

## ***DEFLATIONISM. LANGUAGE STRATIFICATION AND THE REDUNDANCY THEORY OF TRUTH***

**Paula Pompilia Tomi**

**PhD Student, University of Bucharest**

*Abstract: The redundancy theory of truth considers that there is an equivalence between asserting that a statement is true and the statement itself, therefore between  $T(A)$  and  $A$ . Horwich did not try to find a satisfactory definition of truth, because the equivalence schema in all its instances is all that can be said significantly about truth. Dorothy Groover offers an alternative for the standard deflationary theory of truth, a prosentential approach, based on a theory of anaphora. The T-schema is accepted as long as it does not generate paradoxes. This seems possible only if we accept the stratification of the languages from a Tarskian point of view. The differences between an object language and a metalanguage will be described. The main question that occurs is if the truth predicate may be removed from a language without change or diminish the expressiveness of that language. The aim of this paper is to submit different variations of the deflationary theory of truth and their answers to this question.*

Keywords: Deflationary theory of truth, Alfred Tarsky, Paul Horwich, Stratified Language, T-Schema

The truth predicate is well-known and extremely used, but from a logical and philosophical point of view it seems to have different definitions and approaches. The most common or the traditional ones are the correspondence and coherence theories of truth. A more modern one is the deflationary theory of truth. The redundancy theory of truth accepts the equivalence  $T(p)$  and  $p$  itself. In addition, some deflationary theorists consider that this is the only relevant thing that can be said about truth. In this paper we are going to start from the Tarskian definition of truth and move to Horwich's minimalist approach, concluding with the prosentential theory of truth offered by D. Grover. Through these we aim to provide an answer, from each perspective, to a relevant question: may the truth predicate be removed from a language without minimizing the expressivity of that language?

## 1. Tarski's semantic conception of truth and the stratification of language

Tarski tries to find a satisfactory definition of truth, to be more precise, a definition which is materially adequate and formally correct.<sup>1</sup> The semantic conception of truth has its roots in the Aristotelian correspondence theory of truth presented in *Metaphysics*: "To say of what is that it is not, or of what is not that it is, is false, while to say of what is that it is, or of what is not that it is not, it is true."<sup>2</sup> Therefore the correspondence theory demands that a sentence is in agreement with reality to be true. In this case, a sentence is true if it designates an existing state of affairs. Even if Tarski considers the correspondence theory of truth the base of his own theory, he does not accept it as a satisfactory theory of truth.

Tarski's example is<sup>3</sup>:

The sentence "snow is white" is true if, and only if, snow is white.

Generalizing the T – schema is obtained:

(T): "S" is true if, and only if, S.

In this case, the first occurrence of the sentence or in the generalization the "S" is the name of the sentence, and the second one is the sentence itself. This schema is not a proper definition of truth; it can only be a particular definition of truth. A general one is obtained by an infinite conjunction of those particular usages of the T – schema. However, this infinite conjunction is practically impossible to achieve.

The other obstacle that stands in the way is the class of paradoxes. The liar antinomy may be the most obvious one in this case.

(L): This sentence is false.<sup>4</sup>

---

<sup>1</sup> Alfred Tarski, "The Semantic Conception of Truth and the Foundation of Semantics", in *Philosophy and Phenomenological Research*, Vol. 4, No. 3 (Mar., 1944), pp. 341

<sup>2</sup> Aristotel, *Metafizica*, 1011b, translated by Andrei Cornea, Bucharest: Humanitas, 2001

<sup>3</sup> Tarski, 1944, pp. 343 – 344. Tarski's generalization has a slightly different form: X is true if, and only if, p. In this case X represents the name of the sentence and p is the sentence itself. The meaning of those is the same.

<sup>4</sup> Ibidem, pp. 347 – Tarski uses another formulation for this antinomy.

In this case if it is assumed that L is true, the conclusion will be that L is false and if it assumed that L is false, the conclusion will be that it is true.<sup>5</sup> Applying T – schema:

(1) “L” is true if, and only if, “L” is not true.

This is a contradiction. Therefore, starting from the assumption that the proposition is true, it is attained that the proposition is false and vice versa. This contradiction seems to be grounded in the language in which it is constructed. This language contains not only its terms and expressions, but also the names of these expressions, and semantic terms (e. g. true) referring to its sentences. Self – referential sentences, as liar antinomy, may be formulated in a language like the one described. Such a language is called a semantically closed one.<sup>6</sup> In order to avoid contradictions and be able to discuss the truth predicate, Tarski’s solution presents a stratification of the language.

