A. Pichler, S. Säätelä: *Introduction to Wittgenstein*

Lecture 3, 2.9.2024:

- The elementary proposition
- The molecular proposition
- Truth functions
- “Nonsense” and other problems of the *Tractatus*

Repetition and outlook

- Philosophical problems are **conceptual** confusions // have to do with …
  - Philosophical problems are problems (co-)produced by false / misunderstood / confused concepts // have to do with …
- We are confused / misled by the **surface** structure of our language.
  - Cf. “The man saw the boy with the binoculars”, “The present king of France is bald” …
- We misunderstand what and how language and our concepts **represent** (and work).
  - Philosophy of *language*
- Understanding **reference** and **sense** is key to understanding the representation of the world in language / thought.
- Sense and reference are to be located in the **depth structure**, not in the surface structure of language.
  - Philosophical problems are solved by attending to our concepts in the depth = *logical* structure of language
  - Later Wittgenstein: Philosophical problems are solved by attending to our concepts in the depth = *practice* structure of language
- Depth structure, language’s real structure is language as **logically analyzed**.
- Logical analysis and **notation** help to adequately capture sense and reference.
  - Not *Subject* and *Predicate*, but *Begriffsschrift*, *Function*, *Logical operator* (connectives and quantifiers) …
- My whole task consists in explaining the nature of the proposition. (NB p. 39, 22.1.1915)
- → Picture theory: How shall we account for sense and reference? How does language, in its depth structure, represent the world? What is truth?

Repetition and outlook

Reference:

- For there to be reference, there must be simple and basic constituents in our language and thought that connect with the world, that refer to things in the world.
- In order to solve our philosophical problems, we need to separate, on the level of depth grammar, what has reference from what has not.

Sense:

- Only propositions that can be true, but aren't *necessarily* true, can express a thought and say something about the world, and can thus have *sense* (cf. tautologies). Only propositions that can be false, but aren't *necessarily* false, can express a thought and say something about the world, and can thus have *sense* (cf. contradictions).
- I.e. only true-false ("bi-polar") propositions (= propositions that can be true and that can also be false) can say something about the world and have sense. Only propositions that contain parts with reference can be bi-polar, and therefore only propositions that contain parts with reference can have sense.

Truth:

- The truth value (True / False) of an elementary proposition is determined by its picturing relation to the world.
- The (output) truth value of a molecular proposition is determined by, or is a function of, the (input) truth values of the elementary propositions it is composed of.

- Which is the home of meaning, sense, reference, and truth in language? The elementary proposition.
- Which is the home of meaning, sense, reference, and truth in thinking? The thought ("Gedanke").
  - What is the thought? See TLP 4.

Repetition and outlook

- The elementary proposition plays an indispensable role not only for the picture theory, but for the entire *Tractatus* philosophy of language and account of sense, meaning, truth.
  - It is the **elementary proposition** that has sense and is a genuine picture, representation of something in the world.
- The colour exclusion problem (and other problems) brings Wittgenstein to abandon the *Tractatus* notion of the elementary proposition.
- The abandonment of the elementary proposition brings with it the abandonment of the *Tractatus* account of
  - Sense, reference, truth, necessity and impossibility …

The elementary proposition

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

Reality and World (Wirklichkeit und Welt)* * NB: «Welt» ≠ «Wirklichkeit»	Language (Sprache)
o o o o o simple objects (einfache Gegenstände)	o o o o o names (einfache Zeichen, Namen)
The name refers to the simple object, but only by «participating» in an elementary proposition.	
oo (elementary) state of affairs / state / status rerum (Sachverhalt): a concatenation of simple objects	oo **elementary proposition** (Elementarsatz, einfacher Satz): a concatenation of names
An elementary proposition has *sense*. If the state of affairs that is asserted by the elementary propositions obtains, then the elementary proposition is *true*, and the state of affairs a *fact* (Tatsache).	
oo oo «It rains. My cat gets wet.» (molecular) state of affairs (Sachlage?)	oo → oo «The state of affairs *It rains* implies the state of affairs *My cat gets wet*.» molecular proposition (zusammengesetzter Satz)

