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## THE LIAR PARADOX FROM THE WITTGENSTEINIAN PERSPECTIVE

**SUMMARY:** Our approach to the liar paradox is based on the Wittgensteinian approach to semantic and logical paradoxes. The main aim of this article is to point out that the liar sentence is only seemingly intelligible, and that it has not been given any sense. First, we will present the traditional solutions of the paradox, especially those which we call modificational. Then we will determine what the defects of these solutions are. Our main objection is that the modificational approaches assume that we can express in languages certain senses which are improper. Next, we will explain why we think that the liar sentence is a mere nonsense. This sentence does not have any role in any language game – it is completely useless. We will also respond to several objections to our approach. 1. That it is not consistent with the principle of compositionality of sense. 2. According to the Quineian philosophy of logic, paradoxical sentences can be conceived as false assumptions leading to crises of logical paradigms. 3. The liar sentence seems to be, contrary to our approach, intelligible.

**KEYWORDS:** compositionality principle, context principle, intelligibility, liar paradox, nonsense, Wittgenstein.

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## THE PRESENTATION OF THE LIAR PARADOX

We think that the Wittgensteinian approach to the vast family of semantic and logical paradoxes may turn out to be fruitful. However, we will focus only on the liar paradox here. We will point out that, contrary to a certain well established opinion assumed by many approaches, the sentence which is assumed to generate this paradox, is only seemingly intelligible, and that it has not been given any sense (our conception of nonsense will be presented in the section “The liar sentence as mere nonsense”). We will determine what the defects of traditional solutions are, especially those which we call modificational – later we will explain what we mean by this term.

The liar paradox was formulated by Eubulides in the antiquity. The sentence generating the paradox is: “I am lying”. The most famous contemporary exposition of the liar paradox was formulated by Alfred Tarski:

To obtain this antinomy in a perspicuous form, consider the following sentence:

The sentence printed in this paper on p. 347, l. 31, is not true.

For brevity we shall replace the sentence just stated by the letter ‘s.’ According to our convention concerning the adequate usage of the term “true,” we assert the following equivalence of the form (T):

(1) ‘s’ is true if, and only if, the sentence printed in this paper on p. 347, l. 31, is not true.

On the other hand, keeping in mind the meaning of the symbol ‘s,’ we establish empirically the following fact:

(2) ‘s’ is identical with the sentence printed in this paper on p. 347, l. 31.

Now, by a familiar law from the theory of identity (Leibniz’s law), it follows from (2) that we may replace in (1) the expression “the sentence printed in this paper on p. 347, l. 31” by the symbol “s.” We thus obtain what follows:

(3) ‘s’ is true if, and only if, ‘s’ is not true.

In this way we have arrived at an obvious contradiction. (Tarski 1944, p. 347)

Tarski’s presentation of the paradox, as well as the formulations (not solutions) given by Graham Priest (1987), Bertrand Russell (1908), Wolfgang Stegmüller (1955), and Bas C. van Fraassen (1968),

presuppose that the liar sentence is intelligible and has a certain truth-value.

#### THE MODIFICATIONAL APPROACHES

Today, there is a prevailing opinion that the solution of the liar paradox (and other paradoxes) must consist in imposing certain constraints on language. The aim is to make the formulation of certain troublesome expressions impossible, or to block certain troublesome inferences. So, it can be said that the adherents of such solutions take a normative perspective, not a descriptive one – instead of describing how language works, they want to make its rules “stricter” or “better ordered”. Their perspective can be then called regulative or modificational.

Zbigniew Tworak, a Polish scholar specializing in the problem of paradoxes, noticed that there are generally three different kinds of such modification or regulation of language (Tworak 2004, p. 126–128). The first of them concerns formation rules that determine how to form correct linguistic expressions. This modificational approach springs out of the belief that the source of our problems lies in the usual grammar which is far too liberal: it permits certain troublesome strings of symbols to become sentences of language. So, the proponents of this kind of solution suggest modifications to the formation rules and they also tend to disregard the whole natural language and postulate replacing it with a more precise “scientific” or “formal” language. One of the important contemporary exponents of this standpoint is Jan Woleński. He is a follower of the tradition commenced by Russell, Tarski, and Stanisław Leśniewski. The following quote from an article written by that last logician may serve as an exemplification of the view:

