

Problems Concerning Logic and the  
Philosophy of Language in the *Tractatus*  
*Logico-Philosophicus*

– Doctoral Dissertation –

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Summary

## 1 Choice of topics and aims of discussion

In my dissertation I discuss some problems concerning logic and the philosophy of language in Ludwig Wittgenstein's *Tractatus Logico-Philosophicus* (henceforth, *Tractatus*). I tried to choose problems about which I could make important new observations, either because the problems have not been covered in literature sofar, or because I feel there is a false consensus regarding them. However, I did not attempt to discuss questions beyond the scope of the *Tractatus*. To some extent, I uncertain whether the problems discussed in my paper have general philosophical importance at all.

## 2 Methods

In the main chapter of the paper I aimed to develop a formal reconstruction of the Tractarian theory of propositions. Formal reconstruction is a rare means of interpreting philosophical texts, and it is not without its dangers. In particular, there are two pitfalls in formal reconstructions. One is that the technical arsenal may distort the interpretation by introducing illegitimate preconceptions. I tried to avoid this by laying out the reconstruction in the weakest possible framework. Another pitfall is that formal methods enforce otherwise unnecessary interpretational decisions even where loose ends are desirable. I have tried to solve this problem two different ways. First, some interpretational decisions could be deferred by weakening the set-theoretical framework. Second, at certain points, I ramified the reconstruction. For example, the nominalist and realist readings of Tractarian ontology—subject to so many debates in the literature—are discussed separately.

I believe that in an ideal case formal reconstruction and informal interpretation can support each other. On the one hand, the outlines of a formal reconstruction are determined by preliminary interpretation. On the other hand, reconstruction influences the interpretation in some of the following ways:

1. it may turn out that interpretational choices that seemed plausible before formalizing have in fact unsustainable consequences;
2. new interpretational choices may turn up in the reconstruction;
3. it may turn out that interpretational choices that were taken

as different before have in fact equivalent consequences;

4. it may turn out that interpretational choices that were taken as equivalent before have in fact different consequences.

The enumeration is incomplete. It is common in the four cases considered that formal means do not terminate but rather stimulate interpretation. This is very important regarding both of the pitfalls mentioned before. Some of the distortions that the application of formal methods bring about are unavoidable, but further interpretation can correct them. This may be followed by further formal reconstruction, which in turn leads to another step of interpretation, and so on; in an ideal case, *ad infinitum*. In the light of a potential series like this, it is not so disheartening if I could accomplish only a fragment of my initial goals.

## 3 Main points of discussion

### 3.1 Tractarian solutions to the color exclusion problem

In the literature there is a certain consensus that the ontological and semantical ideas of the *Tractatus* are incapable of solving the *color exclusion problem*. In particular, the doctrine of the independence of elementary propositions is apparently inconsistent with the linguistic fact that propositions that attribute different degrees of a property to a certain object contradict each other. In this chapter, I attempted to challenge this consensus. By means of constructing a couple of intuitive models, I believe to have showed

that even if Tractarian ontology allows for facts involving degrees, it is neither inconsistent nor categorical.

The last two of the models have two further conclusions. One is that the logical analysis of propositions necessarily involves arbitrary steps. The other is that the color exclusion problem can be solved in the Tractarian context by methods that are used in the simulation of real world phenomena by computer programs. The point of this chapter can be put as follows: *it cannot be ruled out merely on the basis of color exclusion problem that the facts of our world are arranged according to the Tractarian system; but if it is so, it cannot be decided whether we live in a real or a simulated world.*

### 3.2 The proper treatment of Tractarian Quantification

For a long time it was commonly held in the literature that although the *philosophical* system of the *Tractatus* is highly problematic, its internal *logical* system is a sound one for its own purposes. This consensus was broken in the late 70's by Robert Fogelin's work. According to Fogelin, first-order propositions that involve mixed quantification—i.e., those of the form  $\forall x\exists y\phi(x, y)$  or  $\exists x\forall y\phi(x, y)$ —are not expressible by the symbolic means of the *Tractatus*. A couple of years later Peter Geach and Scott Soames attempted to refute Fogelin's arguments, and to show that all first-order propositions can be expressed by Tractarian means. With a few exceptions their solutions are held definitive in the literature.

In this chapter I argue for the following points:

1. both Fogelin's, Geach's and Soames' arguments are based on

some false premises;

2. the problems posed by Fogelin can be solved in the Tractarian framework;
3. other problems still seem insolvable; e.g., propositions of the form  $\forall x\exists y(xRy \ \& \ yRx)$  are inexpressible;
4. even propositions like this became expressible after some modifications of the Tractarian system. (These modifications are slight from a technical point of view, but radical from a philosophical one.)

