

## IV. Truth



## 1. The Classic Definition of Truth

In the last chapter, I often used the terms “true” and “truth”. But what is truth? The question was asked by Pilate when Jesus said to him: “To this end I was born, and for this cause came I into the world, that I should bear witness unto the truth.”<sup>1</sup> Jesus seems to know what truth is, since he takes himself for the truth: “I am the way, the truth, and the life.”<sup>2</sup> But Pilate, the unbelieving sceptic, retorts “What is truth?”<sup>3</sup> and does not even appear to be interested in an answer. A modern sceptic, Oswald Spengler, suggested the following answer:

What is truth? For the masses, that which they continually read and hear. A poor devil may be sitting somewhere and collecting grounds on which to determine “the truth” – but what it obtains is just **his** truth. The other, the public truth of the moment, which alone matters in the material world of efficiency and success, is today a product of the press. What the press wants is “true”. Its barons create, transform, switch truths. Three weeks of press work, and “the truth” is acknowledged by everybody. Its arguments are irrefutable as long as there is enough money to keep repeating them. Classical rhetoric, too, was designed for effect and not content [...] but it limited itself to the actual audience and the moment. The dynamics of the press demands *permanent* effects. It must exert *continuous* pressure on people’s minds. Its arguments are refuted as soon as the greater financial power shifts to the counter-arguments which are presented even more intensively to all eyes and ears. At that moment the needle of public opinion swings round to the stronger pole. Everybody is immediately con-

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<sup>1</sup> John XVIII, 37. Transl. King James Bible.

<sup>2</sup> John XIV, 6. Transl. King James Bible.

<sup>3</sup> John XVIII, 37. Transl. King James Bible.

vinced of the new “truth”, and considers himself awakened from an error.<sup>4</sup>

Truth, then, is “today a product of the press”. Obviously, by truth, Spengler means what is taken to be true. He is advancing a hypothesis about when “the masses” believe something to be true. The hypothesis may or may not be true, but we “poor devils” want to know something else – not when we regard an opinion as true, but what *the* truth, the objective truth, is.

Here we must make a distinction. When we say that someone is a true friend, we do not mean the same thing as when we say that a sentence is true. In the first instance, we mean that the person concerned is a genuine friend. In the second instance, for example, if we assume that a testimony in a court of law is true, we mean something different, namely, that it corresponds to reality. In the first instance, then, truth is a property of a person or a thing; in the second, it is a relationship between a sentence and the reality. The first is also called ontological truth, the second propositional truth.

To put it more accurately, in the second instance, it is not the sentence as such that is true, but the content of the sentence. If the sentence were true only as a sound sequence, a translation of it with the same content into another language would no longer be true. Since the sound sequence is different in different languages, the sentence as a physical form of expression cannot be true. What is true is the content of that form of expression. The content is also called a *proposition*. As a variable for a proposition, we will use a capital “P”, “Q”, “R”, etc., and for a sentence, we will use a small “p”, “q”, “r”, etc. In what follows, I will restrict myself to the second type of truth, that is, proposi-

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<sup>4</sup> Spengler, DW, Volume 2, Chapter 4, Section 3, 1139-1140. Transl. Atkinson with small alteration by Ferber.

tional, and not ontological, truth. As I have already spoken about the truth of mathematical and logical axioms, I will now concentrate on the truth of propositions about the external world.

A proposition is true if it corresponds to the facts; it is false if it does not correspond to them. The proposition “Snow is white” is true if the snow is white and false if the snow is not white. This conception of truth is based on correspondence and non-correspondence. Therefore, it is also called the correspondence theory of truth. It is a new formulation of the classic thesis that truth is the correspondence between knowledge and reality.

Aristotle, without using the Greek word for correspondence, put it like this: “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, and of what is not that it is not, is true.”<sup>5</sup>

What is remarkable about this definition is that if we resort to the correspondence theory in asserting the truth of a proposition, we do not even have to say that the proposition is true. By formulating a proposition, we are already saying that it is true. If, for example, we assert that “snow is white”, we mean that it is true that snow is white. Conversely, if we assert that “snow is not white”, we mean that it is true that snow is not white. Thus, by “P is true” or “P is not true”, we say no more than we do by P alone. The claim of propositions to truth is so obvious that we do not even mention the word “truth” itself.

That is why we can omit the word “true”, unless we want to stress specially that a proposition is true. However, in that case, the word “true” no longer has a descriptive function, but rather an emphatic or expressive one. For descriptive purposes, the

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<sup>5</sup> *Metaph.*, Book 4, Part 7, 1011b26-28. Transl. Ross.

word “true” in connection with propositions about the external world appears to be superfluous or redundant. That is why we also speak of the redundancy theory of truth.<sup>6</sup> The redundancy theory supplies neither a definition nor a criterion of truth, but it demonstrates the obviousness of the claim to truth in terms of the correspondence theory. The redundancy theory of truth, therefore, is not an alternative to the correspondence theory. Rather, it is an indication of the obvious nature of the claim to the truth of propositions about the external world in terms of the correspondence theory.