In this case, two different languages will be used. The first one is the object – language, which is “talked about”<sup>7</sup>. The truth definition will be applied to the sentences of this language. The second one is the meta – language where the first language is talked about. Here, the definition of truth for the first language will be constructed. The meta – language, should be essentially richer than the first one, and contain the object – language as a part. A meta – language should contain logical terms (e. g. if, and only if), names for the terms and expressions of the object – language and terms that make possible the relations and operations between expressions. The essential richness refers to the logical character of the meta – language, and it is necessary and sufficient for the construction of a satisfactory definition of truth.<sup>8</sup>

The role assignment of the role for each language is relative, because a meta – language can become an object – language if another language, a bigger one, becomes a meta – language and the rules are applied. Using the example of the T – schema: the name of the proposition belongs to the meta – language, also the truth notion and the logical term “if, and only if”, the proposition itself belongs to the object – language.

---

<sup>5</sup>  $(p \supset \neg p) \supset \neg p$  and  $(\neg p \supset p) \supset p$

<sup>6</sup> Tarski, 1944, pp. 348

<sup>7</sup> Ibidem, pp. 349

<sup>8</sup> Ibidem, pp. 352

Paul Horwich considers that the solution for the liar antinomy offered by Tarski is unsatisfactory. If it is accepted that according to the T – schema, “D” is not true  $\equiv$  D, at one point in the demonstration the relation “D is true  $\equiv$  D is not true” will be obtained.<sup>9</sup> Tarski claims that a language cannot contain its own truth predicate. For example, if there is a language  $L_0$ , its truth predicate is in  $L_1$ , and so on. For the liar paradox Horwich considers that the only languages that can include the “D is not true<sub>k</sub>” are  $L_k, L_{k+1}, L_{k+2}$ , and so on. If we accept that “D is not true” is identical to D and D must be a sentence of  $L_{k-1}$  then, in this case, D cannot exist and there is no liar paradox, according to Horwich. This explanation is not strictly linked to the Tarskian point of view, because it also can be used in a deflationary theory of truth. Horwich introduced the idea of grounding<sup>10</sup>, where an instance of the T – schema will be acceptable even if it contains a proposition concerning truth.<sup>11</sup> The proposition “D is not true” will not be considered a grounded proposition of  $L_k$ , because in  $L_{k-1}$  there are no facts which will entail that proposition or its negation. According to Horwich this proposition will not be a grounded one of any of the other sub – languages and, in this case the contradiction will not occur.

In order to be a satisfactory definition of truth, such a definition should be materially adequate and formally correct. To be materially adequate the definition formulated in meta – language must have as consequences all the particular definitions of truth, therefore all the particular applications of the T – schema. Even if a formal definition of truth is not possible because of the infinite conjunction, an inductive one is. The inductive method starts from the simplest sentences, which do not have other sentences as component parts. For these ones the truth condition is determined directly using the T – schema. Also, by using syntactic rules the definition is extended to any composed sentence of the language.

---

<sup>9</sup> The complete demonstration may be found in Paul Horwich, “A Minimalist Critique of Tarski on Truth”, in *Deflationism and Paradox*, Ed. by J.C. Beall and Bradley Armour-Garb, New York: Oxford University Press, 2005, pp. 80

<sup>10</sup> “Every proposition of  $L_0$  is grounded and for  $k > 0$ , a proposition ( $p_k$ ) is grounded if and only if either it or its negation is entailed by the grounded facts of  $L_{k-1}$  and  $L_{k-2} \dots$ , in conjunction with the instances of the equivalence schema that are legitimized by these facts.” Ibidem, pp. 82

<sup>11</sup> Horwich’s example is: *What John said is true*. Ibidem, pp. 81

The definition of truth can be obtained from the notion of satisfaction. Using this notion, the truth definition can be formulated, therefore a sentence is true if it is satisfied by all objects, and false otherwise.<sup>12</sup> This definition is formally correct and materially adequate.

In a deflationary theory of truth this equivalence makes possible the elimination of the truth predicate. In this case the “<S> is true”, which belongs to the meta – language can be eliminated, and replaced with an equivalent sentence which belongs to the object – language. Tarski considers that this elimination is not possible all the time. Examples used by Tarski are<sup>13</sup>:

- (2) All consequences of true sentences are true.
- (3) The first sentence written by Plato is true.