- Elementary propositions have sense. (Frege)
- Elementary propositions don’t have reference. (≠ Frege)
  - It is only the simple names which concatenate to the elementary proposition, that each have reference (to a simple object).
- Elementary propositions are bi-polar.
- Elementary propositions are simple.
- Elementary propositions are logically independent of each other.
- The sense of an elementary proposition is 100% determinate.
  - Without **100%** determinacy of sense, it is unclear which the objects referred to would be - and, as consequences: 1) the sense of the proposition is undetermined; 2) it cannot be decided whether the proposition is true or false).
  - The reference of a simple name is 100% determinate.
- It is only within the elementary proposition that the simple name refers to the simple object. (Frege)

The molecular proposition

What is a *molecular proposition*?

- Through logical operators, a molecular proposition is built out of elementary propositions.
- Molecular propositions result from the logical operations that we perform on the elementary propositions.
  - The logical operators / connectives do *not* represent (and do not refer).
    - ≠ Frege and Russell who assume that there are «logische Gegenstände», and hence also have a different conception of logic
  - With molecular propositions we perform logical operations on our elementary pictures of the world.
- Logical connectives: ~, &, v, →
- Examples of molecular sentences built with logical connectives:
  - ”It rains and my cat is grey”*:* p & q
  - ”It rains or my cat is grey”*:* p v q
  - ”(It rains) implies (My cat is grey)”: p → q
  - ”(It rains) implies (My cat gets wet)”: p → r

Logical connectives

p	~	&	v	→	|	q
W						W
W						F
F						W
F						F

Truth and truth functions

How can I find out whether an *elementary proposition* is true?

E.g. “It rains” (= p)

TLP 2.223:

- In order to discover whether the picture is true or false we must compare it with reality.

TLP 4.024:

- To understand a proposition means to know what is the case, if it is true.

How can I find out whether a **molecular proposition** is true?

p	~
W	F
F	W

(1) (2)

How can I find out whether a molecular proposition is true?

p	&	q
W	W	W
W	F	F
F	F	W
F	F	F
(1)	(3)	(2)

How can I find out whether a molecular proposition is true?

p	v	q
W	W	W
W	W	F
F	W	W
F	F	F
(1)	(3)	(2)

How can I find out whether a molecular proposition is true?

p	→	q
W	W	W
W	F	F
F	W	W
F	W	F
(1)	(3)	(2)

How can I find out whether a molecular proposition is true?

Sheffer stroke ~(p & q)

p	|	q
W	F	W
W	W	F
F	W	W
F	W	F
(1)	(3)	(2)

Tautologies: Law of noncontradiction

~	(p	&	~	p)
W	W	F	F	W
W	F	F	W	F
(3)		(2)	(1)	

Tautologies: Law of excluded middle

(p	v	~	p)
W	W	F	W
F	W	W	F
	(2)	(1)	

The truth table method permits to calculate the truth value = to establish the truth / falsehood of extremely long and complex molecular propositions! E.g.

((p ∧ q) ∨ (~r → s)) ∧ ((t ↔ u) ∨ (v ∧ ~w)) ∧ ((x ∨ y) → (z ↔ (~a ∨ b))) ∧ ((c→d) ∧ (e ∨~f)) ∧ ((g ↔ h) ∨ (I ∧ ~j)) ∧ ((k ∨ l) → (m ↔ (~n ∨ o)))

But doing this manually will take a long time. Alone listing all the possible combinations of truth values between all the elementary propositions (p, q …) will already take a lot of time … ☺

p	q	r	s	t	u	v	w	x	y	z	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	F
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	F	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	F	F
…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…

N.B.:

The truth table method for establishing the truth / validity of a molecular proposition presupposes that the elementary propositions which it is composed of, indeed are *elementary propositions in the sense of the TLP*: i.e. that they are logically independent of each other; that their truth values can be assigned independently of each other; **that the truth value of one elementary proposition is True / False entirely independently of the truth value of another elementary proposition**!