Since, keeping to “natural intuitions” of language we get involved in irresolvable paradoxes, these “intuitions” seem to imply contradiction. The “*artificial*” frame of strict conventions is thus a far better instrument of reason than the language dissolving in the opaque contours of “*natural*” habits which often imply incurable contradictions – much as the “artificially” regulated Panama Canal is a better waterway than the “*natural*” rapids on the Dnieper. (Leśniewski 1991, p. 82)

According to the second form of the modificational approach, paradoxes are simply wrongly interpreted proofs of falsehood of certain commonly accepted non-logical principles. The proponents of this form of solution consider our troublesome formulas or utterances as a demonstration of the incorrectness of certain assumptions or definitions existing in both natural and artificial languages. This approach was presented among others by Leon Gumański (1990) and Stegmüller (1955). The former wrote about it as follows:

Each antinomy which is not only apparent can be easily transformed into a valid proof by contradiction of a thesis saying that on the basis of a given theory or a given set of assumptions a term defined within the antinomy or used as if it was defined within it in a certain way does not refer to anything (its referent does not “exist”). (Gumański 1990, p. 270)

The third kind of modificational approach aims at a revision of received logical principles. It assumes that logic is not substantially different from other sciences and that it should be subject to improvement, just like physics and chemistry. According to the proponents of this standpoint, since there are many different systems of logic, we are free to decide which of these systems should be recognised as the right one. The most famous logician who held such a view on logic, Willard Van Orman Quine, wrote:

Logic is in principle no less open to revision than quantum mechanics or the theory of relativity. The goal is, in each, a world system – in Newton’s phrase – that is as smooth and simple as may be and that nicely accommodates observations around the edges. If revisions are seldom proposed that cut so deep as to touch logic, there is a clear enough reason for that: the maxim of minimum mutilation. (Quine 1986, p. 100)<sup>1</sup>

Interestingly, Quine himself admitted that revising logic in order to deal with paradoxes (e.g. by recognition of three-valued logic as the right one) “is not to my liking” (Quine 1986, p. 85). So, strictly speaking, Quine does not belong to the proponents of this kind of solution to the problem of paradoxes, although such an option is available within his general approach to logic. Among the thinkers who actually made use of such an option were Dmitri A. Bochvar (1938), Georg Henrik von Wright (1988), and Priest (1987). So, from

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<sup>1</sup> At the end of this paper we present some arguments against Quine’s holism.

this point of view, paradoxes may be considered as *sui generis* falsifiers of logical systems.

It is easy to notice that each of these three options focuses on a different aspect of what Ludwig Wittgenstein called “grammar”. The author of *Philosophical Investigations* adopted this concept in his so-called middle period, when he gradually gave up the views presented earlier in the *Tractatus Logico-Philosophicus*. Initially he started using the term as a synonym of “logic in a broader sense” – it was to include rules which were to warrant non-classical, but still a priori, inferences. Further evolution of the concept of grammar was related to the idea of language as calculus, the idea of the arbitrariness of rules, and finally, the idea of language-games. Wittgenstein developed these ideas on the basis of the philosophy of mathematics proposed by the so-called older formalists, that is Eduard Heine and Carl J. Thomae, and refined – for critical purposes – by Gottlob Frege. According to Wittgenstein’s conception, even in the initial language-as-calculus stage, grammar included both the rules governing internal structures of sentences and the rules responsible for inter-sentential relations (Gomułka 2016, p. 220–221, 254).

The pragmatic turn, taken by Wittgenstein in the middle of the 1930s, and thanks to which he arrived at the view known from his *Philosophical Investigations*, brought about the rejection of understanding of the grammar of a natural language as a set of strict rules. Still, grammar covered both kinds of relations: within sentences and among sentences. Anyway, the difference between these two groups of relations became less important after the pragmatic turn, because sentences appeared to be parts of greater wholes, namely language-games.<sup>2</sup>

Let us notice that the modificational approaches assume that the liar sentence is intelligible, i.e. it is a meaningful expression. If instead of being intelligible it were devoid of sense, we could not assign any truth-value to it. If one could not do this, one would not make the

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<sup>2</sup> A good illustration of this approach can be found in §§19–20 of *Philosophical Investigations*, where Wittgenstein points out that the same expression can often be considered both as a sentence and as a single word. It should be noted on this occasion that the notion of “logic” appears in *Philosophical Investigations* both in the context of the truth-value calculus (see Wittgenstein 1974, §554) and as a synonym of Wittgensteinian grammar (see Wittgenstein 1974, §345).

inference ending with the formula “‘s’ is true iff ‘s’ is not true,” for the first premise of the reasoning would be senseless – a sentence assigning a truth-value to a senseless sentence lacks sense too.<sup>3</sup> The accounts of the paradox just described assume that either the liar sentence is incorrect or some logical or extra-logical principles which are seemingly obvious are false, for one infers from these principles and the assumption of the liar sentence having a truth-value the following contradiction: “ $p$  is true iff  $p$  is not true.”

