

THE MINIMALIST CONCEPTION OF TRUTH AND PHILOSOPHY OF SCIENCE

Ajdukiewicz's Account of Scientific Inquiry

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Introduction

In my paper I would like to consider Ajdukiewicz's theory of meaning as a form of deflationism. This theory was formulated in the thirties and was published in two articles: "Sprache und Sinn" and "Das Weltbild und die Begriffsapparatur". My paper is intended as not only a historical study. Above all I want to interpret some aspects of Ajdukiewicz's construction as a theoretical model of deflationary ideas concerning science. I believe that this will help in examining the capacity of the deflationary account to accommodate some important facts regarding rationality and scientific development.

My paper consists of five parts. In the first, I introduce some terminological conventions regarding the use of the terms "semantics" and "theory of language". In the second, I present the deflationary view as a conjunction of a few theses. In the next, I relate Ajdukiewicz's theory, identifying deflationary aspects of it. In the fourth part I examine a possible alternative interpretation of the theory in question as a form of antirealism. I believe this might explain why deflationism is sometimes regarded as a sophisticated kind of antirealism. In the last, critical part, I indicate some limits of the deflationary account of scientific development.

1. TERMINOLOGICAL CONVENTIONS

Following Charles W. Morris, Kazimierz Ajdukiewicz divided semiotic considerations into three disciplines: syntax, semantics, and pragmatics. Ryszard Wójcicki points out that Ajdukiewicz's theory was developed on the level of syntax and pragmatics, while semantic analyses were neglected because of the threat of semantic paradoxes (Wójcicki, 1999, p. 5). In the same vein, Jerzy Giedymin states that Ajdukiewicz was

interested in providing a theoretical model of language conceived as an actual “part of our biological and social life, adaptive behaviour, goal-directed and rule-governed activity” (Giedymin, 1995, p. 120) rather than an abstract entity being subject to semantic analyses.

The term “semantic theory” can be taken either in its wide or narrow sense. In the wide sense it means simply any theory of language, no matter what its central concepts are: justification; rules; empirical evidence; denotation; connotation; correspondence with reality; and so on. It sometimes involves a general idea of “semantic value”, that is, any meaning-property of an expression that makes it understandable. In the narrow sense semantic theory is an account of language employing the concepts of reference, denotation and truth, in short pure semantic concepts. In my paper I use the terms “semantics”, “semantic analysis” and “semantic concepts” in the narrow sense. In contrast, any theory that results from general considerations regarding language use I simply call a theory of language.

Having made the distinction between theory of language and semantics we can state the deflationary view very briefly. According to deflationists, pure semantic concepts play no role in an adequate theory of language.

2. DEFLATIONARY ACCOUNT OF TRUTH AND MEANING

I consider the term “deflationism” a new label for an old and familiar set of ideas concerning language use and origins as well as its role in human cognition. Regarded as a new and inspiring attitude towards truth and meaning, deflationism presupposes certain philosophical views on language, understanding, and science. What these all have in common is the claim that the concept of truth plays no significant role in philosophical theory. The most prominent modern defenders of the deflationary view are Hartry Field and Willard V. O. Quine with their *disquotational theory* and Paul Horwich with his *minimal theory*. On the disquotational conception the truth bearers are interpreted sentences, that is, well-formed assertoric sentences playing a determined role in our speech. As an alternative, Horwich claims that truth bearers are to be propositions conceived as meanings of interpreted sentences. I believe that introducing propositions into the deflationary picture makes it unnecessarily complex. What kind of entities are propositions to be? One possible answer is that a proposition is a state of affairs or a complex of particulars a given sentence refers to. Another is that a proposition is a contentful thought expressed by a given sentence. But these

two answers involve an inflationary account of meaning. What makes a sentence interpretable is its being connected with some extra-linguistic entity by means of a mysterious relation of *referring to* or *expressing a thought*. On the deflationary account of truth the only available account of propositions is wholly given by the following scheme:

