

Today's programme

- A very short repetition
- What is Wittgenstein trying to do in the TLP?
- Some problems in TLP
 - Saying and showing
 - The limits of language: Sense and nonsense
 - Logic
 - Philosophy

Stimulation from Frege:

- Frege's logicism and his three principles
- The distinction between Sense and Reference (*Sinn und Bedeutung*)
- The idea of expressions as functions (truth-functional semantics)
- The idea of a *Begriffsschrift* as a tool for logical (syntactic) analysis

Stimulation from Russell

- Logical analysis and the problem of descriptions (philosophy as "critique of language", cf. TLP 4.0031)
- Russell's paradox and the theory of types

Russell's "theory of types" began with ...

- Frege's definition of "number" in the *Grundlagen der Arithmetik*:
 - A number is a class of classes with as many members as a given class.
 - Can we find a class whose size is guaranteed by logic?
 - **0** is defined as the class of all classes with as many members as the class of objects which are not identical to themselves (the null-class)
 - **1** is defined as the class of classes with as many members as the class of null-classes
 - **2** is defined as the class of classes with as many members as the class whose members are zero and one
 - ...etc

Russell's "theory of types"

- Frege's logicist system presupposes that all classes must be capable of being members of other classes.
- This leads to a paradox which Russell points out in 1902: Does "the class of all classes which don't contain themselves as their own elements" contain itself as an element or not?
- Frege was devastated by this, because it means there is a contradiction in his system, and thus the whole idea of building mathematics upon logic is jeopardized
- Russell proposed his "theory of types" as a solution to the paradox

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Similar antinomies

- The Barber paradox:
 - The barber is a man in town who shaves those and only those men in town who do not shave themselves. **Who shaves the barber?**
- "This sentence is false"
 - Is it true or false?
- "I am always lying."
 - Always false?

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Russell's solution: A "theory of types" (1908)

To solve the paradox, Russell develops the theory of types / of hierarchy of classes.

- There are principal differences of *type* between
 - (A) Classes of individuals and
 - (B) Classes of classes of individuals
 - The elements of (A) are individuals; the elements of (B) are classes. One must not mix the two and make a class an element of itself.

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Presuppositions about logical analysis shared by Frege and Russell

- logic is an essential framework of all thought, a system of maximally general truths
- logic is conceived of as a science of objective laws of truth; laws of logic are distinguished from the laws of the special sciences only by their absolute generality

Witt disagrees

5.551 Our fundamental principle is that every question which can be decided at all by logic can be decided off-hand [ohne weiteres].

(And if we get into a situation where we need to answer such a problem by looking at the world, this shows that we are on a fundamentally wrong track.)

5.552 [...] Logic *precedes* every experience—that something is so.

Presuppositions about logical analysis shared by Frege and Russell

- it must be possible to give a clear, completely explicit and unambiguous expression to the propositional contents judged true or false (otherwise we are dealing with nonsense)

Witt agrees

3.23 The requirement of the possibility of the simple signs is the requirement of the determinateness of the sense.

3.35 There is one and only one complete analysis of the proposition.

What is Wittgenstein trying to do in the *Tractatus*?

My *whole* task consists in explaining the nature of the proposition [Satz].
(NB p. 39, 22.1.1915)

So a major question in the *Tractatus* is how to distinguish sentences with sense from sentences that are senseless or nonsensical (i.e. do not express thoughts):
Everything that can be thought at all can be thought clearly. Everything that can be said can be said clearly.
(TLP 4.116)

Overview of the TLP

- <http://tractatus.lib.uiowa.edu/map/>

Die Hauptsätze des TLP

1. Die Welt ist alles, was der Fall ist.
2. Was der Fall ist, die Tatsache, ist das Bestehen von Sachverhalten.
3. Das logische Bild der Tatsachen ist der Gedanke.
4. Der Gedanke ist der sinnvolle Satz.
5. Der Satz ist die Wahrheitsfunktion der Elementarsätze. (Der Elementarsatz ist eine Wahrheitsfunktion seiner selbst.)
6. Die allgemeine Form der Wahrheitsfunktion ist $[\bar{p}, \bar{\xi}, N(\bar{\xi})]$. Dies ist die allgemeine Form des Satzes.
7. Wovon man nicht sprechen kann, darüber muss man schweigen.

The main propositions of the TLP

1. The world is everything that is the case.
2. What is the case, the fact, is the existence of atomic facts /states of affairs.
3. The logical picture of the facts is the thought.
4. The thought is the significant proposition.
5. Propositions are truth-functions of elementary propositions. (An elementary proposition is a truth function of itself.)
6. The general form of a truth-function is: $[\bar{p}, \bar{\xi}, N(\bar{\xi})]$. This is the general form of a proposition.
7. Whereof one cannot speak, thereof one must be silent.

