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Tractatus Logico-Philosophicus

DEDICATED
TO THE MEMORY OF MY FRIEND
DAVID H. PINSENT

Motto: . . . und alles, was man weiss, nicht bloss rauschen
und brausen gehört hat, lässt sich in drei Worten sagen.
Kürnberger.

Tractatus Logico-Philosophicus

PREFACE

This book will perhaps only be understood by those who have themselves already thought the thoughts which are expressed in it or similar thoughts. It is therefore not a text book. Its object would be attained if it afforded pleasure to one who read it with understanding.

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 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.

How far my efforts agree with those of other philosophers I will not decide. Indeed what I have here written makes no claim to novelty in points of detail and therefore I give no sources, because it is indifferent to me whether what I have thought has already been thought before me by another.

I will only mention that to the great works of Frege and the writings of my friend Bertrand Russell I owe in large measure the stimulation of my thoughts.

If this work has a value it consists in two things. First that in it thoughts are expressed, and this value will be the greater the better the thoughts are expressed. The more the nail has been hit on the head.—Here I am conscious that I have fallen far short of the possible. Simply because my powers are insufficient to cope with the task.—May others come and do it better.

On the other hand 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.

L.W.

Vienna, 1918

1 The world is everything that is the case.*

* The decimal figures as numbers of the separate propositions indicate the logical importance of the propositions, the emphasis laid upon them is 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.

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.

2.01 An atomic fact is a combination of objects (entities, things).

2.02 The object is simple. . . .

2.03 In the atomic fact objects hang one in another, like the links of a chain. . . .

2.04 The totality of existent atomic facts is the world.

2.05 The totality of existent atomic facts also determines which atomic facts do not exist.

2.06 The existence and non existence of atomic facts is the reality. (The existence of atomic facts we also call a positive fact, their non existence a negative fact.) . . .

2.1 We make to ourselves pictures of facts.

2.11 The picture presents the facts in logical space, the existence and non existence of atomic facts.

2.12 The picture is a model of reality.

2.13 To the objects correspond in the picture the elements of the picture. . . .

2.14 The picture consists in the fact that its elements are combined with one another in a definite way. . . .

2.15 That the elements of the picture are combined with one another in a definite way, represents that the things are so combined with one another. This connexion of the elements of the picture is called its structure, and the possibility of this structure is called the form of representation of the picture.

- 2.16 In order to be a picture a fact must have something in common with what it pictures.
- 2.17 What the picture must have in common with reality in order to be able to represent it after its manner rightly or falsely is its form of representation.
- 2.18 What every picture, of whatever form, must have in common with reality in order to be able to represent it at all rightly or falsely is the logical form, that is, the form of reality.
- 2.19 The logical picture can depict the world.
- 2.2 The picture has the logical form of representation in common with what it pictures.
- 2.21 The picture agrees with reality or not; it is right or wrong, true or false.
- 2.22 The picture represents what it represents, independently of its truth or falsehood, through the form of representation.
- 3 The logical picture of the facts is the thought.
- 3.01 The totality of true thoughts is a picture of the world.
- 3.02 The thought contains the possibility of the state of affairs which it thinks. What is thinkable is also possible.
- 3.03 We cannot think anything unlogical, for otherwise we should have to think unlogically.
- 3.04 An a priori true thought would be one whose possibility guaranteed its truth.
- 3.05 Only if we could know a priori that a thought is true if its truth was to be recognized from the thought itself (without an object of comparison).
- 3.1 In the proposition the thought is expressed perceptibly through the senses.
- 3.11 We use the sensibly perceptible sign (sound or written sign, etc.) of the proposition as a projection of the possible state of affairs. The method of projection is the thinking of the sense of the proposition.
- 3.12 The sign through which we express the thought I call the propositional sign. And the proposition is the propositional sign in its projective relation to the world.
- 3.13 To the proposition belongs everything which belongs to the projection; but not what is projected.
Therefore the possibility of what is projected but not this itself.
In the proposition, therefore, its sense is not yet contained, but the possibility of expressing it.
("The content of the proposition" means the content of the significant proposition.)
In the proposition the form of its sense is contained, but not its content.