We would like to add that the reverse relation of entailment between the thesis of the intelligibility of the liar sentence and the modificational approach to the paradox does not hold. That is, although the assumption that the liar sentence is intelligible usually leads one to embrace the modificational approach to this paradox, the acceptance of this assumption does not have to lead to embracing this approach, i.e. the thesis that we must modify one or more principles belonging to the three aforementioned kinds. For example, according to Laurence

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<sup>3</sup> It seems that a sentence ascribing truth to a senseless sentence should be false. However, if one assumes the meaningfulness of the following sentence “the sentence “colorless green ideas sleep furiously” is true” and accepts both classical logic and Convention T, one can infer the sentence “colorless green ideas sleep furiously”, which is obviously senseless. This is unacceptable because one cannot infer a nonsense from meaningful sentences. So, it seems, one must either modify logic or abandon Convention T if one wants to claim that a sentence ascribing truth to a senseless sentence is false. If one modifies logic and retains Convention T, both sentences “the sentence “colorless green ideas sleep furiously” is false,” “the sentence “colorless green ideas sleep furiously” is true” entail sentences which were assumed for the sake of the argument to be nonsensical, namely “colorless green ideas do not sleep furiously,” “colorless green ideas sleep furiously.” There are two objections to this proposal. Firstly, the principles of classical logic are much more intuitive than the “intuition” that a sentence ascribing a truth-value to a senseless sentence should be false. Secondly, as we have said, the idea that one can infer a nonsense from meaningful sentences is unacceptable. If one does not modify logic, but abandons Convention T, then one of the sentences “the sentence “colorless green ideas sleep furiously” is false,” “the sentence “colorless green ideas sleep furiously” is true” must be true and the other one false. In this case, however, the words “true” and “false” must mean something other than in the case of applying them to meaningful sentences – if one predicates truth of a meaningful sentence, one asserts the same thing which is asserted by this sentence. So, one can say that “the sentence “colorless green ideas sleep furiously” is true” is false, but this statement does not assert that it is not the case that colorless green ideas sleep furiously – perhaps it can be understood as asserting that one does not ascribe truth to nonsensical strings of signs.

Goldstein (1988, 2000, 2009), the reasoning the conclusion of which is the sentence “ $p$  is true iff  $p$  is not true” shows that the liar sentence is not simply a negation of an atomic sentence but a biconditional of the form “ $p$  iff  $\sim p$ ”. So – as it seems – the adherents of the modificational approach must accept one more assumption: the liar sentence is not a syntactic contradiction.

#### WITTGENSTEINIAN CRITIQUE OF THE MODIFICATIONAL APPROACHES

What are the main defects of the modificational approach? We would like to start our considerations on this question by drawing the reader’s attention to the fact that the thesis that natural languages are defective because it is possible to formulate in them sentences which generate paradoxes can be interpreted in various ways. Does this thesis imply that the liar sentence is grammatically correct from the perspective of a natural language, or does it imply that this sentence is a meaningful expression of a natural language? These two questions should not be equated. In our opinion, this sentence is constructed according to the rules of school-grammar, but has no sense, because no meaning has been given to some parts of it. If our account of the role of this sentence were right, then natural languages would be no more defective than uninterpreted formal languages. So, as it seems, the defectiveness of natural languages must consist in something else according to the adherents of the modificational approach. Natural languages are defective because one can form in them sentences which have an improper sense. Considerations on the ambiguity of the thesis that natural languages are defective lead us to the uncovering of a hidden assumption lying at the bottom of the modificational approach: we can express in languages (e.g. in natural languages) certain senses which are improper. In our opinion this assumption is wrong, and it is our main objection to the modificational approach.<sup>4</sup>

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<sup>4</sup> It is worth adding that we are not concerned here with the question “what features of natural languages allow us to formulate the liar paradox according to the adherents of the modificational approach to this paradox?” – but with the question “what does it mean when the sense of a sentence which generates a paradox is improper?” That is, we are not dealing with, e.g., the question whether the application of semantic terms of a given language to expressions