The colour exclusion problem

- Elementary propositions are simple.
- Elementary propositions are bi-polar.
- Elementary propositions are logically independent of each other.
- The sense of an elementary proposition is 100% determinate.
- But what if there are types of propositions for which it seems impossible to reach a level of
  - Complete analysis
  - Complete simplicity
  - Complete determinacy of sense
  - Logical independence

  ?

«Can you give me an example of an elementary proposition?»

- The *Tractatus* doesn't give examples of simple objects.
- The *Tractatus* doesn't give examples of simple names.
- The *Tractatus* doesn't give examples of elementary propositions.
- Our typical everyday language sentences are not like elementary propositions:
  - They are molecular rather than elementary propositions.
  - They are often not truth- and falsehood-capable (e.g. «Give me an apple!», «Hi!»).
  - They typically contain complex expressions referring to complex objects.
  - They are typically *not* logically independent of each other.
  - They sometimes don‘t seem to have much of an internal / depth structure (e.g. „Hi!“).
  - …

Does it makes sense to conceive of colour statements, and sense-data statements more generally, as elementary propositions?

- Sense-data statements:
  - «Here red»
  - «There green»
  - «This heavy»
  - «Here pain»
  - …

➢ Do «Here red», «This heavy», «This is red», «This is green» … (on depth analysis-level) consist of nothing but names that refer to simple objects? Is their sense 100% determinate? Are they bi-polar? Are they absolutely simple and independent of each other?

Tractatus: No

Colour statements cannot be elementary propositions because they contradict / exclude each other.

TLP 6.375

- Just as the only necessity that exists is *logical* necessity, so too the only impossibility that exists is *logical* impossibility.

TLP 6.3751

- For example, the simultaneous presence of two colours at the same place in the visual field is impossible, in fact logically impossible, since **it is ruled out by the logical structure of colour**.
- Let us think how this contradiction appears in physics: more or less as follows – a particle cannot have two velocities at the same time; that is to say, it cannot be in two places at the same time; that is to say, particles that are in different places at the same time cannot be identical.
- **(It is clear that the logical product of two elementary propositions can neither be a tautology nor a contradiction. The statement that a point in the visual field has two different colours at the same time is a contradiction.)**

The colour exclusion problem and its consequences

Some Remarks on Logical Form and other writings from 1929-30

TLP: Elementary propositions are logically independent of each other.

1) The truth values of elementary propositions are, according to TLP, independent of each other.
2) Since colour statements can stand in a relation of mutual exclusion to each other, they are not independent of each other, and therefore, according to TLP, they cannot be elementary propositions.
3) Since colour statements cannot, according to TLP, be elementary propositions, they must be analysable into simpler propositions, and their analysis must eventually yield elementary propositions which *no longer* exclude each other (TLP #4.211, #6.3751).
4) If the analysis of colour statements into elementary propositions cannot be successfully achieved, we may want to recognize the colour statements themselves as elementary propositions - which would imply that we accept elementary propositions which *do* exclude each other.
5) Now, it seems indeed to be the case that colour statements cannot be analysed further into elementary propositions which would *not* exclude each other. Should we therefore just go for (4) and
   a. *pace TLP*, conceive of the colour statements themselves as *elementary* propositions?
   b. *pace TLP*, accept that there are elementary propositions that *do* exclude each other, and thus are *not* independent of each other!?

6) If there are some elementary propositions that are not independent of each other, we may just as well throw TLP's entire notion concept of elementary proposition overboard!!!!????

