogous question for complexes.

(ii) The opposition "simple-complex" is relative to a given analysis (See *Notebooks 1914-1916*), i.e. to a given language of analysis and to some methods of decomposition. Hence, any fruitful discussion of this opposition has to start with description of the language of analysis, particularly with, delimitation and classification of its names, and with indicating the methods of analysis. Let me recall that no language of analysis is described in the Tractatus in a satisfactory way!

(iii) By choosing appropriate language and method(s) of analysis we, in fact, determine its results. This two-parameter relativeness is the most important facet we should take into account when discussing the problem of objects. Several options, all of them in accordance with Tractatus ontology, are left open therein.

(iv) Particularly, taking appropriate "part-whole" methods of analysis (and, of course, an appropriate language) we obtain a very popular option that objects are individuals (or atoms), whereas complexes are some--combinatorial or mereological, etc.--combinations of atoms. However, if we use method of logical analysis, i.e. when we ask which names of a given language are undefinable, we conclude that category of simples consists of, on the one hand,

all names ostensibly defined (i.e. by indication of examples. as for instance colours), and, on the other hand, the most general notions of the language (i.e. universals), which --according to the classical theory of definition -- are undefinable. To indicate complexes is much more difficult task in the case considered. For instance, some of them must be items equivalent to combinations of universals, f.ex. individuals if we accept the "bundle" theory of individuals (an individual is equivalent to the bundle of all its properties!).

Of course, choosing appropriate language and methods we may obtain also the phenomenalistic option: objects are Russellian objects of acquaintance (sense data). In this case complexes would be like Machian bundles of sensations.

All these conceptions, if only in accordance with Tractatus main claims, are only particularizations of more general Tractatus ontology; they are rather metaphysical than ontological theories.

(v) Bearing in mind how heavily Tractarian ontology depends on objects, esp. on their internal properties, we must, in any option, answer carefully not only what complexes are, but also we should decide what their internal properties are. This important question is very frequently overlooked, perhaps because it is not possible to discuss this question in the original language of analysis. For such a discussion we must introduce a stronger (meta-) language!

11. To sum up, according to the outlined interpretation the *Tractatus* ontology is, very modal indeed. Not only because many fundamental notions are modal ones, including the notion of "form" which, as I try to show, is the central notion of the *Tractatus* ontology; but also because the Tractatus ontological machinery works according to rules taking into account both what is done and what can be done--all what is possible (remember--the logical space!). Moreover, it should be pointed out that the crux of the interpretation lies not exactly in emphasizing the role played by "form" in the T *ractatus* (What was observed previously by several observant authors), but in its explication (II) with subsequent comments which makes clear how heavily Tractarian ontology is based on objects, esp. on their internal properties (*) -- much more heavily than it is usually recognized.

Is my interpretation right? I am offering the following four arguments to support it:

FIRST, I was trying to be so close to Wittgenstein's own words as possible;

SECOND, The interpretation solves in the uniform way several notorious puzzles of the *Tractatus*;

THIRD, It gives insights into the coherent construction of the main body of the Tractatus, particularly--through the outlined ontological solutions to the semantical puzzles discussed previously--into the way in which Tractarian semantics is based on ontology.

Let me also recall--and this is meant to be an addition to all three first arguments--Wittgenstein's well-known dissatisfaction with early interpretations of the *Tractatus*, which later on have become standard. The *Tractatus* ontology seems to be much more close to continental tradition of objects' ontology than it was recognized i.e. by B. Russell and F. Ramsey.

And--last but not least--

FOURTH, When we compare the text of the *Tractatus* with the text of the *Prototractatus* we note that Wittgenstein's amendments are, in fact, responsible for the second and the third puzzle. Namely, both 2.033 as well as the theses defining (in the spirit of 2.033) the form of objects, and--in the course--the second definition of the form of representation are not to be found in the *Prototractatus*, all of them were introduced into the text in the last period of Wittgenstein's working on the Tractatus.