What could an improper sense be? One may try to answer this question in a few ways. According to one proposal, a sentence has an improper sense if it is formed out of expressions that do not fit together either semantically or syntactically – one will obtain such an improper sense if one concatenates the predicate of a language  $L$  “is false” with the name of a sentence belonging to this language (if the name of a sentence is “ $s$ ” and the sentence designated by it is “ $s$  is false”, we will obtain the liar sentence). An improper sense understood in this way is, in fact, a semantic or syntactic nonsense. In our opinion, the conceptions of semantic and syntactic nonsense are incoherent, not the very notion of nonsense. According to them, a sentence can be devoid of sense because the result of the concatenation of given expressions yields, semantically or syntactically, an incoherent whole. Such a whole consists of expressions which do not fit together, so, focusing on the conception of semantic nonsense, the whole is devoid of sense because the referents of its constituents cannot be connected in such a way as the expressions are connected in this nonsensical sentence (Diamond 1991). Let us consider, as an example, the following sentence “Julius Caesar is a prime number.” This sentence is nonsensical, because Julius Caesar cannot be a member of any set of numbers. The above explanation of nonsensicality of this sentence shows that according to the conception of semantic nonsense this sentence is a nonsense, because it represents (or quasi-represents) something impossible, namely the fact that Julius Caesar is a prime number. So, the conception of semantic nonsense treats some sentences as devoid of sense in virtue of their having a certain specific sense (Whitherspoon 2000). This shows that the conception of semantic nonsense is incoherent.<sup>5</sup> One can

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of this language is responsible for the formulation of the paradox, but with the question of “what does it mean when a sentence, in which a semantic term of a given language is predicated of a certain expression of this language, has an improper sense or is ill formed?”

<sup>5</sup> As a response to the remark of the anonymous reviewer that we claim that “a nonsense lacks any sense, but some nonsenses seem to contain some sense, i.e. they express some impossible state of affairs” we would like to state that we accept the first statement and reject the second. We reject the conception of semantic nonsense. The argument presented above shows that it boils down to the incoherent “idea” that some nonsenses have sense, i.e. that they express some impossible states of affairs. Of course, the question whether a given sentence is nonsense or not can be controversial, but if one acknowledges that a given sentence is

draw an analogical conclusion as regards the conception of syntactic nonsense.

According to another proposal, a sentence has an improper sense, if on the one hand it can be treated as a certain kind of self-contradictory sentence, but on the other hand it seems to be a negation of a simple sentence which is unproblematic from the point of view of school grammar. For example, the liar sentence seems to be a negation of the following simple sentence “this sentence is true” and it can be interpreted as a contradiction of the form “ $p$  is false iff  $p$  is true” (one may say that the reasoning known as the liar paradox shows that it has such a form). The following sentence “this expression is not a sentence” is a slightly different example of the phenomenon under consideration, as it is of course a negation of a simple sentence, and can also be treated as somewhat self-contradictory – it is a case of a broadly understood pragmatic contradiction.<sup>6</sup> The second explanation of the idea of improper sense is also not satisfying. The very observation that certain negations of simple sentences can be grammatically correct and at the same time seem to be contradictory does not show that they have an improper sense. It shows, at most, that natural languages differ in this respect from standard formal languages. We think that instead of describing such sentences as having an improper sense, one can treat them either as real contradictions or as strings of signs devoid of meaning. The decision depends on the particular example and the context.

One can also criticize numerous modificational solutions of the liar paradox in the following way. All these solutions, which on the one hand claim that the liar sentence generates a contradiction and on the other hand postulate to exclude it from a language (Tarski’s

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nonsense then one does not ascribe to it any sense. Moreover, our approach does not have to assume that in every case it should be decidable without any doubt whether a given expression is meaningful or nonsensical. So, one of us is inclined to recognize “ $2 + 2 = 7$ ” as a mere nonsense, the other is more hesitant as regards this question, someone may treat it as a meaningful expression, but all these facts do not undermine our position because we claim that if a certain sentence is nonsense, it does not have any semantic features and it is not a premise or a conclusion of any inference.

<sup>6</sup> We are inclined to treat the above sentences as examples of a degenerated kind of sentence. One uses them only in order to give examples of sentences which are false (or true) merely in virtue of the fact that they have been formulated.

solution may serve as a paradigm here), are not consistent (Wawrzyński 2011). As we have mentioned before, the formulation of the liar paradox requires acknowledging that the liar sentence has a truth-value and, consequently, that it has a sense. Therefore, all solutions according to which the liar sentence is a nonsense cannot be reconciled with the conviction that an ascription of any truth-value to the liar sentence leads to a contradiction. Thus, to be consistent, one must either acknowledge that there is no liar paradox and there is only the liar sentence, which is devoid of sense, or present another solution of the paradox.<sup>7</sup>

Of course, Priest's solution of the paradox is not vulnerable to this objection. But we think that the costs of his solution are too high. It is a desperate move to claim that some sentences – the liar sentence, among others – are both true and false. We think that any consistent solution of the paradox is better than Priest's solution.