Three TLP views are at stake

- If color statements cannot be analyzed further into statements that lead to elementary propositions which are logically independent of each other, and if we therefore consider these color statements themselves elementary propositions …
  - Then at least some elementary propositions are mutually exclusive and not independent of each other!
- ➢ Three Tractatus views are at stake:
  - The *independency* view of elementary propositions
    - Elementary propositions can be mutually exclusive ("*a* is red" and "*a* is green" exclude each other for "phenomen(ologic)al" impossibility).
  - The view that elementary propositions are *simple*
    - Colour statements can be analyzed further into statements of colour degree, and propositions ascribing degree are not simple.
  - The view that logic "must take care of itself" (TLP #5.473)
    - We seem to need more than logical necessity / possibility only! Based on logical syntax / logical analysis alone we cannot show how color statements can exclude each other!
- The *Tractatus* conception of elementary propositions can just as well be given up!?

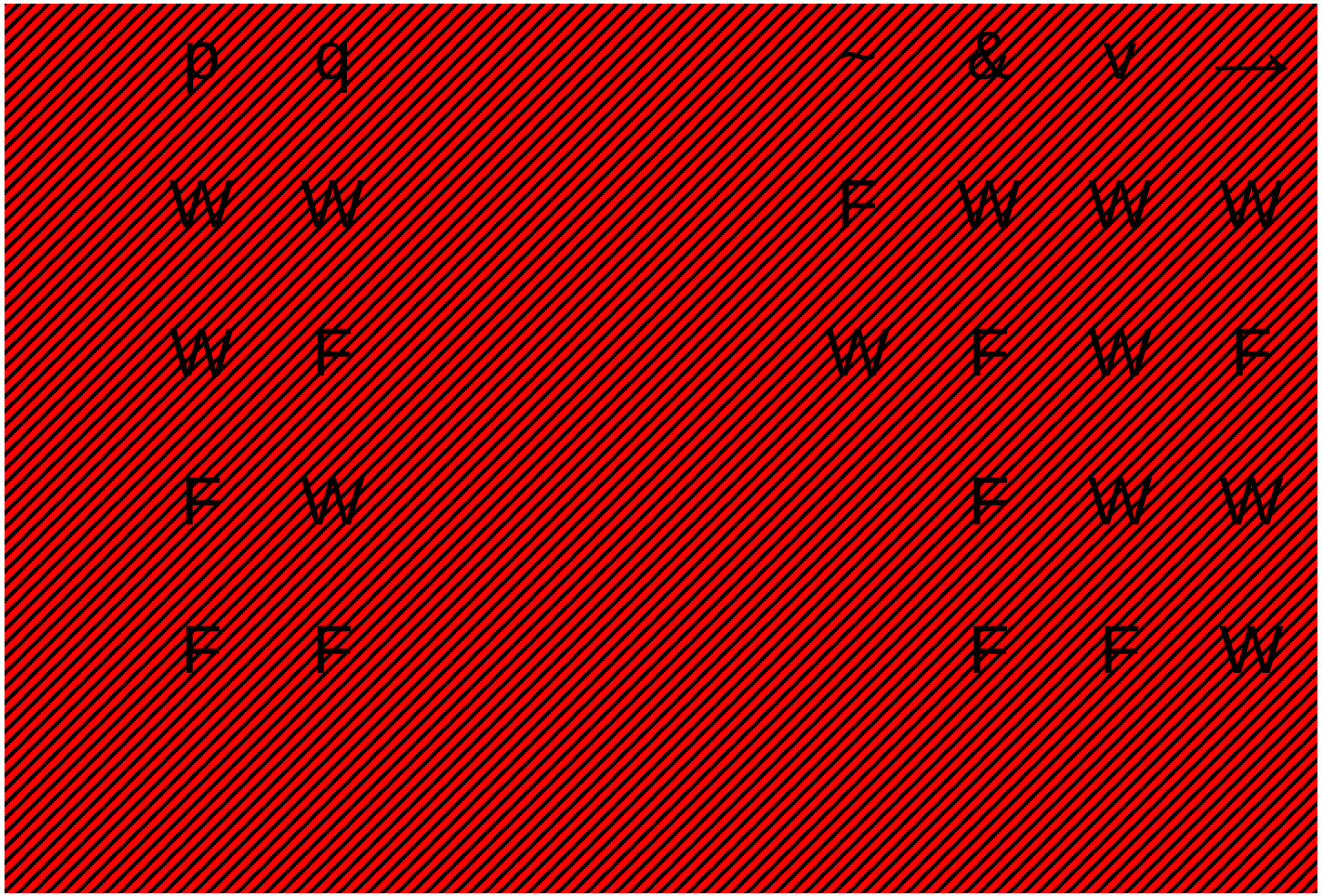
If we no longer have TLP's elementary propositions …

→

A whole lot is being thrown over board!