In these cases, the elimination of the term “true” is not possible in the way presented above. Tarski considers that the elimination is possible only when the name of the sentence is built in a way that allows the reconstruction of the sentence itself. In (3) this is not possible. The reconstruction may be possible if it is known what the sentence says, even if it is not mentioned in its name, but Tarski did not mention this.

The semantic conception of truth is not a deflationary theory of truth, according to Tarski, but it seems to be the base for such theories. The truth definition enables the replacement of the definiendum by its definiens, and in this way the elimination of the term “true” is possible. In Tarski’s view, this elimination cannot be made by replacing a sentence of a meta – language with a sentence of an object – language.<sup>14</sup> In this way, the stratification of the language defends the semantic conception of truth from transforming it into a deflationary theory of truth.

## **2. Deflationary theories of truth – Minimalist theory of truth and Dorothy Grover’s prosentential theory of truth**

Deflationary theories of truth consider that there is an equivalence between asserting that a statement is true and the statement itself, therefore:

$$(D): T(A) \equiv A^{15}$$

---

<sup>12</sup>Tarski, 1944, pp. 352 – 353

<sup>13</sup> Ibidem, pp. 359

<sup>14</sup> Ibidem, pp. 359

<sup>15</sup> Graham Priest, *Doubt Truth to be a Liar*, New York: Oxford University Press, 2006, pp. 44

Horsten's view is that deflationism is not a theory about the laws of truth, but one about the nature and the role of this concept. This theory does not seem to aim to resolve metaphysical and epistemological disputes. According to Horsten the theory of truth does not have a domain itself, it consists of the bearers of truth.

Deflationary theories of truth have two main parts: one that presents the meaning of the truth concept, and another that describes the role of this notion. The meaning of the notion is expressed by the T – schema, and as stated by Horwich that is all that can be said significantly about truth. The idea that if someone knows and accepts all the applications of the T – schema does not refer to the infinite conjunction of those applications, but rather to the fact that the language users have to know the T – schema and be willing to apply it every time he or she recognizes a proposition. Horsten considers that in a deflationist view knowing the meaning of truth can refer to knowing a rule.<sup>16</sup>

The truth predicate makes it possible to relate terms to sentences. By using quotation marks a sentence may be transformed into a term. In this case, asserting a sentence is equivalent with transforming that sentence into a term and asserting that it has the truth property. This seems to be what Quine wanted to say by naming truth a disquotational device and Horsten by calling the deflationary theory of truth a disquotational theory of truth.<sup>17</sup>

Horwich accepts the equivalence between<sup>18</sup>:

(4) p

(5) The proposition that p is true

and in his opinion nothing more about truth needs to be assumed. In this case, the minimal theory of truth presents the T – schema as the main statement about truth. Horwich considers that truth is applied to propositions, but utterances, mental attitudes and other types of entity have their 'truth' also. The minimalist conception does not seem too weak to be philosophically significant.<sup>19</sup>

---

<sup>16</sup>Leon, Horsten, *The Tarskian Turn – Deflationism and Axiomatic Truth*, London: Massachusetts Institute of Technology, 2011, pp. 61

<sup>17</sup> Ibidem, pp. 63

<sup>18</sup> Horwich, 2005, pp. 5

<sup>19</sup> Ibidem, pp. 6

Propositions are language independent and this may be one reason why Horwich prefers propositions over sentences as bearers of truth. A theory of truth seems to be a theory of truth for a specific language; more specifically of the language it is presented. Even if a person who does not know English, for example, but knows the T – schema, he or she will be able to apply it to an English proposition. In this case that person will know that the schema expresses a truth, but will not know *what* truth it express unless it will be translated.<sup>20</sup>

In a minimalist theory the truth function is to enable the explicit formulation of schematic generalizations, and the understanding of the word is represented by its use in order to perform its function<sup>21</sup>, in simpler words to accept and use the T – schema.

Because those theories do not seem to be able to avoid paradoxes, some inflationary theories use truth – value gaps and reject the T – schema in those applications that provide paradoxes.<sup>22</sup> In order to avoid paradoxes the minimalist theory will not accept certain instances of the equivalence schema as axioms. The liar – type contradiction will not be generated using the minimalist theory. This class of excluded instances should be as small as possible, according to Horwich.

