Do Scientists Seek the Truth?

Abstract. In this article I try to answer the question if it is true that scientists discover the truth. The question is based on the tradition which the existence of objective truth about reality treats like a myth. I recall the hermeneutics tradition, according to which there is nothing like an objective truth, but there are truths. According to Gadamer, a human being is not the subject who discovers the objective reality, but the interpreter, one who brings out the meaning. On the basis of these framework assumptions I ask two questions. The first of these concerns the object of research for scientists. What is the reality of an interpreter built from? Using a variety of traditions, as referring to Fleck, Wittgenstein and Derrida I give an answer that these are cultural and historical components, not the objects as they are understood in the mathematical sciences. The second question concerns the issue of consciousness of the scientist. In reply I conclude that, despite the fact that the concept of objective truth is empty, it has a character of a white lie. The myth presents in philosophy is false but useful: the conviction of scientists that this myth is true allows for the new meaning to appear.

Keywords: truth, objective truth, interpretation, scientist, interpreter, meaning, difference, “seeing-as”, thought collective, stylish seeing, Derrida, Fleck, Gadamer, Wittgenstein

Czy naukowcy poszukują prawdy?


Słowa kluczowe: prawda, prawda obiektywna, interpretacja, naukowiec, interpretator, znaczenie, różnica, widzenie-jako, kolektyw myślowy, stylowe widzenie, Derrida, Fleck, Gadamer, Wittgenstein

1. Introduction

The question of the search for truth by scientists should be preceded by the question about the truth itself. There is a number of classical questions which can be asked: “Whether there is anything like a truth?”, “What it is?”, “Whether it is
possible for a human being to know it?”, etc. These kinds of questions are quite obvious, but we can also ask questions less popular, but also present in the philosophical tradition. We can ask “Whether the truth concerning reality is one, or there are more truths?”, or “Is the truth something to find and gain once for ever, or it is something to invent and then give it up going to the next one?”.

The questions like the last one above found their answer in a rich philosophical tradition. Of course, the answer – as usually in philosophy – is not conclusive, it provides us with the choice of ways of thinking and teach how to ask questions. My choice in this article is to ask whether scientists who seek the truth can assume that there is nothing like one truth about reality. I will use a tradition according to which there are more “truths”, not just one. The scientists, in the option I take, will appear as these who “bring out” a possible truth about the world, which is then dropped and replaced by a new one. A starting point like this generates questions which should be also asked. I’ll try to answer two of them. The first: what is the object of research for scientists in the adopted model? And secondly, whether a scientist who discovers one of the possible truths about the world must be simultaneously aware of being there truth in plural?

2. Nietzsche, Gadamer and Derrida on the multiplicity of truths

To be able to ask these questions I must first outline the tradition, on the basis of which they arise, and therefore the one where the truth is functioning only in plural. The relatively recent one, can be named as hermeneutical tradition, along with the views that led to it and its derivatives. I will refer to three names of great philosophers: Nietzsche, Gadamer and Derrida.

I’ll go from Friedrich Nietzsche’s famous statement, which says that absolute truth does not exist. He considered that all the concepts and theories of reality are not its faithful description but interpretations: they can be different. But if “chosen” why that and not the another?

According to Nietzsche, what is reflected in theory, it is not a reality that the human intellect copies but values recognized by people. What a human being found important for himself is reflected in his views, knowledge about the world. Referring to the reality a man gives meaning to everything that he meets with. In a way, therefore, he creates the sense that depends on his personal needs. Theories serve human life, but do not reflect reality.

In connection with this model of cognition, there is a concept of the subject as a free creator, an interpreter. Of course, it cannot be said that his freedom in interpreting the world is complete. It is not that he „sees” what he wants. Recall that his worldview depends on the values which are important to him. His cognition is determined by his needs. So his view is directed. And therefore, Nietzsche describes it as “perspectival”. A human being is someone who while seeing the world has to take a point of view.
Perspectivism is also a feature of the cognition in the writings of the most important hermeneutics of twentieth century – Hans-Georg Gadamer. The reality, according to him, is not something to be reflected, but it appears in the perspective of human being’s understanding. And, as such, is in the form of language. One can even say that the world is a language because it has got a nature of it. The explanation of this thesis is crucial when it comes to the question of the existence of many truths. Let’s clear it up.