- 1 and 2: the «metaphysics» of the TLP
- 3 and 4: The picture theory (isomorphism between language and reality)
- 5: the thesis of truth-functionality
- 6: an algorithm for generating molecular propositions by giving the general form of a truth-function
- 7. Saying and showing.
What *can* be shown *cannot* be said. (4.1212)

The metaphysics of the TLP

1. The world is everything that is the case.
2. What is the case, the fact, is the existence of atomic facts/
states of affairs.

“Logical atomism”: the world consists of ultimate “facts” (or “atoms”) that cannot be broken down any further, and the logical structure of propositions mirrors the structure of reality.

What are the atoms?

For Russell, individuals

For Witt., states of affairs

The «picture theory»

3. The logical picture of the facts is the thought.
4. The thought is the significant proposition.

There is a structural likeness (isomorphism) between language/logic and the world: language represents the world through logical pictures, meaning we can think and talk about how things are.

The “picture theory”

- 3.21 To the configuration of the simple signs in the propositional sign corresponds the configuration of the objects in the state of affairs.

all propositions can be analysed into simple independent elements corresponding to objects making up states of affairs: language represents the world by picturing it.

The isomorphism between language and world

Language (Sprache)	World (Welt)
complex proposition (zusammengesetzter Satz)	a group of states of affairs (Sachlage?)
elementary proposition (Elementarsatz) [sense]	state of affairs (Sachverhalt)
true elementary proposition (wahrer Elementarsatz) [truth]	fact (Tatsache)
name (einfaches Zeichen, Name) [reference]	simple object (einfacher Gegenstand)

- What are objects (*Gegenstände*)?
- There are no examples of simple objects in the TLP.
- W is not interested in this issue; for him it is enough to have shown that if language is to be possible objects must exist. Language is (obviously) possible: therefore, there are objects.

- There is no metalanguage in which I could say what the objects are *in themselves*:

3.221 Objects can only be *named*. Signs are their representatives. I can only speak *about* them: I cannot *put them into words*. [Ich kann nur *von* ihnen sprechen, sie *aussprechen* kann ich nicht.] Propositions can only say *how* things are, not *what* they are.

→ Semantics is ineffable (“unaussprechlich”)

Saying and Showing

W on the *Tractatus*:

The main point is the theory of what can be expressed (*gesagt*) by prop[osition]s – i.e. by language – (and, which come to the same, what can be *thought*) and what cannot be expressed by prop[osition]s, but only shown (*gezeigt*); which, I believe, is the cardinal problem of philosophy.

– Letter to Russell August 18th, 1919.

What kind of metaphysics is implied by TLP?

- Realist interpretation: the objects are part of reality itself, its atoms. The isomorphism between language and reality means that language reflects this reality.
- Idealist interpretation: what counts as the simplest constituent parts of reality is dependent of our system of thought or language. The isomorphism means that our way of representing reality makes it appear as if reality was structured in a certain way.
- Deflationist (quietist) interpretation: in the end, talk of objects is nonsensical. The isomorphism of language and reality cannot and need not be explained by any metaphysical theory.

See Child: 55-60

Quietism?

"Wittgenstein's quietism is not a refusal to engage in substantive philosophy in the face of what everyone has to accept as genuine problems. It is an activity of diagnosing, so as to explain away, some appearances that we are confronted with genuine problems. The supposed problems disappear, leaving no need for theory construction to make things 'less mysterious.'"

(McDowell 2009, 371)

The truth-functional view of language

- 5. Propositions are truth-functions of elementary propositions. (An elementary proposition is a truth function of itself.)
- 5.101 The truth-functions of every number of elementary propositions can be written in a schema

Truth-tables

P	Q	P & Q
T	T	T
T	F	F
F	T	F
F	F	F

Truth-Table for Conjunction

In this table, P represents the left conjunct, Q represents the right conjunct, and the formula P & Q represents the conjunction as a whole.

Cf. TLP 4.31, 5.101

- But what about expressions that seem to defy a truth-functional characterization, say ethical propositions like «It is wrong that people are starving in the world», etc.?
- According to the TLP, these are not really propositions, but nonsense:

There can be no ethical propositions (6.42)

6. The general form of a truth-function is: $[\bar{p}, \bar{\xi}, N(\bar{\xi})]$. This is the general form of a proposition.