“*S*” means (or expresses) the proposition that *s*, (PS)

where *s* is a sentence of a language we understand. The scheme (PS) accounts for our use of the term “proposition”. Having an idea of translation we can extend that use to foreign languages. For example, we can say that if “*Pada deszcz*” is a Polish translation of an English sentence “It is raining”, then “*Pada deszcz*” means the proposition that it is raining. The disquotational account of proposition is based on the observation that individuating a given proposition amounts to mentioning a sentence expressing it. Moreover, we can (by means of the definition through abstraction) identify the proposition *that s* with the set containing nothing but the sentence *s* and its translations. To stress: on the disquotational conception of truth the concept of proposition plays no theoretically important role, although it can be introduced by means of the scheme (PS). What is more, its disquotational use can be extended to other languages through the concept of translation.

I think that disquotationalism is the most plausible form of deflationism. Its philosophical background is naturalism, a doctrine that finds many prominent proponents. According to it all the facts about language and knowledge are to be either reduced to the facts described by the natural sciences or, if the reduction does not succeed, eliminated as useless myths created by the philosophical dispute. Deflationists take the second strategy, namely elimination. Roughly speaking they state that there are no purely semantic facts in nature. Their main theses are the following:

- (1) An adequate account of (our understanding of) the concept of truth is given by the disquotation scheme:

S is true iff *s*. (DS)

- (2) (DS) defines truth only for sentences one understands.
- (3) Each instance of (DS) holds by virtue of the cognitive equivalence of the acceptance of the left side and the acceptance of the right side.
- (4) The truth-predicate has no factual content. That means that (DS) cannot be transformed into a closed general sentence of the form:

for all p , p is true iff p is F ,

where p stands for a proposition expressed by a sentence and F stands for a complex property identical to truth (correspondence, coherence, utility, and so on).

- (5) Although the predicate “is true” has no content, it has a use. Our understanding of the predicate is manifested by our ability to use it in accordance with (DS).
- (6) The utility of the predicate “is true” is accounted for by its use as a device for abbreviating infinite conjunctions and disjunctions. Truth is a device for semantic assent.
- (7) The concept of truth (as well as other semantic concepts) plays no role in an adequate theory of language.
- (8) An adequate theory of truth has nothing to do with issues (for example, realism-antirealism debate) traditionally discussed by philosophers of science.

Let me make a few comments. According to thesis (1) a satisfactory theory of truth contains nothing more than all uncontroversial instances of (DS). It follows that the theory cannot be explicitly formulated. But deflationists claim that the identification of the theory by reference to (DS) suffices. They also agree that every instance of (DS) is a kind of single equation with two unknowns. It follows from the fact that an instance of (DS), for example,

“Snow is white” is true iff snow is white,

can either account for our knowledge of the meaning of the respective sentence provided we independently know what the truth of the sentence consists in or explain the truth of the sentence provided we are able to interpret it. Deflationists take the second option. That is why they state thesis (2). The above instance of (DS) explains what it is for that particular sentence, namely “Snow is white”, to be true. It does so employing nothing more than the sentence itself. Consequently, the disquotational account of truth calls for an account of understanding that is neither truth-conditional nor referential. Hence thesis (7). Contrary to Donald Davidson, deflationists claim that the instances of (DS) are not theorems of the theory of meaning but theorems of the theory of truth. In my opinion what represents a real challenge to the adequacy of the deflationary theory of truth is the need for a deflationary theory of meaning.

Thesis (3) states what I call Ramsey's intuition. In the famous passage of "Facts and Propositions" we read that

it is evident that "It is true that Caesar was murdered" means no more than that Caesar was murdered [...] its value "Caesar was murdered is true" is the same as "Caesar was murdered" (Ramsey, 1964, p. 16).