Language is not just one of man’s possessions in the world; rather, on it depends the fact that man has a world at all. The world as world exists for man as for no other creature that is in the world. But this world is verbal in nature. (Gadamer 2004, 440)

The world, according to Gadamer, reveals itself in the language. The reality, therefore, has got a nature of language. The problem that is in connection with such claim raises is a problem of pluralism of reality, being there multiplicity of worlds. For if the world appears only in the language robe, and there are a lot of languages we can speak, therefore there are many worlds. But Gadamer strongly denies this. There are many languages, but the world is one. How can it be?

Man’s freedom in relation to the environment is the reason for his free capacity for speech and also for the historical multiplicity of human speech in relation to the one world. (Gadamer 2004, 441)

The basic statement is that the world presents itself in the language. This means that each language contains a certain picture of the world. It serves as a means of presenting the world and as such is not private. However not universal, it is over-individual. Therefore, the world which reveals itself in the language has the meaning for a specific group of language-users. That’s why one can say that because of the diversity of languages the reality presents itself differently. This does not mean, however, that there are many worlds. The world – one and the same – comes to presentation assuming it expresses itself in many languages. In other words, for reality to presents itself, it is necessary to be seen from one of the many possible points of view. What’s more, each possible image of reality must be something to develop. Each image is potentially to expand, can be a smooth transition to a different picture. Before us, thinker says, there is always an even wider aspect of the world to take into account.

All human speaking is finite in such a way that there is laid up within in an infinity of meaning to be explicated and laid out. (Gadamer 2004, 454)

Gadamer objects in this way against the tradition in which a human being is understood as one who reflects the reality in his mind. He breaks up with the traditional metaphor of the mirror. According to it, the human mind can be understood
in terms of a mirror, which reflects the world. The important thing here is that the
true reflection could be just one and the only one. If there are other pictures, they
are all misleading. In place of this metaphor Gadamer suggests a different one, let’s
name it: bottomless, inexhaustible cauldron (of the sense) to extract. Who is a man
in this metaphor? He is the one who brings the meaning out of the cauldron, which
is abysmal. It cannot be exhausted to be a man.

At this point, we can go back to our main issue of perspectivity of human cog-
nition and have a closer look at it. If the world is to emerge, the perspective from
which it is seen, cannot be the only one. Thus there is no perspective over the oth-
ers, any kind of sub specie aeternitatis, from where the world would be seen in its
truth. If the world is to be the object of human cognition it must be assumed that the
point of view from which it is seen, is one among the others. Indeed, if there is only
one good point of view, the world would not be seen at all!

So perspectivity of human cognition is not considered by Gadamer as the human
cognitive defect. On the contrary, taking a specific perspective – one of the possible
– is the only way to see the world. And that means that the truth which is gained in
such a way will never be the only one. Approaching the world we meet it in an in-
finity senses to elaborate. The knowing subject is the one who brings out one of the
possible meanings. The one, ultimate source of meaning, simply does not exist.

At the end of the twentieth century, the above assertion is gaining many support-
ers. These are primarily postmodernists. Jacques Derrida – regarded as one of the
leading representatives of this movement – like Gadamer rejects the statement that
human cognition is a kind of a mapping of knowledge of reality. Any significance,
according to him, grows out of the element of ambiguity, therefore, remains am-
biguous. Let’s look for a moment on his view on the source of any meaning.

An important feature of Derrida’s vision of the genesis of sense is the lack of
a single source, the lack of a simple beginning. In what way he explains this? He
rejects the idea of being there a close unity between a thought and the world. There-
fore he rejects the thesis of the referentiality of our language.

A classical theory of reference assumes the natural relationship between subject,
speech and being. The idea that the words copy the reality is an echo or a form of
belief in the existence of objective truth, the belief in the existence of the ultimate
source of meaning. A meaning however, does not arise from the rejection of wrong
interpretations and is not a result of a proper one. So how meaning is created? If
not by identifying, it must be by a difference of meaning. Meanings arise from the
difference between them. A sign – in “his” theory of reference – refers not to the
reality, but to the other sign.