- Describes an algorithm or a procedure which can generate all other propositions from given elemental propositions.
- Builds upon Scheffer's proof that all truth-functions can be obtained out of «not-p and not-q» («nand»)

- W demonstrates this by showing that the concept number is the general form which is common to all numbers.
- The general form of a cardinal number is: $[0, \xi, \xi+1]$

7. Wovon man nicht sprechen kann, darüber muss man schweigen.

7. Whereof one cannot speak, thereof one must be silent.

Saying and Showing

W on the *Tractatus*:

The main point is the theory of what can be expressed (gesagt) by prop[osition]s – i.e. by language – (and, which come to the same, what can be *thought*) and what cannot be expressed by prop[osition]s, but only shown (gezeigt); which, I believe, is the cardinal problem of philosophy.

– Letter to Russell August 18th, 1919.

The preface again...

The book deals with the problems of philosophy and shows, as I believe, that the method of formulating these problems rests on the misunderstanding of the logic of our language. Its whole meaning could be summed up somewhat as follows: What can be said at all can be said clearly; and whereof one cannot speak thereof one must be silent. [...] the *truth* of the thoughts communicated here seems to me unassailable and definitive. I am, therefore, of the opinion that the problems have in essentials been finally solved. And if I am not mistaken in this, then the value of this work secondly consists in the fact that it shows how little has been done when these problems have been solved.

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And again...

The book will, therefore, draw a limit to thinking, or rather—not to thinking, but to the expression of thoughts; for, in order to draw a limit to thinking we should have to be able to think both sides of this limit (we should therefore have to be able to think what cannot be thought).

The limit can, therefore, only be drawn in language and what lies on the other side of the limit will be simply nonsense.

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- It follows from section 5 in TLP that «propositions» that are not truth-functional do not have sense (since they cannot picture states of affairs or express thoughts)
- Propositions with sense are either true or false (bi-polar)

Principle of bipolarity

Every proposition is essentially true-false: to understand it, we must know both what must be the case if it is true, and what must be the case if it is false. Thus a proposition has two poles, corresponding to the case of its truth and the case of its falsehood.

(NL, 98-99)

- Unipolar propositions are always true (tautologies) or always false (contradictions) and therefore senseless (*sinnlos*)
- Nonsensical (*unsinning*) «propositions» do not have a truth value at all

Bipolarity vs. bivalence

- Principle of Bivalence: every proposition must be either true or false.
- Principle of Bipolarity: true/false must in addition be “live options” for every proposition, i.e. every true proposition must also be capable of being false and every false proposition capable of being true.

• Cf. Morris 2008

Nonsensical sentences include:

1. Sentences which contain value concepts: propositions of ethics and aesthetics.

Propositions cannot express anything higher (6.42)

- But even though statements attempting to express something “higher” (ethics, aesthetics, religion) are nonsensical, they still seem to state something important and convey some kind of truth, even though not in logically correct ways. How is this possible? Are there «unsayable truths» we can just gesture at through language?

There is indeed the inexpressible. This *shows* itself; it is the mystical. (6.522)

- W struggles with this tension for instance in the *Lecture on Ethics* (1929).

Nonsensical sentences include:

2. Any proposition that contains a sign without meaning. (TLP #5.4733)

Frege says: Every legitimately constructed proposition must have a sense; and I say: Every possible proposition is legitimately constructed, and if it has no sense this can only be because we have given no *meaning* to some of its constituent parts. (Even if we believe that we have done so.)

"Socrates is identical" says nothing, because we have given *no* meaning to the word "identical" as *adjective*. For when it occurs as the sign of equality it symbolizes in an entirely different way—the symbolizing relation is another—therefore the symbol is in the two cases entirely different; the two symbols have the sign in common with one another only by accident.

Saying and showing: sense and nonsense

- Russell: Certain combinations of signs are to be excluded from language as "nonsensical", e.g. "The class of all humans is a human". The explanation / justification for this exclusion is provided for by the theory of types.
- Wittgenstein: Nonsensical combinations *are* already excluded from language, they are not possible. They may occur on the linguistic surface, but if we look at language's deep logical structure, we will see that the nonsensical combinations cannot occur there.

Saying and showing: sense and nonsense

- Thus, to try to exclude certain combinations of signs does not make sense: It amounts to trying to say that something is not possible which language (through logic) *shows* not to be possible.

See TLP 5.4733 [...] A *possible* sign must also be able to signify. Everything which is possible in logic is also permitted. ("Socrates is identical" means nothing because there is no property which is called "identical". The proposition is senseless because we have not made some arbitrary determination, not because the symbol is in itself unpermissible.)