#### THE LIAR SENTENCE AS MERE NONSENSE

Our account of paradoxes is inspired by Wittgenstein's philosophy, especially by his approach to nonsense. We think that the adherents of the so-called "New Wittgenstein" line of interpretation have presented an adequate construal of Wittgenstein's conception of nonsense. Moreover, we think that this conception of nonsense is philosophically correct. We will present the short characteristic of such understood nonsense below. We will not give any substantial definition of nonsense for it would require a substantial definition of meaning. We are inclined to the view that it is impossible to formulate the so-called full-blooded theory of meaning (the question was discussed by Dummett 1987, McDowell 1998, Wawrzyński 2015). This does not imply that one cannot say anything in general about meaning. We think that,

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<sup>7</sup> The anonymous reviewer noted that such a description of Russell's and Tarski's approaches to the paradox is unjust because according to their solutions the liar sentence is devoid of meaning. We point out that if their approach were simple and unambiguous they would not claim that one can infer from the supposition that the sentence is true and the supposition that it is false a contradiction because in order to obtain this conclusion one must assume that the sentence is meaningful. (The following step of the derivation: "(1) 's' is true if, and only if, the sentence printed in this paper on p. 347, l. 31, is not true" would be nonsense if the liar sentence were nonsense.)

among others, an explanation of meaning of any expression consists in describing its use. However, this very general statement does not determine which aspects of use are essential to meaning. Thus, this statement allows one only to say that an expression is nonsense if it does not have any linguistic use. It should be added that the above remark does not exclude the possibility that a piece of nonsense can be used to achieve various purposes, e.g., to induce bafflement, it excludes only that a piece of nonsense is a linguistic expression of something, e.g., an expression of bafflement.

We believe that the liar sentence is mere nonsense.<sup>8</sup> That is to say, it is devoid of sense because no meaning has been ascribed to its parts: “The proposition is nonsensical because we have failed to make an arbitrary determination, and not because the symbol, in itself, would be illegitimate” (Wittgenstein 1961, 5.473). (The development of this idea can be found in: Diamond 1991 and Conant 2000.) Thus, we accept the following truisms about nonsense: an expression E is a nonsense iff it does not have any sense; if E is an assertion, a question, or an order or... (that is, it has not only the grammatical form of an assertion, but is an assertion, and so on), then E is not a nonsense. Because of the fact that it is not possible – as we think – to give a complete list of kinds of illocutionary acts one cannot present a full explanation of nonsense in terms of these acts.

So, there is no liar paradox, there is only a sequence of nonsensical sentences. Of course, such an approach may induce bafflement and even outright opposition: after all, we understand the liar sentence, after all, it is correctly constructed from the point of view of school-grammar, after all, the conclusion that the liar sentence is true if and only if it is false follows from the premises. Thus, we will present arguments supporting our approach to the liar paradox and consider the objections against it.

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<sup>8</sup> Of course, this thesis is not a new one. However, our approach to the liar sentence differs from the majority of other approaches which also recognise it as a nonsense in this respect that it treats this sentence – according to the Wittgensteinian conception – as mere nonsense. (It is worth adding that the inspiration to treat the liar sentence as nonsense may have come from another aspect of Wittgenstein’s thought, namely from his conception of truth which is quite often interpreted as deflationary. J Beall has pointed out that the deflationists have an independent reason to treat this sentence as a nonsense (Beall 2001).)