If so, the equivalence "It is true that Caesar was murdered if and only if Caesar was murdered" expresses an analytic truth. But what does the clause "means no more than" mean? I think that what Frank P. Ramsey had in mind was that by adding the predicate "is true" to the original sentence we give no more information than this in the sentence itself. "It is true that Caesar was murdered" has the same cognitive content as "Caesar was murdered". Consequently, the truth predicate has no factual content, as stated in thesis (4). If this is so, the traditional philosophical search for the content and nature of truth proves to be founded on a terrible misunderstanding. There is no general property identical to truth that is worthy of philosophical analysis. The "no content" thesis plays a central role in deflationary views of Peter F. Strawson, Richard Rorty, and others.

Since the truth predicate has no content, the question what makes it understandable arises. The deflationary answer is thesis (5). The truth predicate has a definite use identified by (DS). The scheme amounts to a rule of linguistic behaviour. We know that our assertion predicating the truth of a certain sentence is justified if and only if we are justified in asserting the sentence itself. That does not mean that truth is to be identified with justified or warranted assertibility. To be justified in asserting that a certain sentence is true is a property of a human linguistic behaviour, while being true is supposed to be a property of a sentence. What the disquotational theory of truth aims to describe is not a property of a sentence but a part of our linguistic custom. What is more, it attempts to account for its utility. Hence thesis (6). Due to the disquotational use of the truth predicate we can simply state "Some sentences Tom uttered are true" instead of making an infinite list of conditionals:

(If Tom said that snow is white then snow is white) or
(if Tom said that coal is black then coal is black) or

In the same vein, we can simply say "Every sentence of the form '*p* or not-*p*' is true" instead of making an infinite list of disjunctions:

(snow is white or snow is not white) and
(coal is black or coal is not black) and

Thesis (7) and (8) represent philosophical consequences of deflationism. Thesis (7) does not mean that such concepts as “denotation”, “reference”, “content”, “fact”, and “truth conditions” are not available on the deflationary account of language. They can be introduced by means of the relevant disquotational schemes, for example:

It is a fact that p iff p , (F)

for all x , “ N ” refers to x iff “ N ” = x , (R)

“ S ” has truth conditions that s , (TC)

and so on. The deflationary point is that so-called semantic concepts are characterised by their disquotational use and have no explanatory power. In particular, “denotation”, “reference”, and “truth conditions” play no role in explaining language use and learning. According to thesis (8) an adequate theory of truth favours neither realism nor antirealism. It contradicts the common opinion accepted by Donald Davidson, Michael Dummett, and others that the debate between realism and antirealism actually is a dispute over the nature and content of truth. Moreover, the disquotational concepts introduced by (F) and (TC) do not help us to draw any significant philosophical distinction between fact and value, reality and fiction, and so on. According to deflationary standards every well-formed and significant sentence expresses a fact and is truth-conditional. Of course we can make a few distinctions between various kinds of facts: moral, physical, historical, and so on. But this has nothing to do with semantics but with our theory of morality, nature, and the past.

3. AJDUKIEWICZ’S THEORY OF MEANING

At the beginning of this paper I pointed out that Ajdukiewicz’s construction could serve as a theoretical model of deflationary ideas. I also said that the deflationary conception of truth was to be supplemented with a theory of meaning that is not truth-conditional. Now I would like to preface a presentation of Ajdukiewicz’s theory with the remark that it involves no semantic terms. Instead Ajdukiewicz points out that language communication is a human art, an activity governed by man-made rules, in other words conventions. According to his own words, his

contribution to studies on language is really based upon drawing attention to the fact that our way of using expressions depends on our way of understanding them, and thus upon the meaning in which we use them (Ajdukiewicz, 1995, p. 13).

The passage contains the phrase “depends on” and the nature of this relationship between “our way of using expressions” and “the meanings in which we use them” remains vague and unclear. It could imply that there exists a domain of meanings, entities equipped with a specific power that determine our way of using expressions. But I think this picture is misleading. What Ajdukiewicz seems to state is that there is no other way of speaking of meanings than in terms of regularities of use. I take him to have implicitly accepted a requirement that is now known as *the principle of manifestibility*: if someone understands a statement in a certain way, there must be some possible behaviour on his part by which he could show that he understands it in that way. In short, meaning is use. If so, the central concepts of the theory of language are neither “truth” nor “denotation”, but “rule”, “usage”, “linguistic behaviour”, and “custom”.