Symbols grow. They come into being by development out of other signs, particularly from icons,
or from mixed signs partaking of the nature of icons and symbols. We think only in signs. (Derrida
1997, 48)
Genesis of meaning Derrida therefore defines as a motion of references. Instead of reference to the being we have the movement itself. A sign refers to a sign, which is its only meaning. Where the sign appears, Derrida says, you cannot hope to meet reality. We are left only with signs.

Thus, as it goes without saying, the trace whereof I speak is not more natural (it is not the mark, the natural sign, or the index in the Husserlian sense) than cultural, not more physical than psychic, biological than spiritual. It is that starting from which a becoming-unmotivated of the sign, and with it all the ulterior oppositions between physics and its other, is possible. (Derrida 1997, 47–48)

So as we can see the words to be significant, cannot have fixed meanings. If so there will be no meaning at all. They appear only in movement, reference, motion. The words gain and lose their meaning for another one. A game of signs has no beginning or end. But its got a subject, the interpreter.

The world of a man therefore is a realm of signs. There is no reality known as a „solid” ground for cognition. He refers to what has been constructed (interpreted). To “turn” to reality is to create a new meaning. A new one emerges from the old one, and thus so must its destruction, its deconstruction. Deconstruction of the previous meaning.

These views, in which a man appears not as a discoverer, but as a constructor are closely linked with the issue of the object of knowledge. An option of being there many truths and not the only one, being the liberator of sense and not the discoverer of truth, requires the reality turned out to be an interpretation, realm of signs, meanings, symbols. Let’s, therefore, go closer to the very moment when the objective reality disappears from a history of philosophy and a realm of signs – what is interpreted – appears.

This issue, as I said before, has got a historical character and is associated with the classical problem of anticipation. So it is time to ask following question: what is the contribution of an interpreter to what is interpreted?

3. Being as a sign. The issue of anticipation

The answer belongs to the classics of philosophy. Immanuel Kant is among the best known who gives one of these answers. So let’s look at his contribution to the issue of the anticipation. According to him a subject and an object – in a cognition relation – are closely related moments of it. Each of them can be thought of only in the relation to the other. Asking about the conditions and structure of the human cognition Kant revealed both the creativity and the receptivity of a human reason. Speaking about the cognition then, Kant talks about pre-cognition: we are not in the relation to the object as it is, but to the object as it is recognized by the subject. What is the object then?
Asking about the synthetic yet universally valid knowledge, he asks about conditions and possibility of knowledge, which is not understood as anything other than scientific one. His investigation therefore must be primarily regarded as an analysis of scientific knowledge — and if so, it is necessarily to understand the object of cognition as an object in mathematics and physical sciences. This is the object of a pure thinking.

Having this in mind let’s contrast this view to the comments done by Ludwig Fleck, the Polish-Jewish microbiologist who, despite the lack of philosophical education, took a prominent position on the raised issues.

Reading Fleck after Kant one might have the impression that the first of them keels the philosophy of the other. The transcendental subject is replaced by the real scientist saddled with the task of specific experiments, equipped with appropriate research tools and with some learned knowledge. Altogether, someone who is — in the language of Fleck — a member of a particular thought collective. Everything here is more concrete — both a subject and an object, along with a process of cognition. It would seem that where Kant builds a skeleton, and Fleck completes the picture with flesh, leaving the work of Kant intact. However, the picture like that is very deceiving. A member of the Fleck’s collective thought works on a different ground than that which is drawn by Kant. How does the process of cognition looks like in Fleck’s thought?

The idea which Fleck strongly denies is of there being something like the pure consciousness. According to him a subject does not meet an object due to his very structure of the intellect. The formation of the sense data according to the principles of the intellect is not the way in which this meeting occurs. The subject anticipates the object not by the structure of his mind, but by pre-knowledge about it. We must know somehow the object of our cognition before we meet it. Even if the object of our cognition we consider as scientific.

Many very solidly established facts are undeniably linked, in their development, to pre-scientific, somewhat hazy, related proto-ideas or pre-ideas, even though such links cannot be substantiated. (Fleck 1935, 23)

Human cognition therefore has never got something like a zero level. To know something — Fleck uses the phrase “see” — you have to know what you are going to see. “An empty soul cannot see anything” — Fleck admits. But how is it possible to know something before you know something?