Consequences for accounting for sense, meaning and truth

Abandoning the logical independence view of elementary propositions means abandoning truth functionality!



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

Reality and World (Wirklichkeit und Welt)	Language (Sprache)
a group of states of affairs (Sachlage?)	molecular proposition (zusammengesetzter Satz)
state of affairs (Sachverhalt)	elementary proposition (Elementarsatz) [sense]
fact (Tatsache)	true elementary proposition (wahrer Elementarsatz) [truth]
simple object (einfacher Gegenstand)	name (einfaches Zeichen, Name) [have reference only in the context of an elementary proposition]

Some other problems of / with the *Tractatus*

Sloppiness?

Frege in a letter of 16.9.1919 to Wittgenstein. In: Ludwig Wittgenstein: Gesamtbriefwechsel/ Complete Correspondence. Electronic Edition, InteLex http://pm.nlx.com:

- Sie schreiben nun: "Was einem Elementarsatze entspricht, wenn er wahr ist, ist das Bestehen eines Sachverhaltes". Hiermit erklären Sie nicht den Ausdruck "Sachverhalt", sonder[n] den ganzen Ausdruck, "das Bestehen eines Sachverhaltes". In einer Definition muss der erklärte Ausdruck immer als untrennbar Ganzes angesehen werden. …

Frege in a letter of 3.4.1920 to Wittgenstein. In: Ludwig Wittgenstein: Gesamtbriefwechsel/ Complete Correspondence. Electronic Edition, InteLex http://pm.nlx.com:

- Was nun Ihre eigene Schrift anbetrifft, so nehme ich gleich an dem ersten Satze Anstoss. Nicht, dass ich ihn für falsch hielte, sondern weil mir der Sinn unklar ist. "Die Welt **ist** alles, was der Fall ist". Das "ist" wird entweder als blosse Copula gebraucht, oder wie das Gleichheitszeichen in dem volleren Sinne von "ist dasselbe wie". Während das "ist" des Nebensatzes offenbar blosse Copula ist, kann ich das "ist" des Hauptsatzes nur in dem Sinne eines Gleichheitszeichens verstehen. Bis hier ist, glaube ich, kein Zweifel möglich. Aber ist die Gleichung als Definition zu verstehen? Das ist nicht so deutlich. Wollen sie sagen: "Ich will unter 'Welt' verstehen alles, was der Fall ist? Dann ist "die Welt" der erklärte Ausdruck, "alles was der Fall ist" der erklärende. In diesem Falle wird nichts damit behauptet von der Welt oder von dem, was der Fall ist, sondern, wenn etwas behauptet werden soll, so ist es etwas über den Sprachgebrauch des Schriftstellers. Ob und wieweit dieser etwa mit dem Sprachgebrauch des Lebens übereinstimme, ist eine Sache für sich, auf die aber für den Philosophen wenig ankommt, nachdem er seinen Sprachgebrauch einmal festgestellt hat. …

Science or art?