As we have mentioned before, we do not deny that a the sentence of the type “*s* is false” (where “*s*” is the name of any given sentence) is well formed. But we deny that the result of a grammatically correct connection of words, which have determinate meanings in other sentences, must be a meaningful whole. We deny this because we accept Frege’s context principle (Frege 1959, p. x). Since the meaning of a word should be considered only in the context of the meaning of a sentence, words which are not constituents of meaningful sentences have no meaning. In order to explain in more detail our conception of nonsense, consider the following sentences: “all dogs bark loudly,” “all dogs are prime numbers.” According to our conception these two sentences contain the same word understood as an inscription, namely “dogs.” However, they do not contain the same word understood as a meaningful expression (a logical part of a sentence).<sup>9</sup> Why? Because in the second case there is no context of a meaningful sentence which can determine the meaning of the word “dogs”.<sup>10</sup> It seems that our conception is also supported by the fact that one can infer from the first sentence the sentence “all dogs bark,” but one cannot infer from the second sentence “all dogs are numbers” because nonsense does not entail anything. Of course, one can transform the sentence “all dogs are prime numbers” into the sentence “all dogs are numbers,” but this transformation would not be logical, but graphic. It is worth adding that the view according to which nonsensical expressions can be composed of meaningful parts, assumes the truth of a conception of either semantic or syntactic nonsense. So if our critique of these conceptions is right, there will be no obstacle to acknowledging that nonsensical expressions are not composed of meaningful parts. So, coming back to the liar sentence, we can conclude that if it is devoid of sense, then the expressions contained in it are devoid of meaning too.

Such an approach to nonsense and to the role of the liar sentence in a language may raise two important questions. How can one prove

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<sup>9</sup> It is worth noticing that according to Peter Geach inscriptions which have the same shape do not have to be the same word (Geach 1971, p. 86–87), Blackburn does not agree with this view (Blackburn 1984, p. 18–26).

<sup>10</sup> The Fregean context principle was initially framed in terms of *Bedeutung*, but it also applies to *Sinn* – the distinction between *Bedeutung* and *Sinn* was made after the formulation of the context principle.

that the liar sentence is nonsensical? Is this approach to sense and nonsense consistent with the principle of compositionality of sense? As regards the first question, it should be underlined that, according to our conception, it is not possible to prove that any sentence, including the liar sentence, is in its essence a nonsense. (According to the Wittgensteinian view we accept, the very concept of an essence is just a shadow of the grammar of our language and the latter is arbitrary.) At most, one can show that no such sense can be given to the liar sentence that would be recognized by the adherents of the thesis of the intelligibility of the liar sentence as the intended sense. Why do we think that the liar sentence is a nonsense? First of all, this sentence does not have any role in any language game – it is completely useless:

If the question is whether this is a statement at all, I reply: You may say that it's not a statement. Or you may say it *is* a statement, but a useless one. (Wittgenstein 1976, p. 209)

Is there harm in the contradiction that arises when someone says: "I am lying. – So I am not lying. – So I am lying. – etc.?" I mean: does it make our language less usable if in this case, according to the ordinary rules, a proposition yields its contradictory, and vice versa? – the proposition itself is unusable, and these inferences equally; but why should they not be made? – It is a profitless performance! – It is a language-game with some similarity to the game of thumb-catching. (Wittgenstein 1978, I, App. III, 12, p. 120)

Moreover, considerations on the liar sentence from other influential perspectives, like the Davidsonian and the Dummettian, reveal that the sentence has neither truth nor assertability conditions. So, it also turns out to be useless and hence senseless.

Secondly, one can notice that in constructions such as:

L: The sentence L is false.

the sign "L" does not refer to any determinate thing. It seems that it is to refer to a sentence. But to what sentence? The adherents of the thesis that the liar sentence has a sense will claim that the sign refers to "The sentence L is false." Of course, this sign can designate the uninterpreted inscription "The sentence L is false." This, however, does not allow one to defend the thesis that the liar sentence has a sense. What could the words mean: "a certain uninterpreted string of signs is false"?

So, the sign “L” should refer to a certain meaningful sentence. The formula “The sentence L is false” will acquire a sense, only if the sign “L” in this formula designates some a meaningful sentence, e.g. “All cats mew”, but the adherents of the thesis of the intelligibility of the liar sentence do not accept any interpretation of this kind and claim that the sign “L” within the formula designates the sentence “The sentence L is false.” So, as one can see, the attempt to ascribe a sense to the liar sentence ends with a failure – the result is either a meaningful sentence which is not recognized as the real liar sentence or *regressus ad infinitum*.<sup>11</sup>

Let us return to the second question: Is this approach to sense and nonsense consistent with the principle of compositionality of sense? Some authors point out that the principle of compositionality can be and is understood in various ways (Bronzo 2011, Pelletier 1994, Peregrin 2005). Our conception of nonsense is certainly not consistent with the conviction that the meaning of words is prior to the sense of sentences. To use a vivid picture, sentences are not like houses which are built of earlier existing elements (say, bricks). We think that the understanding of the principle of compositionality on the model of the relation between houses and their elements is only a possible, but not convincing, interpretation of this principle. According to the suggestions of Bronzo (2011) and Peregrin (2005), we assume that the principle of compositionality boils down to acknowledging that if a meaningful sentence is given, then its sense is a function of meanings of its parts and the mode of their combination. The principle does not entail that the meanings of words must be (conceptually or temporarily) prior to the senses of sentences and that they must be explained outside of the context of sentences. It is worth noticing that this principle does not say that the nonsensicality of a sentence is a function of meanings of its parts and the mode of their combination.