(…) the statement “Someone recognizes something” demands some such supplement as “on the basis of a certain found knowledge”, or better, “as a member of a certain cultural environment”, and best, “in a particular thought style, in a particular thought collective.” (Fleck 1935, 39)

It is possible on the ground — and there is a clue of the Fleck’s theory of knowledge — that the one who knows it, is not universal transcendental “self”, but a com-
munity, thought collective. The thinking “self” is not the pure “self”, but a community a man belongs to. Although thinking seems to be the activity of the individual ego, in fact it is a collective action. What I think depends on the community to which “self” belongs to. What is this thinking community?

The community called thought collective has got – like in Gadamer’s view – a linguistic character – it is a group of people speaking the same language. What language does he mean? This can be either the language of some scientific discipline, colloquial language associated with a specific culture, or language of a particular religious community. Every language which contains a certain picture of the world.

These pictures differ. The difference between them has got a conceptual character. Fleck distinguishes the so-called active elements – those that “make image”, and passive elements – the one which forms what is seen under the dictation of the first one. To put it in Aristotelian mode: the former serves as a form and the second as matter. The thing which is important here is that only passive components are visible, and that what allows the appearance of the picture remains hidden. So, a dependence of the passive elements on active once is what is called anticipation and is defined by Fleck as the stylishness. Cognition, thinking, seeing – are stylish.

A crack in the wall plaster, for instance, presents a painter with a problem different from that which bricklayer has to face. The painter sees only the surface damage and treats it accordingly. But the bricklayer worries about the wall structure and is likely to “work in depth.” The way in which their thinking is stylized is revealed by the way it is applied. (Fleck 1935, 104)

According to Fleck two observers of distant styles of thinking never come to an agreement, because there is no common ground in their world-pictures. So, we get to an important conclusion: what we see is not built from mathematical and physical elements, as Kant wanted to, but from elements which are cultural and historical in nature. Let’s look closer at that issue by “using” a different philosophy to explain that.

The cultural status of the object of human cognition can be found in the thought of the great philosopher Ludwig Wittgenstein. He made his now famous comments on this subject under the heading “seeing as”. The thinker has been used very well chosen examples which prove that there is no such thing as an objective reality (so it is also illusory to attempt to “reach” one). Let’s look at one of his example.

If I saw the duck-rabbit as a rabbit, then I saw: these shapes and colors (I give them in detail) – and I saw besides something like this: and here I point to a number of different pictures of rabbits. – This shows the difference between the concepts. (Wittgenstein 1958, 196–7)

In the picture of a hare we can distinguish two levels: the basic components of an image: colors and shapes, and the second – pictorial hare. The first one seems
to contain basic components, the second – something which is built out of the first one. So, seeing the hare – we would call – interpreted, directed seeing colors and shapes. And now: when we see a hare, we think, that at the same time we see colors and shapes. Knowing how the hare looks like, using this knowledge, we can recognize him in a tangle of lines and colors. We are inclined to say that the “interpreted” seeing (according to our knowledge) is based on what is seen in objective way, something that is always here, and can be interpreted differently.

Do I really see something different each time, or do I only interpret what I see in a different way? I am inclined to say the former. (…) (Wittgenstein 1958, 212)

It seems that the interpretation must have their solid ground. However, according to Wittgenstein such a thing as permanent components of the pictures, does not exist. Seeing colors and shapes is also interpreted seeing. How he comes to it?

We believe that seeing a hare at the same time we see “the basis” for it. View as such Wittgenstein considers false, because the fact like such “double seeing” simply does not occur. We can see either colors and shapes, or a hare. We cannot see both at the same time, at the same glimpse. Such “casket” seeing does not occur. On the contrary – and here lies the strength of this argument – to see the hare one cannot see a tangle of colors and shapes. And vice versa. None of these images is the basis for a second. Seeing colors and shapes – we cannot see a hare. What is more, each of the images to be seen, requires anticipating knowledge. Not only the image of a hare. Seeing colors and shapes also requires knowledge. One has to learn to recognize them, and that is why a picture of them is also an interpretation, not a basis for some.