## 2. Objections to the Classic Definition and Tarski’s Reformulation

There are several objections to the definition of truth as the correspondence of proposition and fact.

a) The definition is circular. How do we know that it is true that truth consists in the correspondence between a proposition and a fact? We would need to know whether it really corresponds to a fact that the truth of a proposition consists in its correspondence with a fact. To be able to judge whether or not our definition corresponds to the truth, we would have to be able to compare our definition of truth with the truth.

b) The definition is not epistemologically neutral. It presupposes a naive epistemological realism which holds that an external world exists objectively and independently of human un-

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<sup>6</sup> This theory was first advocated by Frege: “Therefore it is really by using the form of an assertoric sentence that we assert truth, and to do this we do not need the word ‘true’. Indeed we can say that even where we use the form of expression ‘it is true that ...’ the essential thing is really the assertoric form of the sentence” (Logic 140). Transl. Long and White. The theory became well-known through Ramsey, *Facts and Propositions*.

derstanding, for example, that snow is really white and is not merely perceived as white by us. The definition presupposes a naïve epistemological realism. But how do we know that a proposition corresponds to a fact “as it really is”? In order to decide whether or not the proposition corresponds to the fact, we would have to know the proposition and the fact independently of it. We would, as it were, have to assume the point of view of “the eye of God”,<sup>7</sup> who is able to see the two separately from each other.

c) But as we cannot assume God’s point of view, the definition turns into an endless series of returns to an endless array of facts, a *regressus ad infinitum*. We want to decide whether the proposition  $P_1$ , “Snow is white”, corresponds to the fact that snow is white. To do so, we must first fix the fact in question in a proposition  $P_2$ . Only then can we decide whether or not  $P_1$  corresponds to  $P_2$ . But how do we know whether or not  $P_2$  corresponds to the actual fact that snow is white? To decide that – whether or not  $P_2$  corresponds to the fact that snow is white – we must first fix the fact in question in a proposition  $P_3$ , etc. Therefore, we cannot decide whether or not the proposition corresponds to the fact by comparing the two, because we have no access to the fact apart from the proposition. Of course, we can see the white colour of the snow with our bodily eyes. But nobody has ever seen the actual fact that snow is white with his bodily eyes. The fact that snow is white does not exist apart from the proposition.

For these three reasons, we cannot adopt the classic theory, which claims that truth consists in a correspondence with reality, as it was originally formulated by Aristotle. However, there

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<sup>7</sup> The term “eye of God” is found, with a critique of the correspondence theory, in Putnam, Reason, Truth and History, 73-74.

is a method that allows us to retain the classic definition of truth, albeit only in languages whose structure has been precisely established in advance. The method was put forward by Alfred Tarski (1902-1983) in his treatise *Der Wahrheitsbegriff in den formalisierten Sprachen* (1935) (*The Concept of Truth in Formalised Languages*, 1956). Tarski talks about sentences because he believes that the concept of proposition is not clear and unequivocal enough. But his choice of terminology need not prevent us from understanding the principle behind his suggested solution. Naturally, Tarski does not have sentences in a merely physical sense – such as a sequence of sounds or printer’s ink – in mind. He means sentences that make sense. Such sentences can only be true or false in derivative terms. Originally, only the sense of a sentence – the proposition – is true or false.

Tarski formulates the classic definition as follows: “(1) a true sentence is one which says that the state of affairs is so and so, and that the state of affairs indeed is so and so.”<sup>8</sup> He sees the general pattern of true sentences like this: “(2) x is a true sentence if, and only if, p.”<sup>9</sup> Here “x” is a symbol of any individual name of a sentence and p of the sentence itself. The expression “It’s snowing” may serve as a concrete example of such a “quotation name” x of a sentence. It symbolises the sentence that it is snowing. Therefore, according to (2), the following is the case: “(3) ‘It’s snowing’ is a true sentence if, and only if, it is snowing.”<sup>10</sup>

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<sup>8</sup> Tarski, *The Concept of Truth*, § 1, 268. Emphasis in the original. Transl. Woodger.

<sup>9</sup> *Ibid.* Emphasis in the original. Transl. Woodger.

<sup>10</sup> *Ibid.* Emphasis in the original. Transl. Woodger.



If, instead of the quotation name  $x$ , we use the variable “ $p$ ”, a sentence “ $p$ ” is true if, and only if,  $p$ . The truth of a sentence “ $p$ ”, therefore, consists in the elimination of the quotation marks, or, as Quine has put it, in “disquotation”. The sentence “Snow is white”, for example, is true if, and only if, snow is white. This equivalent relationship between “‘ $p$ ’ is true” and  $p$  is also called the equivalence formula: “ $p$ ” is true.  $\equiv$  . $p$ .

(With the help of the notion “satisfaction”, Tarski also gives a more formal definition of a true sentence: “ $x$  is a true sentence – in symbols  $x \in \text{Tr}$  – if and only if  $x \in S$  and every infinite sequence of classes satisfies  $x$ ”,<sup>11</sup> where  $S$  is the class of all meaningful sentences. This definition of truth depends on the notion of satisfaction, namely, the “satisfaction of a given sentential function by given objects”.<sup>12</sup> These objects are classes of individuals. Satisfaction is a relation which assigns individual objects  $a$  to free variables. So, “for all  $a$ ,  $a$  satisfies the sentential function  $x$  if and only if  $p$ ”<sup>13</sup> means that we have to substitute for  $x$  an individual name of the sentential function, for example, “snow is white”, and for  $p$  this function where all free variables in it are replaced by  $a$ . Then – in the given example – “for all  $a$ ,  $a$  satisfies the sentential function ‘ $x$  is white’ if and only if  $a$  is white”<sup>14</sup> whereby snow, for example, is an  $a$  which satisfies the function “ $x$  is white”).

At first sight, this formula seems to be both trivial and merely a new formulation of the classic definition of truth. That is in fact how Tarski intended it. But the point of his reformulation is that truth is no longer a relationship between sentence

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<sup>11</sup> Tarski, 1983, 190.

<sup>12</sup> Tarski, 1983, 190.

<sup>13</sup> Tarski, 1983, 190.

<sup>14</sup> Tarski, 1983, 190.

and reality, but a relationship between two different sentences, one in object language, the other in metalanguage. A sentence in object language talks about extralinguistic objects; a sentence in metalanguage talks about the object-language sentence about the objects. An object can be any extralinguistic thing. Thus, the sentence in metalanguage is the expression “p” or “Snow is white.” The object-language sentence is p or snow is white. Since this definition of truth is a semantic convention of how to use the expression “true”, Tarski also called it the “semantic conception” of truth or simply the “Convention T”. A convention sets constraints on an adequate definition of the meaning of an expression already in use.