I don't believe that Wittgenstein's intention was to spoil the *Tractatus*, on the contrary--I do believe-- that he introduced these amendments to point out the intended meaning of the text." (pp. 229-230)

Notes

(*) Both Wittgenstein's terminology (internal--external) and his claims about the nature of objects, particularly 2.012-2.0141, confronts us with the following questions: Either the structure of a given configuration consists only of one relation or it may be factorized into relations: Such "structure" relation, in turn, is determined by the nature of objects (i.e. internal properties) standing in it. The relations of a given structure, using the terminology of F. H. Bradley as presented in B. Russell *My philosophical development* (1959), are internal relations. Hence any relation is the internal one (the axiom of internal relations), provided, that to be a relation is to be a relation in some structure. However, in Russell's opinion the axiom of internal relations implies monism, whereas Tractarian ontology is a pluralistic one. Therefore, the problem of connections between monism and the axiom of internal relations should be reexamined." (pp. 229-230)"

From: "Some Ontological and Semantical Puzzles of Wittgenstein's *Tractatus*", in: Rudolf Haller (ed.), *Aesthetics. Proceedings of the 8th International Wittgenstein Symposium, 15th - 21st August 1983, Kirchberg am Wessel (Österreich)*, Wien: Holder-Pichler-Tempsky 1984, pp. 224-230.

"*Towards Post-Tractatus Ontology*. 1. Surely the above title is rather dark. Therefore, let me start with a few words of clarification. "Post-Tractatus" means either after "Tractatus" or a natural prolongation of the books' sequence: "Proto-Tractatus", "Tractatus",... . Hence the title of this paper means either the task of developing ontology built up after "Tractatus" clues, by taking its claims and lesson seriously, or clarification of the "Tractatus" text, by explaining notions and providing its claims with well-grounded arguments, trying thus to develop, step by step, a more advanced and better argued version of Wittgenstein's treatise. As regards Tractarian ontology realizations of the first task are still rather rare. Instead, most of investigators try to adapt ontology of the "Tractatus" to more common and advanced frameworks, looking for its reconstruction. Quite a lot of people, however, have been involved in realization of the second task (1), producing jointly quite convincing explication of Wittgenstein's text and thus opening a way to the proper post-Tractatus investigations.

(...)

Tractarian Ontology. 3. A brief account of the *Tractatus* ontology is as follows: The world is the totality of facts. Facts are constituted by states of affairs consisting of things (2) connected together, hence standing in relations to each other. Things are simples, the rest consists of complex items (states of affairs, facts, situations, the world). Every complex has a structure, i.e. the way things hang together in the item, and the substance – formed by complex's things, usually treated as the collection of simples included in the item. It also has a form, intermediary between the substance and the structure, defined as the possibility of the structure. As regards things, they have no structure; they have, however, both the substance and the form. The substance of a thing includes the thing itself, whereas the form of a thing is the possibility of its occurring in appropriate states of affairs (complexes). In addition, things are unalterable, subsistent, necessary and stable; whereas complexes are changeable, accidental and unstable. Things constitute the foundation of the (onto)logical space – the space of all possible states of affairs (more generally – complexes or configurations). Which configuration is possible is determined by internal (essential) properties of things entering into a given configuration. Indeed, by 2.012 the possibility of a thing's occurrence in a state of affairs (configuration) must be written into the thing itself.
This formal substance-determination is basic and necessary. It produces (determines) all basic (or atomic) complexes and, further, the rest of complexes. Synthesis of atomic configurations is thereby no accidental, for things are mutually dependent, but, on the contrary, synthesis of non-atomic complexes is, to some extent, accidental, for states of affairs (complexes) are independent of one another (2.061)." (pp. 185-186)