It is only if someone can do, has learnt, is master of, such-and-such, that it makes sense to say he has had this experience. (Wittgenstein 1958, 209)

Summing up, seeing something we must, each time, know in advance what we are going to see in this picture. It means that nothing like solid components of the picture exists. There is nothing, which we can call the objective basis for interpretation. Everything we see, we see as something we know, according to our knowledge. In another words, Fleck and Derrida were both right: the reality consists of the cultural and historical elements, so each interpretation is rooted in the other one, and that is why we can create them endlessly.

4. Commentator and the state of his consciousness

Wittgenstein’s examples just only confirm previous assertions. Seeing is preceded by knowledge, which is not an interpretation of what would be seen directly as inherent in the picture. Therefore, the subject, the one who sees, does not obtain
the truth, the only truth. As Gadamer said, the world unveiling itself in uncountable pictures, and none of it is more true than the other. What we know, our theories, does not depend on reality, but they are build up one upon the other. They depend on our previous knowledge of the subject – somebody who is not the explorer, but, in this model, the interpreter. And so we come to the place where we can ask a second question, which we formulated at the beginning. Assuming that the subject is “determined” to discover the truth in a sense of a possible interpretation, the question is: must he or she be aware of this fact to be able to do so?

To answer this question let’s go back to the Fleck’s distinction between active and passive elements. According to him each picture – as it was already said – can be decomposed into the active elements – forms or the ideas which are not seen directly in the image, and passive elements, so to speak, the “matter” of the image. The subject is normally not aware of the existence of active elements. He is convinced that he sees reality as it is, not realizing the anticipating knowledge which allows him to do it. Using Fleck’s words: he does not realize that his seeing is stylish. Therefore, he remains convinced that he sees reality as it is.

Cognition therefore means, primarily, to ascertain those results that must follow, given certain preconditions. The preconditions correspond to active linkages and constitute that portion of cognition belonging to the collective. The constrained results correspond to passive linkages and constitute that which is experienced as objective reality. The act of ascertaining is the contribution of the individual. (Fleck 1935, 40)

The thing which is important here is that the subject in a style which is not his own can recognize only the active elements. So, he does not see the passive one. For example, someone who is not acquainted with the Christian tradition, in a ceremony of christening a child – while given an explanation of this – can “recognize” only the ideas, but is not able to see this event as a Christian does. His perception of this rite remains other than the perception of a Christian. Fleck notes at the same time that foreign styles are usually regarded as naive, fake, inferior, immature, funny, incomprehensible, etc.

All we see in medieval, in Persian, and in Arabic illustrations is schematic sign language but almost no realism. (Fleck 1935, 137)

The Fleck’s comments are really precious. They tell us, in a very simple way, that this is what we call objectivity – seeing something as it is – requires blindness to the existence of active elements. So we feel we see something in an objective way when we see something in accordance with adopted ideas, the existence of which, normally, we are not aware of.

Whatever we would do, our seeing remains ideological one. It is always one of the possible interpretations. It is worth to mention Gadamer again, who argues that
the lack of anticipating knowledge makes impossible the entire process of cognition. To see something a man must take a certain point of view, but while seeing is not aware of it. And it must be like that. A feeling of objectivity is “created” when one is directed by his previous knowledge. Objectivity, which would mean styleless – as Fleck puts it – is simply a fiction.

An object of cognition, although constructed on the basis of accepted ideas, is what is given to the subject. It is felt as given. A member of the thought collective does not have the impression of being directed in seeing something. He also does not feel he is a creator of reality. On the contrary: he feels like a recipient. An individual can see what other members of the same thought collective see. As Fleck says: they affirm one another in the faith in the objectivity of what they see. Not knowing this, they put some pressure on each other, which does not allow them to see things differently. People of different ages are pressed to think in a certain way, though all are convinced that they think in a proper, pure and the only possible way.

Thus the answer to the question about the state of consciousness of the subject of the thought collective is the following: the individual can only “theoretically” know that his cognition is stylish, but practically he is not able to “see” what makes his view possible. So, he must see a picture “as it is”. He can be aware of it after that. He remains doomed to be blind to the style he see/thinks, perceives etc. So, as an observer the subject has to see the world as an objective reality. The awareness of stylistic seeing appears only when an observer becomes a historian. But only then and does not have to.

5. And what about being certain?

Replacing the objective world by the endless sense and subject of cognition of the interpreter we have to ask the question of whether humans, in this model, can be sure of what they know. Is their knowledge certain?