The advantage of this definition of truth is that it is no longer tied to epistemological realism, but is epistemologically neutral, at least as Tarski intends it: “We may accept the semantic conception of truth without giving up any epistemological attitude we may have had; we may remain naive realists, critical realists or idealists, empiricists or metaphysicians — whatever we were before. The semantic conception is completely neutral toward all these issues.”<sup>15</sup>

The “semantic conception” of truth says only what the term “true” means, and it only says this about sentences in languages whose formal structure has been precisely defined in advance. Thus, it has to be precisely indicated whether the sentence belongs to object language or metalanguage. For Tarski, “true” refers to a concept in metalanguage, where it is not redundant.

But the “semantic conception” is by no means intended to “establish the conditions under which we are warranted in asserting any given sentence, and in particular any empirical sen-

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<sup>15</sup> Tarski, *Semantic Conception of Truth*, 302.

tence”.<sup>16</sup> It does not yield a criterion of the point at which we are entitled to maintain that a particular sentence is true. Therefore, the disadvantage of the “semantic conception” is that it provides only a definition of the term “true” or “truth”, but no criterion of the truth.

In contrast, the classic definition of truth claims to offer both a definition and a condition or criterion of truth. It tells us both what truth is, namely, a correspondence with the facts, and also when we are entitled to uphold an empirical proposition, namely, when it corresponds to the facts. But the classic definition, as reformulated by Tarski, is acceptable only as a semantic definition of truth, and not as a criterion.

Therefore, any theories of truth based only on Tarski’s equivalence formula seem to me to be inappropriate to the everyday and classic concept of truth. According to these theories, “true” is only a semantic predicate, meaning no more than what is contained in the equivalence formula “‘p’ is true.  $\equiv$  .p”. In contrast, Tarski recognised, correctly in my view, that the classic concept of truth means more than the equivalence formula. Therefore, any theories built on Tarski’s equivalence formula alone are called minimal.<sup>17</sup> Because of the inappropriateness of a definition of truth that does not provide a criterion of truth, we must look for other criteria.

### 3. Five Criteria of Truth

a) A first criterion seems to be coherence. An object-language proposition is true if it coheres with other object-

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<sup>16</sup> Ibid., 361.

<sup>17</sup> Such a minimal theory of truth is advocated, for example, by Horwich, Truth, cf. esp. Chapter 2, Section 4.

language propositions. Coherence means at least consistency, and consistency – in a weak interpretation – means at least the absence of contradictions. The object-language proposition that the sun revolves round the earth is true if it is consistent with a system of other propositions, say, the Ptolemaic system. On the other hand, the proposition that the earth revolves round the sun is true if it is consistent with the Copernican system.

The consistency of a proposition with the system can be interpreted, in a stronger sense, as meaning that the proposition can be logically derived from the system. Thus, it follows from the Ptolemaic system that the sun revolves round the earth, and from the Copernican system that the earth revolves round the sun.

What is correct in the coherence theory is that the truth of individual propositions is not independent of other propositions. Usually, the truth is not restricted to one proposition, but belongs to a system of propositions. It is an inadmissible simplification to isolate a single proposition and attribute truth to it alone. But the coherence theory tells us only whether a proposition is “true” or “false” within an accepted system. “The earth revolves round the sun”, for example, is false within the Ptolemaic system. But the coherence theory obviously supplies no criterion when it comes to choosing between two coherent systems, for example, between the Ptolemaic and the Copernican. A proposition or a system of propositions may be “coherent”. But is it true?

b) In the context of axioms, I introduced evidence as a further criterion of truth. But the evidence theory of truth is by no means confined to axioms. Propositions about empirical data can also be regarded as true, because empirical data are evident. Therefore, we have to distinguish between intellectual and sensory evidence. But, as we found with regard to axioms, there are also borderline cases of sensory evidence where evidence no

longer suffices as a criterion of truth. In Euclidean geometry, we saw this in connection with the ninth axiom, “The whole is greater than the part”, and the parallel axiom. But it also applies to moral axioms. The authors of the American Declaration of Independence (1776) write in the preamble: “We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness.”

It is by no means self-evident that all men are created equal. If it were, it would be difficult to explain why Aristotle did not realise it. After all, he was convinced by the Euclidean axioms that I have mentioned. But in Aristotle’s view, there are slaves by nature: “He who is by nature not his own but another’s man, is by nature a slave, and he may be said to be another’s man who, being a human being, is also a possession. And a possession may be defined as an instrument of action, separable from the possessor.”<sup>18</sup> Not every slave by law is a slave by nature. But he is a slave by nature if he shares reason only to the extent of recognising it in others, but not of possessing it himself. Such a slave, according to Aristotle, may be kept almost like a domestic animal, since he has a similar function: Both slaves and domestic animals “with their bodies minister to the needs of life”.<sup>19</sup> For Aristotle, then, slaves have the “inalienable right” to liberty as little as domestic animals do. What was evident to the Founding Fathers of the United States was not evident to Aristotle. What the Founding Fathers called self-evident was acquired evidence. Likewise, to us, it is largely evident that higher mammals may be kept like “slaves” to be domesticated, ex-

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<sup>18</sup> Pol. Book 1, Chapter 4, 1254a14-17. Transl. Jowett.

<sup>19</sup> Ibid., Chapter 5, 1254b25-26. Transl. Jowett.

ploited, slaughtered and eaten. Perhaps it will not be evident to later generations as it is now not evident for everybody.