According to Ajdukiewicz an agent uttering or hearing a given sentence identifies its meaning due to its use-regularity, where the latter is captured by so-called meaning-rules. To speak a language is to be committed to behave according to phonetic rules, syntax rules, and meaning rules. There are three types of meaning-rules. First, there are *axiomatic meaning rules*, specifying sentences that cannot be rejected without violating of the meanings assigned them in the language. Second, there are *deductive meaning rules*, specifying ordered pairs of sentences. One cannot accept the first sentence and reject the second if one want to avoid violating of the meanings assigned them in the language. Third, there are *empirical meaning rules*, specifying ordered pairs whose first element is a description of experimental data or an objective situation and the second element is a sentence that one cannot reject in the presence of those data or this objective situation.

Ajdukiewicz’s view on language-use as an activity governed by meaning-rules implies a certain model of scientific inquiry. Wójcicki points out that meaning-rules are not only rules of linguistic behaviour but also certain methods of arriving at *justified* assertions. More precisely, we should say that they are rules of arriving at assertions that are taken as justified. Ajdukiewicz introduces the idea of *conceptual apparatus* or *conceptual scheme*. This is a system of meanings within a given language. In fact, a conceptual apparatus is a system of meaning rules. The word “apparatus” implies that the rules are tools of speech and scientific inquiry. They can be identified with a speaker’s methods of justifying assertions or, in other words, with his or her standards of rational acceptability. According to Ajdukiewicz, exercising a given conceptual apparatus we arrive at a certain *world picture*. A world picture is a set of sentences (or theories) dictated by rules of a language

with regard to experimental data. It follows that there is an indispensable conventional element in every world picture conceived as a product of scientific inquiry. This element is introduced by using a given conceptual apparatus.

One natural question is are the sentences constituting a given world picture true? Ajdukiewicz's answer is that anybody who arrives at a given world picture is committed to predicate of every of its sentences that it is true. But asserting that a given world picture is true is a trivial step beyond asserting the picture itself. In the thirties Ajdukiewicz felt himself unable to give a more substantive account of truth, because of the dangers of well known semantic antinomies. In my view that is what explains why his proposal is deflationary. Ajdukiewicz states that

we have in our language a directive [that is, a meaning-rule, MW] which appertains to "is true" allowing us to predicate it of every sentence assented to and its translation. Now, if this directive is the only one which concerns our use of the predicate "is true", we shall be only able to predicate "is true" of a sentence, if we assent to the sentence or its translation. But because we can only assent to sentences of the language we are using we are able only to predicate "is true" of sentences of our own language or sentences translatable into our own language (Ajdukiewicz, 1995, p. 28).

In the passage just quoted we can find three disquotational theses, namely (1), (2), and (5). First, the only rule concerning the use of the truth predicate is an extra meaning rule that can be spelled out either in the form of two deductive meaning-rules:

$$\langle s; \text{"s" is true} \rangle,$$

$$\langle \text{"s is true"}; s \rangle$$

or, provided our language contains the classical sentential calculus, in the form of an axiomatic meaning-rule:

$$S \text{ iff "s" is true;}$$

that amounts to (DS). Second, we are allowed to predicate "is true" of sentences we understand, since our ability to use them in the certain way is a manifestation of our understanding them. But Ajdukiewicz states something more than thesis (2). Employing the notion of "interlinguistic synonymy", or simply "translation", we can extend the disquotational use of the truth predicate to sentences of other languages. Field calls this approach *an extended disquotational truth* (Field, 1986, p. 61). Third, what makes the truth predicate understandable is its use-regularity captured by the single extra meaning rule tantamount to (DS).