Frege in a letter of 16.9.1919 to Wittgenstein. In: Ludwig Wittgenstein: Gesamtbriefwechsel/ Complete Correspondence. Electronic Edition, InteLex http://pm.nlx.com:

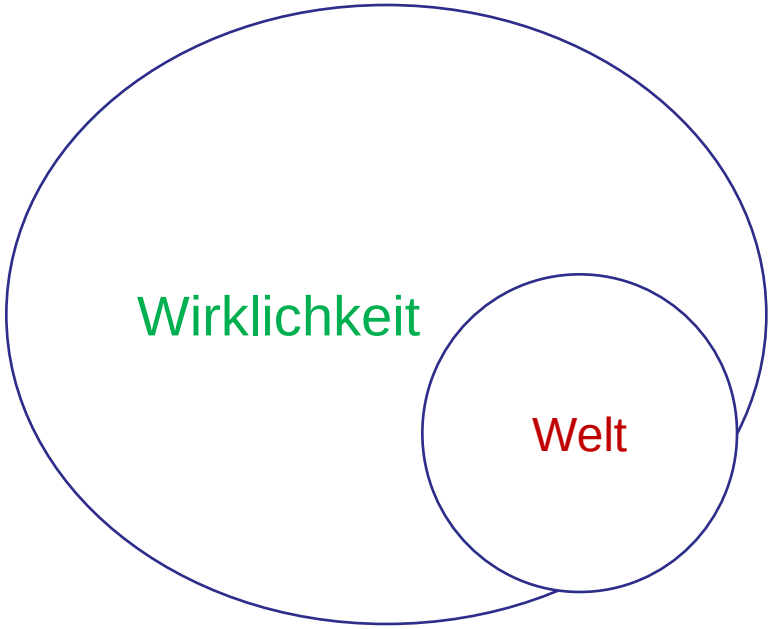
- Was Sie mir über den Zweck Ihres Buches schreiben, ist mir befremdlich. Danach kann er nur erreicht werden, wenn Andere die darin ausgedrückten Gedanken schon gedacht haben. Die Freude beim Lesen Ihres Buches kann also nicht mehr durch den schon bekannten Inhalt, sondern nur durch die Form erregt werden, in der sich etwa die Eigenart des Verfassers ausprägt. Dadurch wird das Buch eher eine künstlerische als eine wissenschaftliche Leistung; das, was darin gesagt wird, tritt zurück hinter das, wie es gesagt wird. Ich ging bei meinen Bemerkungen von der Annahme aus, Sie wollten einen neuen Inhalt mitteilen. Und dann wäre allerdings grösste Deutlichkeit grösste Schönheit.

Arrogance?

N. Malcolm, *Ludwig Wittgenstein: A Memoir*, p.70:

- I asked Wittgenstein whether, when he wrote the *Tractatus*, he had ever decided upon anything as an *example* of a 'simple object'. His reply was that at that time his thought had been that he was a *logician*; and that it was not his business, as a logician, to try to decide whether this thing or that was a simple thing or a complex thing, that being a purely *empirical* matter! It was clear that he regarded his former opinion as absurd.

Inconsistencies?



TLP #1: The world is everything that is the case.
TLP #2.04: The totality of existent atomic facts is the world.
TLP #2.06: The existence and non-existence of atomic facts is the reality.

- «reality» = the obtaining states of affairs (= facts) + non-obtaining states of affairs?
- «world» = **a subset of reality**, namely facts only?

TLP #2.063: The total reality is the world.

- «world» = «(total) reality»? = the obtaining states of affairs (= facts) + non-obtaining states of affairs?

Inconsistencies?

- Wittgenstein in a letter of 19.8.1919 to Russell:
  - **Sachverhalt is, what corresponds to an Elementarsatz if it is true.** [Isn't it*Tatsache* that corresponds to a true elementary proposition? And isn't *Sachverhalt* what corresponds to an Elementarsatz even if it is *false*?] See TLP #2: Was der Fall ist, die Tatsache, ist das **Bestehen** von Sachverhalten.
  - **Tatsache is what corresponds to the logical product of elementary props when this product is true.** [Isn't that a «*molecular*» Tatsache? And aren't there also Tatsachen that correspond to simple («atomic») propositions?]

Simple objects?