Truth has no underlying nature in the minimalist point of view, and because its main function is to offer generalizations, it seems normal to ask if it is possible to remove this concept of the language. Horwich’s response is no. Minimalist theory does not apply “only in those cases in which truth is attributed to an articulate proposition”.<sup>23</sup> Adopting Horwich’s type of example:

(6) Tarski’s schema is true.

In this case “is true” cannot be removed. An application of the T – schema can be formulated in which truth predicate can be removed from this proposition, but its usefulness consists in this capacity of generalization.<sup>24</sup> If the truth predicate is not useful it should fall out of

---

<sup>20</sup> Mircea Dumitru, “Oferă orice teorie a adevărului o teorie a înțelesului? O evaluare critică a programului lui D. Davidson”, in *Probleme de logică*, vol. 11, Crizantema Joja and Călin Candiescu (coord.), Bucharest: Editura Academiei Române, 2004, pp. 143

<sup>21</sup> Horwich, 2005, pp. 37

<sup>22</sup> J.C. Beall and Bradley Armour- Garb, “A short introduction,” in *Deflationism and Paradox*, Ed. by J.C. Beall and Bradley Armour- Garb, New York: Oxford University Press, 2005, pp. 3

<sup>23</sup> Horwich, 2005, pp. 31

<sup>24</sup> (x) (If x is a proposition of the form (If Tarski’s law is the proposition that p, then p), then x is true), or even more

use. This does not imply that truth has some other function. The truth predicate is necessary and it cannot be removed from the language without diminishing the expressiveness of the language.

Even if the deflationary theories present the truth notion as a redundant one, it allows expressing things that are impossible to be expressed without using it. A. Gupta accuses deflationary theories of considering truth a simple concept and offering a simple analysis for it.<sup>25</sup> Horwich does not consider that truth has an underlying nature; there are only false problems based on syntactic overgeneralization.

There are some deflationists that claim that truth has not an explanatory role. The similarity between disquotational and prosentential theories is that they both believe that truth provides expressibility. Both theories consider that truth predicate makes possible a kind of generalization.

D. Grover considers that true and false predicates ensure prosentential constructions. Prosentences are like pronouns, in the way that they can be used anaphorically. Prosentences are non - atomic and have the positions that (declarative) sentences occupy, their antecedent is a sentence.<sup>26</sup> In this way, ‘that is true’ and ‘it is true’ function as prosentences; they provide connections between different parts of a discourse.

Some truth theories assume that a sentence with a truth predicate may say something about an antecedent sentence. The prosentential theory of truth considers the expression ‘that is true’ does not say something about its antecedent sentence but about an extra – linguistic subject which occurs in that (antecedent) sentence.<sup>27</sup> For example:

(7) Ana: Bucharest is the capital of Romania. Mary: That is true.

In this example, that follows Grover’s example, what Mary says refers not to the antecedent sentence, but to Bucharest, to be more specific, which is the capital of Romania.

---

general: (x) (If x is a proposition of the form < ... p... >, then x is true) Ibidem, pp. 33

<sup>25</sup> Anil Gupta, “A Critique of Deflationism”, in *Philosophical Topics*, vol. 21, No. 2, Spring 1993, pp. 78

<sup>26</sup> D. Grover, “On Two Deflationary Truth Theories”, in *Truth or Consequences – Essays in Honor of Nuel Belnap*, ed. by J. Michael Dunn and Anil Gupta, Kluwer Academic Publishers, 1990, pp. 4 and D. L. Grover, Joseph L. Camp Jr., Nuel D. Belnap Jr. – “A Prosentential Theory of Truth”, in *Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition*, Vol. 27, No 2 (Feb. 1975), pp. 87

<sup>27</sup> Idem, 1990, pp. 6



In order to sustain her point of view, Grover offers two alternatives for the English language. English + 'thatt' and English \*. In the first one 'thatt' is a prosentence. Conceptually English and English + 'thatt' are the same. In English \* the main idea is that truth can be understood as a prosentence of the form 'that is true'. The second artificial language has the presentences 'that is true' and 'it is true' and they should be treated as atomic presentences like 'thatt' from the first language. In this second case the verb 'is' should not be modified from those phrases. Sentences as 'What Ana said is true' do not belong to this artificial language.<sup>28</sup> In English \* 'true' may be used in one of the presentences, or in a "connective employed".<sup>29</sup>

What those two artificial languages underline is that the role of the truth predicate is of a prosentence; even if this is not all the time obvious. The two artificial languages are more obvious for the role of truth predicate, but are not so easy to use, common language is not as clear.