Neither is sensory evidence – for example, the fact that a leg in water in a bath looks broken, or that the sun rises and sets – a valid criterion of truth. In reality, the leg is not broken and the sun neither sets nor rises. Some people regard it as evident that a conspiracy is taking place against them, if something does not go as they wish, although that need not be the case at all.

The main objection to evidence as a criterion of truth, therefore, is that evidence itself can hardly supply a criterion for distinguishing between genuine evidence and the subjective experience of evidence. Therefore, this criterion does not support the claims to objectivity made by its champions. Blaise Pascal (1623-1662) even suggests that reason makes it obvious that even the most obvious propositions should not be believed. This seems to be carrying scepticism too far. Evidence can serve very well as a *prima facie* criterion. But in most cases in which the evidence really goes unchallenged, it is only a sign that we agree about a proposition. A proposition or a system of propositions can be perfectly evident. But is it true?

c) The agreement of a group of people is the theme of the consensus theory of truth, advocated, for example, by Jürgen Habermas (born in 1929).<sup>20</sup> According to this theory, an object-language proposition is true if it can secure the agreement of all participants in a discourse characterised by the exchange of arguments. This does not mean that an object-language proposition is true simply because it carries the agreement of all. Those who journey towards the truth journey alone, as the proverb has it. But nobody tries to be left alone at the end of the journey. Even the consensus theorists know that it is possible for a truth

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<sup>20</sup> Habermas, *Wahrheitstheorien*, 211-265. No English translation.

to be recognised only by a minority or by an individual. There can be a truth before it has received the agreement of all or most. The tragedy of many creative people, from Socrates (469-399 BC) to Robert Mayer (1814-1878), the discoverer of the fundamental physical law of the conservation of energy, was that their insights were not accepted by their contemporaries. An assertion can be true in principle even if only one individual has recognised it. In the event of a miscarriage of justice, for example, the convicted defendant may be alone in being clearly aware of his own innocence.

The consensus theory of truth does not imply the possible agreement of all in all circumstances, but only in the circumstances of an “ideal speech situation”. An “ideal speech situation” is one in which all possible participants in a discourse have an equal chance to carry out informative, argumentative, expressive and directive speech acts.<sup>21</sup> In concrete terms, this means that opinions are formed in a conversation of equals, in which nobody can force anybody else to agree either by material or moral pressure; in which all are prepared to be convinced by arguments rather than insisting on their own views come what may, simply in order to be right and to save face; in which the prestige of a person cuts no ice; and a great deal more. “The ideal speech situation”, according to Habermas, is “neither an empirical phenomenon nor a mere construct but rather an unavoidable supposition reciprocally made in discourses.”<sup>22</sup>

But when do we know that such a supposition has been realised? The mechanisms of power, of domination and of instinctive submission to authorities may operate so imperceptibly as to make it appear almost impossible to decide whether or not

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<sup>21</sup> For a continuing discussion, cf. *ibid.*, Chapter 5, 252-260.

<sup>22</sup> *Ibid.*, 258.

the process of agreement has taken place in an “ideal speech situation”. Rather, the consensus theory of truth seems to be an ideal that ought to guide a discourse, but it does not supply a criterion for determining when a proposition is actually true. Habermas himself writes: “To the extent to which it suggests a concrete form of life, even the expression ‘ideal speech situation’ is misleading.”<sup>23</sup> Nevertheless, the actual consensus provides us with a criterion as to when a proposition is recognised to be true. What is recognised or regarded as true *seems* to be true because it is probable or plausible. Aristotle put it like this:

Things are “true” and “primary” which are believed on the strength not of anything else but of themselves: for in regard to the first principles of science it is improper to ask any further for the why and wherefore of them; each of the first principles should command belief in and by itself. On the other hand, those opinions are “generally accepted” which are accepted by every one or by the majority or by the experts – i.e. by all, or by the majority, or by the most notable and illustrious of them.<sup>24</sup>

What is believed to be true “by every one or by the majority or by the experts”, and among these “by all, or by the majority, or by the most notable and illustrious”, can claim to be probable or plausible. But that is all that can be inferred from the actual consensus. The “most notable and illustrious” of the “experts”, even if they agree, may be in error, not to mention the fact that the “experts” usually do not agree anyway.

The future consensus of the experts, even if it occurred in an “ideal speech situation”, is neither predictable nor usable as a criterion of truth. The truth of a proposition, or of a system of propositions, may be such that, in an “ideal speech situation”,

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<sup>23</sup> Habermas, *New Obscurity*, 161. Transl. Weber NicholSEN.

<sup>24</sup> Aristotle, *Top.* Book 1, Chapter 1, 100a30-b23. Transl. Packard-Cambridge, slightly altered by Ferber.



all experts, or at least “the most notable and illustrious”, must agree about it. But is what follows from the agreement of experts necessarily the truth?

Consensus is only a consequence of a proposition, or a system of propositions, being true, but not a criterion for it. A proposition, or a system of propositions, may have obtained the actual consent of all in “real” circumstances, or the imagined consent in an “ideal speech situation”. But is it true?

d) A further potential criterion is the pragmatic theory of truth. This was anticipated on several occasions before it was explicitly formulated by William James (1842-1910). Goethe, for one, writes in his poem “Legacy”: “Only what bears fruit is true.” James puts it as follows, although he does not talk about propositions, but ideas: “True ideas are those that we can assimilate, validate, corroborate and verify. False ideas are those that we cannot.”<sup>25</sup> Truth, then, is not something static, but something dynamic. Essentially, it is generated by the process of verification. But the criterion guiding this process of verification or falsification is utility. “True ideas would never have been singled out as such, would never have acquired a class-name, least of all a name suggesting value, unless they had been useful from the outset.”<sup>26</sup>

The criterion of the pragmatic concept of truth, then, is utility in the broadest sense of the word. Let us assume – to give an apparently plausible example – that we have lost our way in a strange city. In response to our questions, we are told how to find the shortest route to our hotel. This information is true if we actually find the hotel by the shortest route as a result of following it. According to the pragmatic theory of truth, the belief

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<sup>25</sup> James, *Pragmatism*, Lecture 5, 201. Emphasis in the original.