Well, it’s hard to imagine a negative response. Why? Despite the fact that the objective truth can be seen as a myth, a man – as a user of natural language – still can be sure of something. Whatever is the status of an image of the world we still use the expression of being certain. We say that we are confident that the fire will burn us and that two and two is four. And it is the same with scientists. They also are sure of a discovery they make and they are not wrong. How it could be?

The concept of certainty in a model where a subject constructs sense of what he sees does not disappear, but takes a different content, different meaning. To explain it let’s go back to Wittgenstein.

The author of *Philosophical Investigations* examines mathematical theorem: $25 \times 25 = 625$. None of us who knows the math, doubts the claim is true. Why it is like that? Why can we be sure of anything if we believe there is nothing like an objective truth?
The answer of Wittgenstein is that certainty which accompanies arithmetic does not rely on an unwavering sense of the obvious, but on the fact that we assume that counting results are indisputable. Why? In reply Wittgenstein invokes convention. Mathematical type of decidability we recognize as inviolable. We accepted it as such and that means we could not do otherwise. We can imagine, Wittgenstein argues, a mathematician who denies the certainty of a result on the basis that some numbers imperceptibly changed (Wittgenstein 1958, 225). And what about the fact that we consider it comical? This proves only that this convention which is here – not to doubt in mathematical theorem – is strongly rooted in us. It is a form we look at things through.

What has to be accepted, the given, is – so one could say – forms of life. … Of course, in one sense mathematics is a branch of knowledge, – but still it is also an activity. And ‘false moves’ can only exist as the exception. (Wittgenstein 1958, 226–227)

We feel it is funny that the Japanese talking to his boss on the phone, bows. Why? Because this is not our usual procedure. For the Japanese, however, it is normal, and is not funny. Similarly, no quarrels among mathematicians regarding elementary arithmetic is something adopted. It is not because of the very nature of mathematics as we would like to say. For the discipline like mathematics we adopted such standards of behavior, which exclude having doubts. We are certain that a result is true because having doubts about it, is not the kind of the reaction which is normal in this case.

Ask, not: “What goes on in us when we are certain that …?”– but: How is ‘the certainty that this is the case’ manifested in human action? (Wittgenstein 1958, 225)

In a situation when there are many truths rather than the single truth, an interpreter replaces a subject of objective reality, and the meaning to be develop replaces a truth to be discovered – a state called “being certain of something” is just an attitude we take. Towards what? Not towards anything of a very special nature. One can say: it is an attitude of someone for whom doubts were eliminated. They are excluded not by a thing as it is objectively seen, but by the rules of the game one is involved in, i.e. by the conventions.

6. Conclusion

So, it turns out that the answer to the question of whether scientists seek the truth – even if we agree that there is no objective truth – paradoxically, is positive! What’s more, one can say that scientists not only seek the truth, but they also find it and can be sure of the results they achieve! Rarely, however, they are aware that the truth they find is “true” only within their thought style. The majority will reject
– due to a common sense – the whole model in which the possibility of reaching the objective truth simply does not exist. The idea that we live in a world build up from cultural and not the mathematical and physical elements – especially for scientists – is not acceptable. The great number of scientists is convinced that reality is a sort of an open object for scientific cognition, and the science explores it in the most accurate, reliable, and, in fact, the only possible way.

This belief, however, is in a way very useful. It allows the appearance of a certain ‘objective’ meaning. No one demands scientists should be historians of the ideas and to be aware of the stylish thinking, seeing and reasoning. And that is why the whole issue appears to be some kind of a trick, only we do not know whose. Blindness to the fact that the obtained knowledge is just an interpretation, seems to be necessary for a certain sense to emerge. This means that in the “interest” of this process the subject “should” think that his view is objectively true. When one makes some kind of research one “should” believe that he discovers something “real”, a being as it is. The knowledge to be developed required, you might say, a myth, an illusion. What’s more, an illusion which cannot be helped. To know that the human cognition is nothing, but the construction of piled up meanings cannot undermine our “blindness” to it while seeing, discovering, thinking. One can say: knowing we are ill cannot heal us, because… there is no illness. On the contrary, the old myth of philosophy, in which we are explorers – and the scientists believe they are the most prominent – is a myth, which has got a character of a white lie.

References