Following the aim of this paper, the question if the truth predicate is redundant is discussed from the prosentential point of view. Grover considers that her theory does not want to demonstrate the redundancy of truth, even more it wants to underline the "important anaphoric role of presentences involving 'true'".<sup>30</sup> Truth has a prosentential role, therefore Grover considers that English may be translated into English \* without significant changes. Therefore in English truth predicate can be reduced to its use from English\*. The irredundancy of 'true' in English \* is strictly logical, in English too. In relation to the question 'what is truth?' Grover tried to offer an answer by her prosentential theory, but this question must be a metalinguistic one in order to have a sense and an answer, otherwise it is incoherent.

In conclusion, none of the theories analyzed in this paper found the truth predicate redundant. The Tarskian semantic conception of truth provides deflationary theories of truth with the T – schema. Even if Horwich considers that all that can be said significant about truth is reduced to the T – schema, he does not think that the truth predicate is redundant. The truth predicate has an important role because of its capacity of generalization. In the prosentential

---

<sup>28</sup> Idem, 1975, pp. 92

<sup>29</sup> Ibidem, pp. 93

<sup>30</sup> Ibidem, pp. 101

theory of truth this notion has a logical role that can be reduced to some expressions which contain the word itself, but it cannot be reduced from the language.

#### BIBLIOGRAPHY:

1. Aristotel, *Metafizica*, translated by Andrei Cornea, Bucharest: Humanitas, 2001
2. J.C. Beall and Bradley Armour- Garb, “A short introduction,” in *Deflationism and Paradox*, Ed. by J.C. Beall and Bradley Armour- Garb, New York: Oxford University Press, 2005
3. Mircea, Dumitru, “Oferă orice teorie a adevărului o teorie a înțelesului? O evaluare critică a programului lui D. Davidson”, in *Probleme de logică*, vol. 11, Crizantema Joja and Călin Candiescu (coord.), Bucharest: Editura Academiei Române, 2004, pp. 140-153
4. Hartry, Field, “Tarski’s Theory of Truth”, in *Journal of Philosophy*, Vol.69, No. 13 (July, 1972), pp. 347-375
5. Hartry, Field, *Saving Truth from Paradox*, , New York: Oxford University Press, 2008
6. Dorothy, Grover, “On Two Deflationary Truth Theories”, in *Truth or Consequences – Essays in Honor of Nuel Belnap*, ed. by J. Michael Dunn and Anil Gupta, Kluwer Academic Publishers, 1990, pp.1-18
7. D. L. Grover, Joseph L. Camp Jr., Nuel D. Belnap Jr. – “A Prosentential Theory of Truth”, in *Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition*, Vol. 27, No 2 (Feb. 1975), pp. 73-125
8. Anil, Gupta, “A Critique of Deflationism”, in *Philosophical Topics*, vol. 21, No. 2 (Spring 1993), pp. 57-81.
9. Leon, Horsten, *The Tarskian Turn – Deflationism and Axiomatic Truth*, London: Massachusetts Institute of Technology, 2011
10. Paul, Horwich, *Truth*, New York: Oxford University Press, 2005
11. Paul, Horwich, “A Minimalist Critique of Tarski on Truth”, in *Deflationism and Paradox*, Ed. by J.C. Beall and Bradley Armour- Garb, New York: Oxford University Press, 2005
12. Graham, Priest, *Doubt Truth to be a Liar*, New York: Oxford University Press, 2006

13. Graham, Priest, *In Contradiction*, New York: Oxford University Press, second edition, 2006
14. Alfred, Tarski, “Adevăr și demonstrabilitate”, in vol. *Epistemologie- orientări contemporane* (vol. XV from *Materialismul dialectic și științele moderne*), Bucharest: Ed. Politică, 1974, pp.293-316
15. Alfred, Tarski, „The Semantic Conception of Truth and the Foundations of Semantics”, in *Philosophy and Phenomenological Research*, Vol 4, No.3 ( March 1944), pp.341-375
16. Paul, Weingartner, *Basic questions on truth*, in *Episteme*, v. 24, 2000
17. Wolfgang, Kunne, *Conceptions of Truth*, New York: Oxford University Press, 2003