What about thesis (3)? On Ajdukiewicz's approach no other justification is needed for asserting that a given sentence is true than asserting the sentence itself. Accepting a world picture and accepting that this picture is true are two cognitively equivalent attitudes. As for the utility of the truth predicate, I must admit Ajdukiewicz does not say a word about it. In particular, he does not explicitly account for the presence of the predicate in our speech. It seems to me, however, that Ajdukiewicz implicitly holds thesis (6). For the disquotational truth predicate proves to be an indispensable device for formulating axiomatic meaning-rules in a general way. We can simply state that every sentence of the form "p or not-p" is true instead of making an infinite list of concrete instances of the law of excluded middle.

Thesis (7) is a starting point of Ajdukiewicz's theory, so it demands no further comments. The disquotational conception of truth calls for an adequate theory of understanding that is neither truth-conditional nor referential. I think Ajdukiewicz provides us with such a theory. But it also implies a picture of scientific inquiry that I find problematic. Is the deflationary view on the nature of language communication adequate or not? I would like to examine this issue in section 5. Before let's take a look at thesis (4) and (8). Ajdukiewicz might seem to have offered a general account of truth. One might take him to have identified truth with assertibility according to meaning rules and thereby to have adopted a form of antirealism. I think that this issue can be raised not only in connection with Ajdukiewicz's theory. I hope it throws a sort of light on the relation between deflationism and antirealism.

4. ANTIREALISM OR DEFLATIONISM?

I have just presented some Ajdukiewicz's statements concerning the theory of language. What seems to be the most basic part of his construction is the idea of explaining meaning in terms of meaning-rules. There are, however, some further concepts. According to him, the most central part of his work is the conception of closed and connected languages and the definition of synonymy based on it. Later Ajdukiewicz abandons both the conception and the definition in question. As Alfred Tarski's argument shows, the definition allows two synonymous expressions to have different extensions, so it proves to be inadequate. Moreover, the picture of closed and connected languages also seems to be inadequate and fictitious since it implies an uncompromising holism: two languages with slightly different conceptual apparatus are untranslatable. Tarski's criticism is worth our attention, because it denies the possibility of defining the Fregean concept of *Sinn* in

terms of use. But an exhaustive discussion of this issue goes beyond the limits of this paper.

Let us come back to the main argument. Even if we abandon the idea of closed and connected languages, we are left with the picture of language communication as an activity governed by conventional meaning-rules. To explain a meaning of a given expression it suffices to indicate its inferential and empirical role, that is, to demonstrate the rules involving the expression in question. Nothing more is called for. We can still maintain that the choice of the meaning-rules is tantamount to the choice of the methods of justifying assertions and use the disquotational truth predicate according to the extra meaning-rule. If so, we are justified in predicating truth of a given sentence if and only if we are justified in asserting that sentence itself. All this may lead one to say that this allegedly deflationary account actually is a sophisticated form of antirealism.

Antirealism, the view articulated and defended by Michael Dummett, is usually represented by two theses. The second follows from the first. It is said, first of all, that truth is nothing but warranted assertibility. If so, a given sentence can be seriously considered as *truth-conditional* (that is, *meaningful*) if it possesses *warranted assertibility conditions*. Let's imagine — an antirealist encourages us — that for a certain group of sentences we can justify neither their acceptance nor rejection. Consequently, taking the antirealist's identification of truth with warranted assertibility for granted, we cannot say that the sentences under discussion are either true or false. Hence the second thesis: the law of excluded middle is to be rejected. (In latter writings Dummett rejects the principle of bivalence.)