- 3.14 The propositional sign consists in the fact that its elements, the words, are combined in it in a definite way.
The propositional sign is a fact.
- 3.2 In propositions thoughts can be so expressed that to the objects of the thoughts correspond the elements of the propositional sign.
- 3.21 To the configuration of the simple signs in the propositional sign corresponds the configuration of the objects in the state of affairs.
- 3.22 In the proposition the name represents the object.
- 3.23 The postulate of the possibility of the simple signs is the postulate of the determinateness of the sense.
- 3.24 A proposition about a complex stands in internal relation to the proposition about its constituent part.
A complex can only be given by its description, and this will either be right or wrong. The proposition in which there is mention of a complex, if this does not exist, becomes not nonsense but simply false.
That a propositional element signifies a complex can be seen from an indeterminateness in the propositions in which it occurs. We *know* that everything is not yet determined by this proposition. (The notation for generality *contains* a prototype.)
The combination of the symbols of a complex in a simple symbol can be expressed by a definition.
- 3.25 There is one and only one complete analysis of the proposition.
- 3.26 The name cannot be analysed further by any definition. It is a primitive sign.
- 3.262 What does not get expressed in the sign is shown by its application. What the signs conceal, their application declares.
- 3.3 Only the proposition has sense; only in the context of a proposition has a name meaning.
- 3.31 Every part of a proposition which characterizes its sense I call an expression (a symbol). (The proposition itself is an expression.) Expressions are everything—essential for the sense of the proposition—that propositions can have in common with one another. An expression characterizes a form and a content.
- 3.32 The sign is the part of the symbol perceptible by the senses.
- 3.33 In logical syntax the meaning of a sign ought never to play a rôle; it must admit of being established without mention being thereby made of the *meaning* of a sign; it ought to presuppose *only* the description of the expressions.
- 3.34 A proposition possesses essential and accidental features. Accidental are the features which are due to a particular way of producing the propositional sign. Essential are those which alone enable

- the proposition to express its sense.
 ...
- 3.4 The proposition determines a place in logical space: the existence of this logical place is guaranteed by the existence of the constituent parts alone, by the existence of the significant proposition.
- 3.41 The propositional sign and the logical co-ordinates: that is the logical place.
 ...
- 3.42 Although a proposition may only determine one place in logical space, the whole logical space must already be given by it. (Otherwise denial, the logical sum, the logical product, etc., would always introduce new elements—in co-ordination.) (The logical scaffolding round the picture determines the logical space. The proposition reaches through the whole logical space.)
- 3.5 The applied, thought, propositional sign is the thought.
- 4 The thought is the significant proposition.
 ...
- 4.002 Man possesses the capacity of constructing languages, in which every sense can be expressed, without having an idea how and what each word means—just as one speaks without knowing how the single sounds are produced.
 Colloquial language is a part of the human organism and is not less complicated than it.
 From it is humanly impossible to gather immediately the logic of language.
 Language disguises the thought; so that from the external form of the clothes one cannot infer the form of the thought they clothe, because the external form of the clothes is constructed with quite another object than to let the form of the body be recognized.
 The silent adjustments to understand colloquial language are enormously complicated.
 ...
- 4.01 The proposition is a picture of reality. The proposition is a model of the reality as we think it is.
 ...
- 4.016 In order to understand the essence of the proposition, consider hieroglyphic writing, which pictures the facts it describes. And from it came the alphabet without the essence of the representation being lost.
- 4.02 This we see from the fact that we understand the sense of the propositional sign, without having had it explained to us.
 ...
- 4.03 A proposition must communicate a new sense with old words. The proposition communicates to us a state of affairs, therefore it must be *essentially* connected with the state of affairs. And the connexion is, in fact, that it is its logical picture. The proposition only asserts something, in so far as it is a picture.
 ...
- 4.04 In the proposition there must be exactly as many things distinguishable as there are in the state of affairs, which it represents. They must both possess the same logical (mathematical) multiplicity

(cf. Hertz's Mechanics, on Dynamic Models).