What about logic?

Logical properties *show* themselves

Logical so-called propositions *shew* [the] logical properties of language and therefore of [the] Universe, but say nothing.

This means that by merely looking at them you can see these properties; whereas, in a proposition proper, you cannot see what is true by looking at it.

(Notes dictated to G. E. Moore in Norway, April 1914)

- This means that logical propositions are *tautologies*.
- Tautologies are senseless (sinnlose) «pseudo-propositions», because they can never be false.
- They do not tell us anything about the world, but show us the «scaffolding» (das Gerüst) of our representational system (6.124)

The nature of logic

- 6.1 The propositions of logic are tautologies.
 6.11 The propositions of logic therefore say nothing. (They are the analytical propositions.)
 6.111 Theories which make a proposition of logic appear substantial are always false.

The nature of logic

- Logic tells us nothing about the world and in the end it can only collect tautologies. Tautologies are complex propositions whose truth value is always True; they are really not "propositions" in the proper sense.
 - "It rains or it does not rain"
- Traditional (Aristotelian) «laws of logic», such as the law of excluded middle $[p \vee \neg p]$ and the law of contradiction $[\neg (p \ \& \ \neg p)]$ can be shown to be tautologies.
- NB this also applies to mathematics, since mathematics is «a method of logic». Thus, equations like $2+2=4$ are tautologies, that do not tell us anything about reality.

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- 6.112 The correct explanation of logical propositions must give them a peculiar position among all propositions.
 6.113 It is the characteristic mark of logical propositions that one can perceive in the symbol alone that they are true; and this fact contains in itself the whole philosophy of logic. And so also it is one of the most important facts that the truth or falsehood of non-logical propositions can not be recognized from the propositions alone.

6.12 The fact that the propositions of logic are tautologies shows the formal—logical—properties of language, of the world.

6.1251 Hence there can *never* be surprises in logic.

6.13 Logic is not a theory but a reflexion of the world.

Logic mirrors the world → there is no «philosophical logic»

What about philosophy?

As we noted, any proposition that contains a sign without meaning is nonsensical. (TLP 5.4733)

"Socrates is identical" says nothing, because we have given *no* meaning to the word "identical" as *adjective*. For when it occurs as the sign of equality it symbolizes in an entirely different way—the symbolizing relation is another—therefore the symbol is in the two cases entirely different; the two symbols have the sign in common with one another only by accident.

Philosophy is an area where this kind of misunderstanding of the logic of language abounds. Therefore, most of philosophy is simply nonsense (*einfach Unsinn*).

4.003 Most propositions and questions that have been written about philosophical matters, are not false, but nonsensical. Consequently we cannot give any answer to questions of this kind, but can only point out that they are nonsensical. Most of the propositions and questions of philosophers arise from our failure to understand the logic of our language. (They are of the same kind as the question whether the Good is more or less identical than the Beautiful.)

Philosophy is an activity

4.112 The object of philosophy is the logical clarification of thoughts.

Philosophy is not a theory but an activity.

A philosophical work consists essentially of elucidations.

Philosophy is an activity

The result of philosophy is not a number of "philosophical propositions", but to make propositions clear.

Philosophy should make clear and delimit sharply the thoughts which otherwise are, as it were, opaque and blurred.

In philosophy, we should actually say nothing

- The right method of philosophy would be this: To say nothing except what can be said, *i.e.* the propositions of natural science, *i.e.* something that has nothing to do with philosophy; and then always, when someone else wished to say something metaphysical, to demonstrate to him that he had given no meaning to certain signs in his propositions. This method would be unsatisfying to the other—he would not have the feeling that we were teaching him philosophy—but it would be the only strictly correct method.

But what about TLP itself?

- Also sentences which contain formal concepts are "*unsinnig*".
 - Examples for formal concepts include "object", "complex", "number" (TLP 4.126f)
 - TLP 4.1272: *So one cannot say, e.g. "There are objects ..."*
- But the TLP still seems to say a lot about this!

Performative inconsistency?

Russell in his introduction to TLP:

"What causes hesitation is the fact that, after all, Mr. Wittgenstein manages to say a good deal about what cannot be said, thus suggesting to the sceptical reader that possibly there may be some loophole through a hierarchy of languages, or by some other exit."

W is prepared to bite the bullet

6.54 My propositions are elucidatory [erläutern] in this way: he who understands me finally recognizes them as nonsensical [unsinnig], when he has climbed out through them, on them, over them. (He must so to speak throw away the ladder, after he has climbed up on it.)

He must surmount these propositions; then he sees the world rightly.