- ”Real” (e.g. material particles of physics) or phenomenal (e.g. points in the visual field, objects of acquaintance)?
- ”Things” only, or also properties and relations? If elementary propositions of the form ”Fa” or ”aRb” are to be possible, then simple objects have to include also properties and relations?!
  - See Ms-102,147r[3] (date: 19150616): Auch Relation und Eigenschaften etc. sind Gegenstände.

Paradoxical?

- The *Tractatus* expresses thoughts: Wenn diese Arbeit einen Wert hat, so besteht er in zweierlei. Erstens darin, daß in ihr Gedanken ausgedrückt sind, und dieser Wert wird umso größer sein, je besser die Gedanken ausgedrückt sind. (TLP preface)
- But only bi-polar sentences can express *thoughts;* thought = sentence with sense (*sinnvoller* Satz). (TLP 4)
- The sentences of the *Tractatus* are non-sensical. (TLP preface, TLP 6.54). The Tractatus cannot express thoughts??

➢ How can the *Tractatus* express thoughts if its sentences are non-sensical? Is there something like *partial* understanding, like half a thought?

- Cf. idea of 100% determinacy of sense

«Nonsense»?

Russell, in his preface to TLP, reg. “The sentences of philosophy are non-sensical”: “… Mr Wittgenstein manages to say a good deal about what cannot be said …”

- Is the context-principle nonsense? (TLP 3.3 a.o.)
- Is the sign-symbol distinction nonsense? (TLP 3.32 a.o.)
- Are the notions of the elementary proposition and the truth table part of the ladder to be thrown away?
- What is it that we understand when (we feel that) we *understand* what the *Tractatus* says about ethics, logic, philosophy? According to the *Tractatus* account of understanding, there should ne nothing to be understood?
  - Important nonsense vs. plain nonsense
  - Cf. “Resolute readings” of the *Tractatus*

How to read the Tractatus?

- 1 The world is everything that is the case.
- 1.1 The world is the totality of facts, not of things.
- 1.11 The world is determined by the facts, and by these being *all* the facts.
- 1.12 For the totality of facts determines both what is the case, and also all that is not the case.
- 1.13 The facts in logical space are the world.
- 1.2 The world divides into facts.
- 1.21 Any one can either be the case or not be the case, and everything else remain the same.
- 2 What is the case, the fact, is the existence of atomic facts.

…

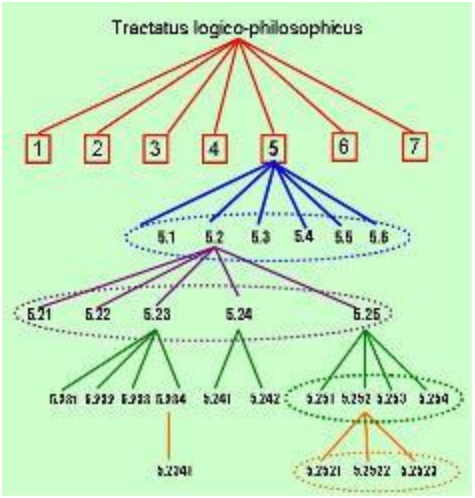
[Quotations from Wittgenstein are marked blue.
If not indicated otherwise, the Ramsey & Ogden translation of the *Tractatus* is quoted.]

See the author's own note about the Tractatus' decimal numbering

The decimal figures as numbers of the separate propositions indicate the logical importance of the propositions, the emphasis laid upon them in my exposition. The propositions *n*.1, *n*.2, *n*.3, etc., are **comments** on proposition No. *n*; the propositions *n.m*1, *n.m*2, etc., are **comments** on the proposition No. *n.m*; and so on.

Linear vs. ”tree”-reading (Bazzocchi 2010)

http://www.bazzocchi.com/wittgenstein/tractatus/



- 1.1 is a branch of 1 and should therefore be read as a *comment* on 1;
- 5.631 is a branch of 5.63 and should therefore be read as a *comment* on 5.63;
- 5.64 is on the same hierarchical level as 5.63 and should therefore (rather than 5.631) be read as the continuation of 5.63
- 6.54 is a branch of 6.5 and should therefore should be read as a *comment* on 6.5; etc. etc.