<sup>26</sup> *Ibid.*, 204.

in the existence of an external world and the existence of other people is true because it is useful for our lives in the broadest sense. The same applies even to the existence of God: “On pragmatic principles, if the hypothesis of God works satisfactorily in the widest sense of the word, it is true.”<sup>27</sup>

Here it becomes clear that there is something unsatisfactory about the pragmatic criterion of truth. A person who believes in the existence of God will not believe in the existence of God because that hypothesis works satisfactorily for him, that is, because it has a placebo effect. Perhaps it is only because he believes in the existence of God that he finds it easier to bear his fate. Likewise, we do not believe in the existence of the external world and of other people because such a belief is beneficial for our lives. Rather, it is because we believe in the existence of the external world and of other people that we are able to benefit our lives and those of others and change the external world to our advantage. The pragmatic criterion of truth seems to confuse utility with truth. Truth can be useful, just as true information can be useful. But it is not necessary that all useful information is true, and it is not necessary that all harmful information is false. True information, for example, “You have cancer”, may do more harm than false information, if it makes the patient worse. Likewise, false information, for example, “You have the heart of a young man”, may do an aging heart patient more good than harm, if it improves his subjective well-being. The hypothesis of God has proved useful for numberless people by helping them bear blows of fate and deep suffering. But does that make it true? Further, the substitution for truth of “what is satisfactory in the widest sense” leaves uncertain what is satisfactory “in the widest sense”. The pragmatic criterion of truth is

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<sup>27</sup> Ibid., Lecture 8, 299.

too vague. But even if a proposition, or a system of propositions, were precise enough to be “satisfactory in the widest sense”, it would still leave the question open: Is it true?

e) Finally, the goal or ideal limit we approach by constantly following the scientific method was chosen to be the criterion of truth by Charles Sanders Peirce (1839-1914): “The view destined by fate to be ultimately agreed by all researchers is what we mean by truth, and the object presented by this view is the real. That is the way I would explain reality.”<sup>28</sup> The agreement of all researchers suggests that Peirce also uses consensus as the criterion of truth. However, his criterion of truth is neither an actual agreement nor agreement in an “ideal speech situation”, but the ultimate agreement of all researchers, which lies in the future. Undoubtedly, truth has a unifying effect, since ultimately every reasonable person must agree with it. So Peirce writes: “For Truth has that compulsive nature which Pope well expressed: The eternal years of God are hers.”<sup>29</sup> But this unifying force does not necessarily produce truth. Apart from the fact that it is not certain what the scientific method is, this theory does not tell us when a concrete proposition, or system of propositions, is true. As we do not know this final state, we do not know either whether a specific proposition is already true or, if not, how far it is from the final state. Moreover, in principle, scientific research can go on indefinitely. But let us assume that the ultimate consensus has been reached. This still leaves the question open as to whether a proposition that has reached the ultimate consensus is true. The ultimate consensus could be the

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<sup>28</sup> Peirce, *Pragmatism and Pragmaticism*, § 407.

<sup>29</sup> Letter to Lady Welby, Dec. 23, 1908. The saying “The eternal years of God are hers” goes not back to Alexander Pope (1788-1744), but to William Cullen Bryant (1794-1878): “Truth, crushed to earth, shall rise again; The eternal years of God are hers.”

ultimate error and the terminal destiny of all researchers. Logically, a proposition can be false even if it has obtained the consensus of all future researchers. The final agreement of all, like the agreement in an “ideal speech situation”, may be only a consequence, but not a criterion, of a proposition, or a system of propositions, being true. A proposition, or system of propositions, may have obtained the final consensus of all. But is it true?

#### 4. The Plus of the Concept of Truth Over the Five Criteria

The open question that can be asked about all five criteria shows that none of them suffices for us to say that an object-language proposition P is true.<sup>30</sup> A proposition, or system of propositions, may be coherent, evident, suitable for consensus, satisfactory or enjoying the final agreement of all researchers. Nevertheless, we can still ask: Is this proposition, or this system of propositions, true? The concept of truth, then, contains a plus of meaning that is not exhausted by the five criteria. The concept of truth – to use a different word – supervenes (from *supervenire*: to come as something additional or extraneous) the

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<sup>30</sup> The argument appears in Moore, PE, Chapter 1, § 13-14, in connection with the question “Is pleasure (or whatever it may be) ultimately good?” in order to show that the meaning of “good” cannot be identified with that of “pleasure”, 16. Here, I have applied the argument to the criteria of truth. As I have remarked later, this application has been anticipated under the name “idealistic fallacy” by Putnam, Reference and Understanding, 108, quoted in Rorty, Mirror of Nature, 308. Putnam has been anticipated by Moore, Refutation of Idealism, 450. The term “idealistic fallacy” goes back to Ralph Barton Perry (1876-1957) in his review of Moore, Refutation of Idealism, 1904. The conclusion of the argument appears also in Moore, PE, Chapter 4, § 80: “That ‘to be true’ means to be thought in a certain way is, therefore, certainly false.”

five criteria of truth that I have discussed. It supervenes – or is superadded to – those criteria, but cannot be reduced to them.<sup>31</sup>

The term “supervene” helps us understand two things: first, that the concept of truth is superadded to the five criteria and depends on them to the extent that, without them, the truth as such would remain unattainable for us. Thus, with Tarski’s equivalence model alone – “‘p’ is true.  $\equiv$ .p” – we would be unable to grasp the meaning of the classic and everyday concept of truth. Second, the term “supervene” indicates that the concept of truth contains a plus over the five criteria of truth. The concept of the supervenience of truth expresses both the dependence of the concept of truth on the five criteria and the plus of the concept of truth over the five criteria.