Notes

(1) Let me mention a few: pioneer works of R. Carnap [1934], A. Maslow [1961], G. E. M. Anscombe [1959] and E. Stenius [1960]; books by J. Griffin [1964], B. Wolniewicz [1968], [1985], M. and J. Hintikka [1968], D. Pears [1987]; and the series of papers representing respectively: Warsaw lattice-theoretical approach – R. Suszko [1968a], [1968b], [1975], B. Wolniewicz [1982], [1983], [1985], M. Omyla [1982], [1986]; its Boolean version – G. J. Lockhorst [1988]; set-theoretical approach – J. Czermak [1978], [1979], K. Mudershach [1978] and others; its combinatorial version – B. Skyrms [1981] and D. Armstrong [1986]; mereological approach – P. Simons [1986]; geometrical interpretation – L. Goddard and B. Judge [1982], etc. Papers dealing with Tractarian modalities should also be mentioned. Most of them look for appropriate modal logics of the "Tractatus", e. g. R. Carnap's [1946], D. Kaplan's [1964], B. Wolniewicz's [1969], [1972], G. H. von Wright's [1972], [1982], N. B. Cocchiarella's [1974], [1975], G. J. Lockhorst's [1988], and mine [1985], [1989]. [Complete references are given in the *Selected bibliography*.]
(2) From two Wittgenstein's names for simples: things or objects I prefer the former, as the latter by its extreme generality is very useful to denote any item under consideration. Therefore, in

combination ontology we change terminology a bit: simple item is called "element", complex - "combination" or still "complex", whereas "object" means both.

From: "Towards Post-Tractatus Ontology", in: Rudolf Haller and Johannes Brandl (eds.), *Wittgenstein. Towards a Re-Evaluation: Proceedings of the 14th International Wittgenstein-Symposium, Centenary Celebration, 13th to 20th August 1989cKirchberg am Wechsel (Austria)*, Dordrecht: Kluwer 1990.

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23. Both the Tractarian ontology and its semantics are based on two fundamental oppositions: simple - complex, actual - possible.
The first opposition is defined with respect to a given analysis. Notice double relativeness of this opposition - with respect to the language of analysis and its methods.
Actual means: real or existing. Remember that Tractarian possibilities are necessary, whereas facts are contingent.
24. As regards principles, let me note first that in the Tractatus Wittgenstein has accepted Frege's function-paradigm principle.
Trying to find solid foundations to logic and language he was using, it seems, at least four additional principles:
The Principle of Grounding, or *Actuality*: What is possible must be, ontologically, grounded on what is real; the realm of possibilities has to be based on the realm of facts, the world.
This is a very old and fashionable philosophical rule used explicitely, inter alia, by Leibniz.
The Principle of Uniformity: All possibilities (possible worlds) are ontologically equivalent. In other words, the (onto)logical space - the space of all possibilities - is uniform in the sense in which in physics we speak about uniformity of the physical space. i.e., no possibility (possible world) is ontologically distinguished; spaces generated seperately by two possible worlds are the same, they are ontologically indistinguishable.
The principle has several applications in the Tractatus, inter alia, direct - in mysterious theses 2.022, 2.023 and 2.025 claiming jointly that any possible world has the same form (=unum formae), probably substance too, as the real one; and indirect - in claim of simple facts' independence.
While the first principle is very Leibnizian in spirit, the last is strongly anti-Leibnizian.
The Principle of Concreteness: A priori (purely formal) components should be eliminated.
The principle expresses an anti-Russellian move of Wittgenstein against Russell's theory of judgements as claiming that any judgement contains an apriori component, its logical form. This move implies that the notion of form should be defined in a way connecting it with ontological concrets - things. And indeed such a definition was provided by Wittgenstein in 2.033.
Once again the principle is very traditional. It motivates, for instance, Leibniz's nominalism or Bradley's critique of relations.
Chance and Necessity Principle: Everything is a fruit of chance and necessity; to be possible is necessary, to exist - contingent.
The principle is stated explicitly in the Tractatus: in thesis 2.012 - In logic nothing is contingent, and in 1.21 - Each item (in the world - J. P.) can be the case or not the case while everything else remains the same.
It is a very old principle of Democritus, having many occurrences both in philosophy and in science." (pp. 366-367)

From: Jerzy Perzanowski, "What Is Non-Fregean in the Semantics of Wittgenstein's Tractatus and Why?", *Axiomathes*, 1993, 4, pp. 357-372.