What about Ajdukiewicz's theory? At first sight it looks like a form of antirealism. To argue for such an interpretation one can say the following: Ajdukiewicz considers a case of two mutually untranslatable languages. On the more liberal view we can admit that translatability is a matter of degree, rejecting the holistic conception of closed and connected languages as too restrictive. But let's consider an extreme example of untranslatability. There are two languages, L_1 and L_2 , that are represented by two different conceptual apparatuses. Let's assume that they deal with the same domain of empirical reality. Almost every word of L_1 has no counterpart in L_2 . That means that users of L_1 and users of L_2 arrive at different world pictures since they employ different standards of justification. Suppose that in the conceptual apparatus connected with L_1 there is a rule concerning the use of the truth predicate. In fact, it is the extra meaning rule discussed in the previous section. Following that rule a user of L_1 can predicate truth of every sentence

constituting his world picture. Suppose that in $L2$ there also exists a predicate to which applies a rule analogous to the rule governing “is true” in $L1$. Ajdukiewicz claims that these two predicates have different meanings despite the fact that they are used in the same way. He points out that the predicates under discussion have different extensions, hence they cannot mean the same thing. Stating that Ajdukiewicz seems to accept two theses regarding the truth predicate. First, the predicate has a content that determines its extension. Second, the content is relative to a given conceptual apparatus. What is more, the content is identical to the relevant set of rules of justifying assertions. It seems that we have no alternative but to accept an interpretation of Ajdukiewicz’s theory as a form of antirealism, or, as Adam Grobler calls it, an *internal antirealism*.

In short, on the antirealist interpretation we can identify the truth of a sentence with its property of being a justified thesis of a certain world picture. Indeed, in the essay “A semantic Version of the Problem of Transcendental Idealism” Ajdukiewicz takes such an identification to be a central claim of antirealism. But comparing antirealism with his early theory of language Ajdukiewicz writes the following:

In my essay of 1934 [“Das Weltbild und die Begriffsapparatur”] in which I expounded my radical conventionalism I did not identify the truth of a sentence with its being a thesis. [...] I did not however warn against identifying these concepts. Because of this oversight on my part a temptation may have arisen to identify these concepts resulting in idealist consequences. I cannot deny that at that time I failed to give a clear account of whether they are concepts having different extensions and did indeed play with the notion of identifying them, thus standing, not quite consciously, at the parting of ways between idealism and realism (Ajdukiewicz, 1995, p. 30).

It looks as if there were two different theories of truth in Ajdukiewicz’s account of language. We find two claims regarding the problem of truth that cannot be reconciled. The first one is epistemic and hence inflationary, while the second is deflationary. The problem is that there are at least two possible explanations of the discrepancy in extensions of the truth predicates of $L1$ and $L2$. The first one is inflationary. We can simply identify truth with warranted assertibility. It implies that the truth predicate has a definite content determining its extension. The content amounts to the set of meaning rules, that is, the rules of arriving at warranted assertions. The change of conceptual apparatus entails the change of the content of truth, and hence the discrepancy in extension. According to the alternative account, the truth predicate has no content. But it does have a disquotational use. If this is the case, the principle that sameness of content entails sameness of extension is not in force.

The discrepancy in extensions of the two predicates is simply caused by different domains of application.

Although Ajdukiewicz explicitly accepts the consequences of the epistemic account, this can hardly be reconciled with his basic view on the role of the truth predicate. The disquotational conception of truth is not a sufficient basis for stating the thesis of relativism, namely that all truths are relative. It says nothing of the conditions of being a truth. It merely explains what it is for a given sentence to be asserted as a truth. "To be said as true" and "to be true" are two different properties and it is the first one, not the second, which is introduced and discussed by Ajdukiewicz in his essay on radical conventionalism. From this point of view scientists aim at arriving at some world picture and eventually asserting it to be true. Their task cannot be described as progress towards the truth conceived in any substantial way, realistic or epistemic. Scientific research is an activity governed by rules and the idea of truth plays no significant role in its description. The truth predicate is nothing but a voice produced by scientists when they want "to indicate the position occupied by the statement in our argument" (Ramsey, 1964, p. 16). Consequently, the proponents of Ajdukiewicz's theory cannot say that every world picture is true relative to its standards of justification. They would rather say that users of a given conceptual apparatus are committed (or disposed) to call their own world picture true. This is not relativism, but rather parochialism in Rorty's style.