This plus grants us an important insight: A proposition, or system of propositions, is not true for us if it is only true according to one of the five criteria, because we can still ask the question that has remained open. A proposition, or system of propositions, is ultimately true for us only when it is true in itself. For example, it is not true for us that we have hit the jackpot simply because this coheres with our other convictions, is evident or useful for us, and has obtained the consensus of our fellow humans. It is true for us only once the cheque has arrived.

But although the five criteria do not suffice to indicate when “P” is true, they are not worthless. Nevertheless, they are only *prima facie* criteria, that is, criteria that can be invalidated by other considerations. The cheque for the jackpot may not arrive

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<sup>31</sup> The concept of supervenience was introduced by Richard Mervyn Hare (1919-2002) for moral properties that come over natural ones. For an exact definition, cf. Hare, *The Language of Morals*, Chapter 5, Section 2, 82-83, Chapter 9, Section 3, 153-155. I understand the term here in the literal sense extending it to the concept “true”.

even if its arrival is consistent with our other convictions. Conversely, a proposition can be true even if it is not consistent with a system of existing propositions, as was, for example, the proposition of the first person who said that the earth is not flat, but round. A proposition can be true even if it is not evident, as is, for example, the proposition that infinite sets have subsets equivalent to the whole set. It can also be true if it does not encounter any consensus in the discourse of experts, as happened, for example, to J R Mayer's proposition that motion turns into warmth. It can be true even if it leaves our feelings in the widest sense unsatisfied, as indicated by the saying "sad but true". Finally, a proposition could be true, even if it were never to obtain the ultimate consensus of all researchers.

We could try to establish other criteria of truth, for example, beauty or elegance. Thus, Nicolas Boileau (1636-1711) writes: "Nothing is beautiful but the true. The true alone is lovable." However, the same open question could be put to all further criteria of truth: The proposition may satisfy this new criterion, for example, the criterion of beauty, but is it true?

This inadequacy of all truth criteria has the important consequence that we have no satisfactory criterion for determining when an object-language proposition P is true. This was already known in principle in Antiquity. Xenophanes (c 570-c 475 BC) wrote:

But as for secure truth, no man has known it, / Nor will he know it; neither of the gods, /Nor yet of all the things of which I speak. /And even if by chance he were to utter /The perfect truth, he would himself not know it: /For all is but a woven web of guesses.<sup>32</sup>

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<sup>32</sup> Popper, *Better World*, Chapter 2, Section 9, p. 34. Transl. Bennett. With small alteration by Ferber.

The “perfect truth” – if we may translate Xenophanes’s idea into a modern language – can be understood to mean objective truth. Even if someone proclaimed the objective truth, he would not know it. Why? Because he has no criterion to recognise that proposition P is objectively true. We have to distinguish between the subjective process of taking things to be true and objective truth. Nevertheless, any truth P formulated by us rests on what we take to be true. The sceptical philosopher Sextus Empiricus (c 200-250) put it in the following image:

Let us imagine that some people are looking for gold in a dark room full of treasures. It will happen that each will grasp one of the things lying in the room and think that he has got hold of the gold. But none of them will be persuaded that he has hit upon the gold even if he has in fact hit upon it. In the same way, the crowd of philosophers has come into the world, as if into a vast house, in search of truth. But it is reasonable that the man who grasps the truth should doubt whether he has been successful.<sup>33</sup>

## 5. The Classic Definition as the Decisive Criterion and the Ideal

So, when can we regard an object-language proposition P as true? When may we say that “Snow is white” is true? Having noted the fundamental inadequacy of those truth criteria that we discussed in detail, and also of some others, such as beauty, that we have mentioned in passing, it would not be sensible of me to look for yet another. We seem to be left with little choice but to return to the classic definition of truth: Truth is the correspondence of knowledge and reality, or of proposition and fact. We have seen that the classic definition of truth is itself a criterion

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<sup>33</sup> Cf. Sextus Empiricus, M, Book 7, Section 52. Transl. Barnes.

of truth (cf. p. 105). In my view, it is the decisive perspective by which to judge the other criteria. A proposition, or a system of propositions, may be coherent, evident, suitable for consensus, satisfactory and enjoying the ultimate approval of all researchers, but if it does not correspond to reality, it is not true. The classic definition of truth, then, can explain the concept of truth in such a way that it loses least of its meaning and at the same time acquires a meaning that is not rendered by the other criteria – coherence, evidence, usefulness or consensus – which reduce the truth to something ultimately subjective. That is why Popper could call them subjective theories of truth.<sup>34</sup> But if a proposition does not correspond to the truth, the concept of truth seems to have lost the objectivity that we attribute to it. The subjective theories of truth give to truth not “the place” – that is, the objectivity – “which is its due”.<sup>35</sup>

Earlier, we voiced three objections to the classic definition. If we are to maintain that definition as the criterion of truth in spite of these objections, we must qualify it:

a) The circularity of the definition of truth is typical of all attempts at defining philosophical key concepts. We cannot define philosophical key concepts without presupposing them. It is true that, in order to define truth as the correspondence of proposition and fact, we must have a preconception of truth as correspondence. But this applies in principle to any other definition of truth. Since this is the case, we were able to ask the question whose answer remains open about each of the other criteria: If the proposition P fulfils one of these criteria, is it therefore true? Further key concepts, such as being or the good, are subject to analogous conditions. Frege is right to suggest

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<sup>34</sup> Popper, *Conjectures and Refutations*, Chapter 10, 225.