### 3.3 A Formal Reconstruction of the Tractarian Logical Notation

In this chapter, I attempted to develop a formal reconstruction of the Tractarian theory of propositions. As a framework, I chose a rather weak axiomatic set theory which is introduced at the end of the chapter. The reconstruction itself has four steps. The first is the development of *logical space*. The second is the introduction of elementary propositions and elementary *propositional variables*. The third is the introduction of complex propositions and propositional variables. The fourth is the definition of Tarskian semantic concepts.

The *Tractatus*' famous *picture theory of propositions* claims that every proposition reflects the internal structure of the fact it represents, whatever that fact may be. This requirement made the first three of the four steps extremely hard to take. Since we cannot know anything *a priori* about the structures that form the world

of facts, we cannot stipulate the cardinality of objects in a Tractarian *state of affairs* or the cardinality of all objects that constitute the substance of the world. Therefore, the syntax of the language had to be prepared for infinite syntactic constructions. This fact alone explains why the set-theoretic framework could not be omitted from the formal reconstruction.

*Logical space* was introduced in four different versions, according to interpretational choices. Further formulations could be introduced applying the many different concepts and methods of the chapter on quantification. Lack of space kept me from drawing up further alternative versions.

### 3.4 Notes on the reconstruction

In the final chapter of my dissertation, I attempted to draw conclusions from the reconstruction developed in the previous chapter. First, I showed that various interpretations of the concept of *logical space* are compatible with the one in the reconstruction, which thus proved to be a neutral one. In the second section I investigated some arguments concerning the cardinality of Tractarian objects. The result is that some hidden premises in both of these arguments are false, and that there are apparently no *a priori* limitations on the cardinality of objects or the complexity of states of affairs. The third section is devoted to the peculiar relation of syntax to semantics in the *Tractatus*. Quite unusually Tractarian syntax is not independent of semantics; it cannot be given without having previously introduced *logical space*. This has far-reaching consequences regarding the concepts of *tautology* and *inference*; but, being pressed for time, I could not go into the details of these consequences. In the concluding section I took the *showing-saying*

distinction into consideration. I came to the following conclusions:

1. Wittgenstein is right in claiming that this distinction is universal;
2. but he is wrong in claiming that the distinction is absolute.

I believe the second conclusion to be the most important one in my dissertation, since it affects immediately the notorious closing remark of the *Tractatus*. If one cannot make an absolute distinction between what can be said and what can be showed, and if everything that can only be shown in one linguistic framework can be said in another one, then the imperative to pass over the unsayable in silence loses its sense.

## 4 Publications on the topics discussed in the dissertation

### 4.1 Papers

1. *A cella, amin belül van a kulcs: Szélgjegyzetek Wittgenstein Tractatusához. (The Cell and Its Key Within—Notes on Wittgenstein's 'Tractatus')*, In: Gulyás, G. (ed.), *Megkerült dilemmák: Vajda Mihály hatvanadik születésnapjára – debreceni tanítványaitól (Dilemmas Recovered—To Mihály Vajda from His Debrecen Students)*, Debrecen, 1995. pp. 118-124.
2. *Diagnózis – terápia – csábítás: Wittgenstein szerepei (Diagnosis, Therapy and Charm—Roles of Wittgenstein)*, Diag-

- nózis (special issue of Szépliteratúrai Ajándék), 1998. pp. 44-49.
3. *Megértés, igazság és jelentés Wittgenstein Tractatusában (Understanding, Truth and Meaning in Wittgenstein's 'Tractatus')*, Világosság 2001/2-3, pp. 66-73.
  4. *A Tractatus kijelentéelmélete: logikai rekonstrukció (The Theory of Propositions in the Tractatus—A Formal Reconstruction)*, Magyar Filozófiai Szemle 2001/3, pp. 251-278.
  5. *Tractatusi megoldások a színekizárási problémára (Tractarian Solutions to the Color Exclusion Problem)*, Vulgo 2004/2. pp. 69-81.

## 4.2 Translations

1. Wittgenstein, L., *Logikai-filozófiai értekezés (Tractatus Logico-Philosophicus)* (with Ákos Polgárdi), Atlantisz, Budapest, 2004.
2. Ramsey, F., *Recenzió Wittgenstein Tractatusáról (A Critical Notice of the 'Tractatus')*, Vulgo 2004/2, pp. 190-202.
3. Wittgenstein, L., *Peter Coffey: A logika tudománya (A Review of Coffey, P, 'The Science of Logic')*, Vulgo 2004/2, pp. 188-189.