Although the disquotational truth predicate is transtheoretical, it has nothing to do with realism. For the same reasons it does not help us to refute relativism. But, on the other hand, it does not favour either antirealism or relativism, going beyond these traditional philosophical alternatives. But let us come back to Ajdukiewicz's theory. I think that it is its failure to define the Fregean concept of *Sinn* in terms of use that makes it deflationary. This failure prevents the truth predicate from having any content determining its extension. In particular, the rules of justifying assertions do not constitute the content of the truth predicate. As for the law of excluded middle (or the principle of bivalence), it can be introduced, or not, into a given language by introducing or withdrawing a relevant axiomatic meaning-rule. In that sense, Ajdukiewicz's conception is very liberal and admits both "realistic" and "antirealistic" conceptual apparatuses.

5. IS A PURE DEFLATIONARY ACCOUNT OF SCIENTIFIC INQUIRY ADEQUATE?

I think that the deflationary account of scientific research faces at least one serious problem. Namely, pure deflationism leads to a very

weak conception of rationality. This need not force one to reject deflationary ideas. To the contrary, it seems to me that the deflationary picture is generally correct, although it calls for a modification. Since it fails to explain some phenomena — evaluations in terms of rationality, for example — it should be enriched with some inflationary ideas. Unfortunately these ideas are found to be incurably vague and unclear. Therefore deflationists are in a way right when they claim that the notion of truth is not subject to philosophical analysis. Even if there must be something more in our common ideas of truth than that is captured by the disquotational scheme, what is this “something more” cannot be made explicit. Nevertheless, it can be more or less clearly illustrated by means of the discussion of the problem just mentioned.

In the previous section I argued that disquotationalism entails neither antirealism nor relativism. Now I argue that actually it entails naturalism. Let me illustrate my point by reference to Ajdukiewicz's theory once again. For the first thing, it assumes a certain conception of a speaker as a system of dispositions to behave according to meaning-rules. Wójcicki calls this conception *procedural*. He claims that

Ajdukiewicz's conception of meaning has [...] the character of procedural conception. It is not a purely syntactic conception, because the directives [meaning-rules, MW] specifying the behaviour of the users of the language are defined in reference to states of affairs as well as expressions. However it is not a semantic conception, because in setting it up we do not refer to any analyses of content — we do not demand from the user of the meaning directives any consideration of the meaning of expressions included in sentences which she accepts in the given situations (Wójcicki, 1999, p. 9).

I think that disquotationalists have no alternative but to accept the procedural conception of meaning and speaker. They cannot explain someone's understanding a sentence by ascribing a contentful belief to an agent. In fact, the course of explanation is reversed. On Ajdukiewicz's conception, to analyse a context “John believes that it is raining” is to say that John accepts (or believes) the sentence “It is raining” or its translation, while to accept (or believe) a given sentence means nothing more than to utter it with conviction. As can be seen, the central concept of Ajdukiewicz's theory of understanding is “accepting a sentence”, while more substantive candidates, like “considering a content” or “referring to an object” for example, are neglected. The concept of “content” is usually defined in terms of truth conditions and hence it has no explanatory power on the deflationary account. According to Ajdukiewicz's own statement, defining understanding in terms of acceptance and meaning-rules we can get rid of “the myth of mental disposition”. Understanding and thinking are simply reduced to following

meaning-rules with regard to the sensory intake. Both this reductionism and this naturalism produce a disastrous consequence for the conception of rationality.