<sup>35</sup> Frege, *Thought*, 342, Transl. Ferber.



that it would be pointless to resort to a definition in order to “clarify what is meant by ‘true’”.<sup>36</sup> The same, he says, holds for all explanations in this form:

A is true if and only if it has such-and-such properties or stands in such-and-such a relation to such-and-such a thing. In each case in hand it would always come back to the question whether it is true that A has such-and-such properties, or stands in such-and-such a relation to such-and-such a thing. Truth is obviously something so primitive and simple that it is not possible to reduce it to anything still simpler.<sup>37</sup>

Therefore, Frege would probably refuse to grant Tarski’s reformulation of the classic definition of truth the status of a genuine or explicit definition of truth. An explicit definition is one that allows the replacement of what is to be defined – the definiendum – with what defines – the definiens. In order to maintain the classic definition of truth, then, we must not understand it as an explicit definition of truth, but only as an implicit one. An implicit definition can also be called an elucidation.<sup>38</sup> An elucidation presupposes, expressly or tacitly, that the concept that is being explained is already known.

b) The classic explanation of truth presupposes an epistemological realism, that is, a belief that we can recognise reality as it is. It assumes that an external world objectively exists, for example, that snow really has a colour and does not merely appear to us that way because that is how we perceive it. We can avoid

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<sup>36</sup> Frege, *Logic*, 139. Transl. Long and White.

<sup>37</sup> *Ibid.*, 140.

<sup>38</sup> Cf. Frege, *Logic in Mathematics*: “Definitions proper must be distinguished from *elucidations*. In the first stages of any discipline we cannot avoid the use of ordinary words . . . We have again to use ordinary words, and these may display defects similar to those that elucidations are intended to remove.” 224. Transl. Long and White.

this epistemological realism by reducing the classic explanation of truth to a hypothetical realism: by not claiming that a proposition corresponds to a fact “as it really is”, but only that a proposition corresponds to a fact “as it appears to us”. If we follow that approach, we need not know the proposition and the fact as two separate entities to decide whether or not they correspond to each other. We need not espouse the point of view of the eye of God. We need to know the facts, say, only as far as we have put them into words on the basis of our observations. The object-language proposition “Snow is white” can be compared with snow that is white to our eyes, if observed in the appropriate conditions. Whether snow is white, seen from God's eye view or in itself, is a question that we have not answered and we need not answer. God's eye view, seen from ours, would be something like a “view from nowhere”. In contrast, all we are able to observe is a “view from somewhere”, that is, a human perspective. From a human perspective, truth is not a relationship between a proposition and a fact in itself, but a relationship between a proposition and a hypothetical fact.

The classic explanation of truth came into being within an epistemological realism: “You are not white because we hold truly that you are white, but because you are white we who say so tell the truth.”<sup>39</sup> Nevertheless, it is only valid within a hypothetical realism. It is only a hypothesis that snow is white. Seen against the sun, it may be yellow. This restriction must be paid for. We can no longer say whether a proposition, or a system of propositions, is true in itself. That is the second restriction.

c) We can also avoid the infinite regression by fixing the reality of the fact that snow is white within a hypothetical realism. In order to decide whether a proposition  $P_1$  corresponds to a

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<sup>39</sup> Aristotle, *Metaph.*, Book 9, Chapter 10, 1051b6-9. Transl. Ross.

fact, we must already have formulated that fact implicitly or explicitly in a proposition  $P_2$ . Only then can we assess whether or not  $P_1$  corresponds to  $P_2$ . But we no longer ask how we know whether or not  $P_2$  corresponds to the fact itself, because we stop at  $P_2$ . This provisional stop at a proposition that only reflects a hypothetical fact is the third restriction.

With the proposition “Snow is white”, we have chosen a simple example, which allows us to study the problem of truth better than a complex one. Here the provisional stop at a proposition  $P_2$  seems justified. Unless we have fallen victim to a collective trick of the senses, we may hypothetically assume that snow – observed in the appropriate circumstances – is white. But how about the truth, that is, the objective truth? Our striving for truth seems to remain unsatisfied until we have found the objective truth. That would be a proposition, or a system of propositions, that corresponds to “reality in itself”. So long as we do not have that, we must expect objections, be it from others or from ourselves. The concept of truth demands an objectivity that cannot be supplied by a merely hypothetical objectivity.

What is objective truth may be totally irrelevant when we ask whether or not snow is white. In general we have anyway no doubt that snow is white: “For while the perception that there is white before us cannot be false, the perception that what is white is this or that may be false.”<sup>40</sup> But in some cases it is very important to render a fact objectively, as for example, in a court of law. Every judge has the duty to discover the objective truth, as far as possible. It is the judge’s natural working hypothesis that a fact – for example, a road accident – occurred in a certain way, even if it is no longer possible in retrospect to

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<sup>40</sup> Aristotle, *De an.*, Book 3, Chapter, 3, 428.21-22.

recognise or reconstruct exactly what happened. But a simple task, such as the reconstruction of a road accident, can be difficult enough. Here, a provisional stop at a proposition  $P_2$  may not be justified.  $P_2$  may be based on a delusion and in need of revision by a proposition  $P_3$ . But proposition  $P_3$  may need revising by  $P_4$ , etc.

It gets even more difficult with scientific or scholarly theories, be it about nature or history. Here, a proposition  $P_2$  may need revising by a  $P_3$ ,  $P_3$  by a  $P_4$ , etc. – or a system of propositions  $SP_2$  by  $SP_3$ ,  $SP_3$  by  $SP_4$ , etc. – into infinity. There is no supreme court that would put an end to the search for the truth. Nevertheless, it is a natural demand of common sense that there should be a “reality in itself”, even if it cannot be recognised. And common sense is something scientists and scholars also want to have.