- 4.05 Reality is compared with the proposition.
 ...
- 4.06 Propositions can be true or false only by being pictures of the reality.
 ...
- 5.54 In the general propositional form, propositions occur in a proposition only as bases of the truth-operations.
- 5.541 At first sight it appears as if there were also a different way in which one proposition could occur in another.
 Especially in certain propositional forms of psychology, like "A thinks, that p is the case" or "A thinks p ", etc.
 Here it appears superficially as if the proposition p stood to the object A in a kind of relation.
 (And in modern epistemology (Russell, Moore, etc.) those propositions have been conceived in this way.)
- 5.542 But it is clear that "A believes that p ", "A thinks p ", "A says p ", are of the form " p says p ": and here we have no co-ordination of a fact and an object, but a co-ordination of facts by means of a co-ordination of their objects.
 ...
- 5.5422 The correct explanation of the form of the proposition "A judges p " must show that it is impossible to judge a nonsense. (Russell's theory does not satisfy this condition.)
 ...
- 6.33 We do not *believe* a priori in a law of conservation, but we *know* a priori the possibility of a logical form.
- 6.34 All propositions, such as the law of causation, the law of continuity in nature, the law of least expenditure in nature, etc. etc., all these are a priori intuitions of possible forms of the propositions of science.
- 6.341 Newtonian mechanics, for example, brings the description of the universe to a unified form. Let us imagine a white surface with irregular black spots. We now say: Whatever kind of picture these make I can always get as near as I like to its description, if I cover the surface with a sufficiently fine square network and now say of every square that it is white or black. In this way I shall have brought the description of the surface to a unified form. This form is arbitrary, because I could have applied with equal success a net with a triangular or hexagonal mesh. It can happen that the description would have been simpler with the aid of a triangular mesh; that is to say we might have described the surface more accurately with a triangular, and coarser, than with the finer square mesh, or vice versa, and so on. To the different networks correspond different systems of describing the world. Mechanics determine a form of description by saying: All propositions in the description of the world must be obtained in a given way from a number of given propositions—the mechanical axioms. It thus provides the bricks for building the edifice of science, and says: Whatever building thou wouldst erect, thou shalt construct it in some manner with these bricks and these

- alone.
 (As with the system of numbers one must be able to write down any arbitrary number, so with the system of mechanics one must be able to write down any arbitrary physical proposition.)
- 6.35 Although the spots in our picture are geometrical figures, geometry can obviously say nothing about their actual form and position. But the network is *purely* geometrical, and all its properties can be given a priori.
 Laws, like the law of causation, etc., treat of the network and not of what the network describes.
- 6.36 If there were a law of causality, it might run: "There are natural laws".
 But that can clearly not be said: it shows itself.
- 6.37 A necessity for one thing to happen because another has happened does not exist. There is only *logical* necessity.
- 6.4 All propositions are of equal value.
- 6.41 The sense of the world must lie outside the world. In the world everything is as it is and happens as it does happen. *In it* there is no value—and if there were, it would be of no value.
 If there is a value which is of value, it must lie outside all happening and being-so. For all happening and being-so is accidental.
 What makes it non-accidental cannot lie *in* the world, for otherwise this would again be accidental. It must lie outside the world.
- 6.42 Hence also there can be no ethical propositions.
 Propositions cannot express anything higher.
- 6.43 If good or bad willing changes the world, it can only change the limits of the world, not the facts; not the things that can be expressed in language.
 In brief, the world must thereby become quite another. It must so to speak wax or wane as a whole.
 The world of the happy is quite another than that of the unhappy.
- 6.44 Not *how* the world is, is the mystical, but *that* it is.
- 6.45 The contemplation of the world sub specie aeterni is its contemplation as a limited whole.
 The feeling of the world as a limited whole is the mystical feeling.
- 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.
- 6.51 Scepticism is *not* irrefutable, but palpably senseless, if it would doubt where a question cannot be asked.
 For doubt can only exist where there is a question; a question only where there is an answer, and this only where something *can* be *said*.

- 6.52 We feel that even if *all possible* scientific questions be answered, the problems of life have still not been touched at all. Of course there is then no question left, and just this is the answer.
- 6.521 The solution of the problem of life is seen in the vanishing of this problem. (Is not this the reason why men to whom after long doubting the sense of life became clear, could not then say wherein this sense consisted?)
- 6.53 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.
- 6.54 My propositions are elucidatory in this way: he who understands me finally recognizes them as senseless, 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.
- 7 Whereof one cannot speak, thereof one must be silent.