See also the Iowa Tractatus map at http://tractatus.lib.uiowa.edu/

«Ludwig Wittgenstein's *Tractatus Logico-Philosophicus* consists of a series of numbered remarks, arranged in numerical order. The seven most important are numbered 1 to 7; decimal numbers are used to indicate the structure of the supporting paragraphs. A footnote, attached to the first remark, tells the reader that

> The decimal figures as numbers of the separate propositions indicate the logical importance of the propositions, the emphasis laid upon them in my exposition. The propositions n.1, n.2, n.3, etc., are comments on proposition No. n; the propositions n.m1, n.m2, etc., are comments on the proposition No. n.m; and so on.…

The site is built around a subway-style map, with the aim of displaying the overall structure of the numbering system, and making it easy to look at the sequences of propositions described in the introductory footnote, together with the remark that they comment on.»

Does it make a difference?

- Reading the *Tractatus* linearly, you will read #2 probably much later than in the case when you approach the *Tractatus* tree- or subway- or ladder-wise.
- If you read the *Tractatus* tree- or subway- or ladder-wise, you will also read the target of many references by ”this”, ”here” … differently.

Example from Bazzocchi (Kirchberg 2012 paper)

- **5.63 I am my world. (The microcosm).**
- 5.631 …
- 5.632 …
- 5.633 Where in the world is a metaphysical subject to be found? You will say that this is exactly like the case of the eye and the visual field. But really you do not see the eye. And nothing in the visual field allows you to infer that it is seen by an eye.
- 5.6331 For the form of the visual field is surely not like this. …
- 5.634 **This** is connected with the fact that no part of our experience is at the same time a priori. Whatever we see could be other than it is. Whatever we can describe at all could be other than it is. There is no a priori order of things.
- **5.64** Here **it can be seen that solipsism, when its implications are followed out strictly, coincides with pure realism. The self of solipsism shrinks to a point without extension, and there remains the reality co-ordinated with it.**
- 5.641 …

See Hacker 2015

- “The book was constructed as a logical tree, with propositions 1 to 6 as the basic propositions. From these, various branches are constructed as numerical sequences (e.g. 4.1, 4.2, 4.3, 4.4 and 4.5). From each of these nodes further branches stem. Bazzocchi demonstrates that the book was not meant to be read linearly (as we all read it), but sequentially. This renders the argument of the book perspicuous, illuminates the anaphoric references, makes clear the dependence of proposition 7 on 6, rather than on 6.54. It shows that the conception of the book as a 526-rung ladder, as suggested by the American Wittgensteinians, is misguided.”

P.M.S. Hacker (2015): “How the Tractatus was Meant to be Read”,
The Philosophical Quarterly, Vol. 65, Issue 261, 648–668

TLP 6.54 only a comment on TLP 6.5? And TLP 6.5 only a comment on TLP 6?

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

This is the general form of proposition.

TLP 6.5: For an answer which cannot be expressed the question too cannot be expressed.

The riddle does not exist.

If a question can be put at all, then it *can* also be answered.

TLP 6.54: My propositions are elucidatory in this way: he who understands me finally recognizes them as senseless [*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.

The Tractatus' main "branches"

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 **Tatsache** ist der **Gedanke**.
4. Der **Gedanke** ist der sinnvolle **Satz**.
5. Der **Satz** ist eine **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.

Reading the Tractatus' tree-wise lets you also better see its main "branches" and their connections («**chaining**»)

1. The world is everything that is **the case**.
2. What is **the case**, **the fact**, is the existence of atomic facts.
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 **truth-function** is $[\bar{p}, \bar{\xi}, N(\bar{\xi})]$.
   This is the general form of proposition.
7. Whereof one cannot speak, thereof one must be silent.

The *Tractatus* as a *ladder*

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

Climbing the *Tractatus* ladder means reaching the insight of TLP 6 – i.e. ***taking in the formula that* shows *the general form of the truth-function and of the proposition!***