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<sup>11</sup> This argument is similar to the line of thought presented by Alfred Gawroński (Gawroński 2004, see also Gawroński 2011, p. 109–156). It can be said that the argument shows that the quotation operator is not a logical operator (in the standard sense of logic). Therefore, there cannot be a function relating expressions in a language to expressions in its meta-language. We owe this remark to Wojciech Krysztofiak – our second reviewer. We are also thankful for his other inspiring comments. We did not address them here though – this would require substantial extensions of our present article. Indeed they are worth a separate paper.

The principle of compositionality entails, at most, that any expression which has a certain meaning in a sentence may have the same meaning in some other sentences.<sup>12</sup> To simplify the matter a little, the principle does not say that someone who learns the full content of a comprehensive dictionary of a foreign language and a comprehensive grammar textbook of the same language will understand every sentence of this language, but rather it says that someone who fully understands a language will be able to indicate how the meanings of expressions and grammatical constructions determine the senses of sentences of this language. We would like to end this part of the text with a brief comparison between our approach to the liar paradox and Goldstein's approach to this paradox which is also inspired by Wittgenstein's philosophy. The main difference concerns the meaningfulness of the liar sentence. According to Goldstein, this sentence has a sense, but it cannot be used to make a statement (Goldstein 2009, p. 382). We think that we can acknowledge at most that the liar sentence is correct from the point of view of the ordinary grammar, but the same can be said about the sentence "colorless green ideas sleep furiously." Goldstein's argument for the thesis that it is meaningful is that that it can be "translated". We think that this argument is unconvincing because Chomsky's above-cited example can also be "translated", although it is obvious that this sentence is nonsensical.

#### QUINEIAN HOLISM VS. WITTGENSTEINIAN HOLISM

One may put forward the following argument which seems to refute our standpoint. If we take the Quineian understanding of logic, then there is no reason to give a special status to its propositions. Quine – followed by other thinkers including Richard Rorty – thought that the division between "empirical" and "analytical" judgements is purely dogmatic and mystifies the actual function of the propositions of logic in our system of knowledge. It is true that these propositions take central position in the structure of knowledge, but – according to Quine – this does not mean that they are invariants in the perpetual

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<sup>12</sup> The practical learnability of a language requires that words and expressions should have the same meaning in a great majority of sentences in which they appear.

process of the self-revision of science. For logic also belongs to the body of the famous Neurath's boat (maybe it is the frame of the boat) and, therefore, it also undergoes the processes of partial reconstruction. If so, one can apply Kuhn's theory of crises of paradigms and their overcoming to logic as well, and therefore consider paradoxes and antinomies as symptoms of crises of logical paradigms.<sup>13</sup>

In response to this charge we have to answer that the Quineian view of science, and his understanding of the role of logic in particular, is simply wrong. We reject Quine's methodological holism, for it leads to the obliteration of the difference between what is false and what is nonsensical. But the difference is indispensable if we want to be able to speak of counterfactual possibilities at all. It may be blurred: presumably there are sentences about which we are not sure whether their negations are still understandable. So, even if logic (or grammar in the sense of the later Wittgenstein) changes due to the pressure of experience (or something else), the change does not go according to Quineian terms – it does not consist in the rejection of a certain theory. Grammar fixes the way in which we understand our theories, theorems, and reporting sentences, so its change cannot be conceived as a rational revision undertaken for some reasons, some arguments. Contrary to certain opinions, we are not willing to accept that some fundamental physical laws are quasi-logical. For example, we tend to think of the sentence “the principle of conservation is false” as understandable, because we may imagine a world, in which mass and energy emerge spontaneously. Indeed, the Steady State cosmological theory formulated in 1948 – now considered false by the majority of physicists – assumed such spontaneous emergence of particles.