The basic dilemma is that following rules either *defines* or *assumes* rationality. The former option is deflationary and leads to a very weak conception of rationality. The latter conception involves a normative idea of truth as the best conceptual representation of reality. The first one is clear and unambiguous. Nevertheless, it proves to be too narrow to capture the whole variety of phenomena that involve evaluations in terms of rationality. The second one accounts for more phenomena of rationality but remains vague and hence open to criticism. Let me illustrate this point with examples. In our language practice we often face borderline cases. When are we to say that a wide stream becomes a small river? To resolve such questions we establish a new convention, usually by supplementing existing empirical meaning-rules with additional empirical procedures. Moreover, sometimes we find ourselves in a new and unexpected empirical situation that forces us to introduce a new empirical meaning-rule or extend the scope of application of the old ones. The discovery of new species of animals inhabiting Australia called for a revision of the use of the term "mammal". In more challenging cases we may need to change the whole system of organising experience. Abandoning the Ptolemaic system in favour of the Copernican system, scientists changed the use of the term "planet". Are such moves subject to rational decisions? On the deflationary account, considering a new candidate for a meaning-rule we are left without any normative clues. But we cannot escape making a decision as to what kind of similarities and differences are to be counted as essential. This, however, calls for a conception of rationality broader than that one identifying thinking with following rules.

For the sophisticated deflationist there are some clues. We can discover some tendencies in the actual development of science. Scientists make their decisions concerning meaning-rules as if they have accepted some criteria governing the development of science. In so far as that statement remains descriptive and does not involve any substantial account of truth, it does not go beyond the deflationary picture. In fact, Ajdukiewicz admits that scientists sometimes decide to get rid of an old conceptual apparatus and to adopt a new one. Studying actual progress in science he also identifies our evolutionary tendencies in the development of conceptual apparatuses. The first one is *consistency*, namely that scientists immediately give up an apparatus if it proves to be inconsistent. The second one is called *rationalisation*. It means that scientists expect a new apparatus to solve more problems by means

of pure theoretical devices, that is, without any appeal to experience. This leads particularly to a scientific theory containing more principles and less empirical generalisations than a previous one. The third tendency is *completeness*. According to it, scientists aim at a theory that solves previously undecidable problems and does not generate new undecidable problems, borderline cases for example. The last tendency is *empirical sensitivity*, namely that a new conceptual apparatus is supposed to distinguish more empirical differences than a previous one. Grobler remarks that in pointing out these four tendencies Ajdukiewicz is about to get committed to a more substantial conception of truth. In my view, however, so long as those tendencies are not subject to normative considerations, his account does not go beyond deflationism. On the deflationary interpretation, there is no need to absolutise these tendencies. If one day scientists decided to favour inconsistent, incomplete or less rational conceptual apparatuses, it would still be termed "an evolutionary development in science". What is more, it would still be called "a rational enterprise". On the other hand, we can look at these four tendencies as if they constituted the very criterion of "progressing towards the truth". The fact that we aim at consistent and complete conceptual apparatuses can find its explanation. This is simply that we aim at the best conceptual representation of the world. Of course, the idea of "the best conceptual representation" or the idea of truth as "the ideal limit of inquiry", which is suggested by Ajdukiewicz's remark on his inclinations towards pragmatism, cannot be strictly formalised. But this is what motivates us to reject apparatuses that prove to be inconsistent and incomplete, and to look for better standards of rational acceptability. Accepting the transcendent idea of truth, we assume that the world we explore is rational, intelligible, and lacks inconsistencies. Hence, on the more substantial interpretation the four tendencies are not merely discovered in the actual course of science but exemplify some general norms of scientific research. Having them we can subject proposals of new conceptual conventions and meaning-rules to a rational discussion.

One can say, following Rorty, that nothing forces us to take the more substantial interpretation. The alternative deflationary interpretation leaves, however, many questions unanswered. This is why Adam Grobler prefers the former in the search of an explanation of scientific inquiry as a rational enterprise. This, however, commits us to the view that the disquotational concept is not the only concept of truth we are able to understand. The content of the normative idea of truth remains vague. However, it is not empty. I would rather say that it is always under reconstruction, since considering many ordinary problems we are forced

— sooner or later — to look for common and universal standards of rationality.

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