Let me demonstrate this again by means of a simpler example, the translation of a literary text. A literary text is a system of sentences. A sentence can render the original more or less faithfully or approach it more or less closely. In principle, this process of approximation can go on indefinitely. So we have many translations of classical texts. But a translator assumes that a sentence cannot be translated in any which way that may occur to him or her. Likewise, the translator assumes that a text has a meaning that needs to be translated. This meaning can be ambiguous. Nevertheless, the translator assumes an original meaning, even though every concrete translation is only a hypothesis.

The trouble with complex scientific theories, which may be far removed from sensory experience, is that they cannot be tested directly, but only indirectly as mediated by the “original” experience. For example, a theory about nuclear structure at average temperatures can be checked only very indirectly by data observed in a “cloud chamber”. Quine even goes so far as to say

that theories can contradict each other and yet correspond to all kinds of sense data.<sup>41</sup> He calls this the underdetermination of a theory by experience. Here, it seems illusory to test the correspondence of these theories to even a merely hypothetical “reality”. As both theories correspond to it, the correspondence cannot be a criterion for preferring one theory to the other. Here, the search for *the* truth seems to be hopeless, and we will probably have to content ourselves with mere coherence, consensus, beauty or usefulness in the widest sense of the word. In fact, these are *prima facie* criteria which are perfectly valid at first sight. Empirical scientists, for example, are often obliged to rely on a purely pragmatic criterion of truth. A scientific theory that has been corroborated can be perfectly appropriate and usable, even though we cannot know whether it is true.

Nevertheless, I believe that, also when dealing with empirical theories remote from direct sensory experience, we have to abide by the classic explanation of truth as a criterion – if for once we may disregard Quine’s notion of underdetermination, for which it is difficult to find an example in normal scientific practice.<sup>42</sup> If a theory about empirical reality satisfies all the other criteria, but does not correspond to empirical reality, it is not true. However, the hypothetical realism mentioned before, and the provisional nature of any proposition, seems to make this natural demand impossible to fulfil. If we are to hold on to it, we must raise the classic explanation of truth from the level of reality to the level of an ideal. In fact, the classic concept of truth includes a value judgment that I have neglected so far. Georg Wilhelm Friedrich Hegel (1770-1831), for example, uses

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<sup>41</sup> Cf. Quine, *Pursuit of Truth*, Chapter 4, § 41, 95-98.

<sup>42</sup> Cf. Quine’s examples, *ibid.*, Chapter 4, § 41, 95-98.

it in this sense when he writes: “To an unbiased man, truth will always remain a great word and make his heart beat faster.”<sup>43</sup>

Truth, as correspondence to a reality in itself, is only an ideal and unachievable. All that we can achieve is correspondence to a hypothetical reality. But there is a sense in which this ideal functions as a moral ideal, because it demands a certain disregard of our own angle of vision and our personal interest. The poet Ingeborg Bachmann (1926-1973) expressed this idea as follows: “You are imprisoned in the world, weighed down by heavy chains, but what is true drives cracks into the wall.” It is an ideal that could also be described as objectivity with the meaning of “impartiality”. What impartiality is will easily be understood if we remember Spengler’s “definition of truth” as merely a “product of the press”. If this were so, the end of the Soviet party newspaper *Pravda* – meaning truth – would have been the end of truth itself. A historian researching the causes of the Arabian revolution has to be as committed to this ideal as a physicist investigating the structure of a nucleus at an average temperature or indeed the safety of a nuclear plant. Personal or party interests may be a strong incentive to research, but they are not the kind of interests that scholars and scientists should pursue.

Naturally, we always see things from our own perspective. The perspective of truth corresponding to a reality in itself would only be available to God. Obviously, God’s perspective cannot be attained by humans. The human striving for truth has been nevertheless compared to a striving for the divine, but there are times when we would be happy enough to come across a mere angel who told us the truth.

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<sup>43</sup> Hegel, *History of Philosophy*, Introduction, A, Section 1, b, 33. Transl. Haldane.

What humans can do is to try to disregard all personal prejudices and vested interests in order to represent a fact as it is. The method for achieving this is to compare our own propositions with the hypothetical facts and, if necessary, allow the latter to refute the former. Likewise, we must expose our own perspectives to criticism and, if necessary, allow them to be refuted by the perspectives of others. This search may, in principle, go on forever. That is probably the meaning of the infinite regression, whereby every proposition can be tested against a fact, that fact against a new fact, etc. What is finally achieved will still be no more than a hypothesis. But we have to stop somewhere, if only for external reasons.

Such a hypothetical realism goes hand in hand with a “naïve” or “in-itself” realism, if we understand the latter as an ideal. But it is an ideal that has to guide the hypothetical realism of empirical research and theoretical reason. We can approach this ideal, even though we cannot reach it. By a normative reorientation, we are able to preserve the classic explanation of truth, with its plus meaning, albeit not on the factual, but at least on the normative level. The classic explanation of truth is more tied to the demand for knowledge rather than to actual knowledge itself, and as this demand cannot be abandoned, the classic explanation cannot be abandoned either.

What we take to be the truth can approach the ideal of objective truth in different degrees. No hypothesis can actually reach the ideal. But one hypothesis can get closer to the ideal by avoiding the mistakes of another. We cannot arrive at a positive definition of how close P, that is, the proposition we take to be true, is to the truth. We cannot measure the distance remaining between P and the unreachable truth. But we can define it in negative terms as the degree of its relative distance from error. The hypothesis that the earth is a globe is closer to the truth than the hypothesis that it is a disc, because it avoids the errors

of the first hypothesis. But the hypothesis that the lonely planet is a globe slightly flattened towards the poles – that is, a rotational ellipsoid – is closer to the truth than the hypothesis that it is simply a globe, because it avoids the errors of the second hypothesis, etc. Therefore, as time passes, we may still hope to get closer and closer to the truth. Truth and the morning are clearing little by little.