Moreover, it is hard to say that the paradoxes and antinomies in logic emerge because of transformations of our knowledge about the facts. The liar paradox was presented for the first time in antiquity, when people's world-picture and science were vastly different from the present ones. It seems that the change of our empirical knowledge had no influence on the role of the paradox. Also, it is not above our intellectual abilities to imagine a scenario in which the ancient thinkers developed naïve set theory and formed the known set-theoretical

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<sup>13</sup> Again, we must underline that Quine himself was not a proponent of such a solution to the problem of paradoxes.

antinomies including Russell's paradox, while their knowledge of natural facts remained at its actual level.

The later Wittgenstein is considered a holistic thinker. However, his holism is essentially different from the Quineian overall philosophy of science. The point of dispute is the principle of arbitrariness of syntax adapted by the author of *Philosophical Investigations* no later than at the beginning of the thirties (Gomułka 2016, p. 196). The principle assumes the difference between factual (empirical) and grammatical (conceptual) questions and propositions. However, in remarks published as *On Certainty* and written at the very end of his life, he seemed to realize that some empirical statements can "harden" up to the point in which they may function as "channels" for other, more "fluid" empirical propositions, but at the same time the distinction between a channel and something which flows through it remained:

The mythology may change back into a state of flux, the river-bed of thoughts may shift. But I distinguish between the movement of the waters on the river-bed and the shift of the bed itself; though there is not a sharp division of the one from the other. (Wittgenstein 1972, §97)

The author of *Philosophical Investigations* explicitly rejected the suggestion that logic is an empirical science (Wittgenstein 1972, §98). Wittgenstein's positive view can be illustrated by a fictional story about the king of a certain tribe brought up to the conviction that the world began with his own birth. The Austrian thinker pointed out that a possible change of the king's conviction cannot be understood as a usual shift of beliefs on a topic due to some rational arguments, but as something much more fundamental, that is a conversion (*Bekehrung*), for it would require the transition to a wholly new way of perceiving the world (Wittgenstein 1972, §92).<sup>14</sup>

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<sup>14</sup> Nowadays it is pointed out that *On Certainty* belongs to the so-called third period of Wittgenstein's thought and is written in a somewhat different spirit from *Philosophical Investigations* (Moyal-Scharrock 2004). According to us, possible differences between these two works are rather irrelevant to the core of the problem illustrated by the tale of the king.

## THE FINAL CHARGE

All our previous arguments can be rejected simply by referring to the fact that we seem to understand the paradoxical expression. How can we say that no one understands the so-called liar sentence when so many claim that they understand it very well. Does the fact that one has a sense of understanding of a sentence one utters not decide the question whether this sentence has a sense? Is not the question of meaningfulness of the liar sentence settled for good in this way?

No, it is not. The conviction according to which the understanding of a sentence or a word is like a pain – it just emerges for the consciousness – results from the mythical picture of the mind created by Rene Descartes. This mythical picture tells us that thoughts and sensations make up the two kinds of *cogitationes* – contents of consciousness – whose existence is beyond doubt. Accordingly, the sense of a sentence is to be roughly the same kind of “object” as pain, and a subject having a mind within which this “object” emerges is to have privileged and direct access to it. But the self-transparency of mind and its absolute sovereignty regarding its own content is not compatible with our scientific knowledge or even our common experience. For it happens many times that we only seem to understand something, we often admit that we do not know what we have just meant, and on the other hand we sometimes say something completely meaningful without any conscious or phenomenal “underlay”. All these observations prompted Wittgenstein to formulate a standpoint that the criteria of understanding cannot be internal: whether one understands a rule or not depends on one’s ability to use it (Wittgenstein 1974, §§146–155); for this very reason, as the author of *Philosophical Investigations* writes: “An «inner process» stands in need of outward criteria” (Wittgenstein 1972, §580).<sup>15</sup>

Wittgenstein’s standpoint can be seen as a deepened Fregean anti-psychologism. As Frege underlined, we should not understand meanings of words as a kind of internal content available only to a mind that thinks or says these words. It should be noted that the philosopher from Jena used this conviction to justify his context principle, for he pointed out that if one does not observe the latter,

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<sup>15</sup> Attacks on the Cartesian myth have been carried out by many other acknowledged thinkers, like Gilbert Ryle (2009) and Richard Rorty (1983).

“one is almost forced to take as the meanings of words mental pictures or acts of the individual mind,” and, hereby, ends up in psychologism (Frege 1959, p. x).

So, if one can be wrong about the understanding of sentences, one can be equally wrong about whether a linguistic expression is understandable at all, and thus whether it is a meaningful sentence. When we apply pragmatic criteria we come to the conclusion that the so-called liar sentence cannot have any sense, for it has no role to play in our linguistic practice.

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