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## Kantian Heritage in Radical Constructivism

**Abstract:** The article examines various historical and philosophical premises of radical constructivism. The three most appropriate philosophical concepts for this role are: ancient skepticism, subjective idealism, and Kantian transcendental idealism. It is shown that radical constructivism cannot be attributed to ancient skepticism or subjective idealism. It is transcendental idealism that should be considered as the main forerunner of this concept. The key point is that inheriting the fundamental points of Kantian theory, in particular, the principle of activity of the subject of knowledge, radical constructivists inevitably inherit the contradiction caused by it. The “thing-in-itself” contradiction will haunt radical constructivism as well as transcendental idealism. It is not possible to overcome this difficulty without going beyond the framework of the theory under consideration (as in the case of Kantian transcendentalism, as the history of philosophy shows).

**Keywords:** Contradiction of thing-in-itself. Glaserfeld. Principle of activity of subject. Radical constructivism. Transcendental idealism.

### Kantovo dedičstvo v radikálnom konštruktivizme

**Abstrakt:** Článok skúma rôzne historické a filozofické východiská radikálneho konštruktivizmu. Tri najvhodnejšie filozofické koncepcie pre túto úlohu sú: antický skepticizmus, subjektívny idealizmus a kantovský transcendentálny idealizmus. Ukazuje sa, že radikálny konštruktivizmus nemožno priradiť k antickému skepticizmu alebo subjektívnemu idealizmu. Za hlavného predchodcu tejto koncepcie treba považovať práve transcendentálny idealizmus. Kľúčové je, že prevzatím základných bodov kantovskej teórie, najmä princípu aktivity subjektu poznania, radikálni konštruktivisti nevyhnutne preberajú aj ním spôsobený rozpor. Rozpor „veci osebe“ prenasleduje radikálny konštruktivizmus rovnako ako prenasleduje transcendentálny idealizmus. Túto ťažkosť nie je možné prekonať bez toho, aby sme prekročili rámec skúmanej teórie

(ako je to v prípade kantovského transcendentizmu, na čo poukazujú dejiny filozofie).

**Kľúčové slová:** Glasersfeld, princíp aktivity subjektu, radikálny konštruktivizmus, rozpor veci osebe, transcendentálny idealizmus

## Introduction. Radical constructivism and its prerequisites

In the late 70s-early 80s of the 20<sup>th</sup> century, a trend that claims to radically rethink reality declared itself. Radical constructivists express their approach in two main theses: knowledge is actively constructed by the cognizing subject; cognition serves to organize the empirical world, but not to discover ontological reality.<sup>1</sup> These theses serve as the basis for the “reconstruction of the concept of knowledge”, in which constructivists propose to abandon the search for truth as an illusion of cognition of objective reality.<sup>2</sup>

The “sensational” nature of radical constructivists’ statements encourages their critical reflection and the definition of their historical and philosophical context. The question of such a genealogical relationship is important both for supporters of this trend and for its opponents: the former justify their principles, the latter seek a basis for criticism.

In its historical and philosophical justification, radical constructivism mentions many names and trends: ancient skepticism, Descartes, Locke, subjective idealism, Kantian criticism, functionalism, pragmatism, etc.<sup>3</sup> However, as E. Smith noted in his review, Glasersfeld is quite adept at dealing with the works of ancient and modern thinkers, building their arguments in such a way that the statements of radical constructivists seem historically inevitable. “Glasersfeld does not, of course, claim that all supported his view of knowledge; rather he selects from their writing in such a way as to create a historic argument whose momentum would seem to make his conclusions all but inevitable.”<sup>4</sup>

Such a selection of authors has pros and cons for radical constructivism: on the one hand, the “titans” of philosophical thought are recognized as their

<sup>1</sup> Quale, A.: Radical Constructivism, and the Sin of Relativism. *Science & Education*, 2007, 16(3–5), pp. 231–266.

<sup>2</sup> von Glasersfeld, E.: An Exposition of Constructivism: Why Some Like it Radical. In: R. B. Davis, C. A. Maher, & N. Noddings, eds. *Monographs of the Journal for Research in Mathematics Education #4*. Reston, VA: National Council of Teachers of Mathematics, 1990, pp. 19–29, here p. 22.

<sup>3</sup> Smith E.: Review: Constructing the Individual Knower. *Journal for Research in Mathematics Education*, 1997, 28(1), pp. 106–111.

<sup>4</sup> Ibid., p. 108.

predecessors. According to the logic of this historical and philosophical justification, radical constructivism stands on the shoulders of giants, but does what they did not dare – radically reject any claim to find the truth and comprehend being:

Radical Constructivism [...] decidedly steps out of the epistemological tradition [...] What differentiates Radical Constructivism from the tradition, is the proposal unequivocally to give up the notion that knowledge ought to be a veridical ‘representation’ of the world as it ‘exists’ prior to being experienced that is, ontological reality.<sup>5</sup>

On the other hand, radical constructivism gives the impression of a superficial acquaintance with the ideas of its “predecessors”. For example, it can hardly be said that Descartes, with the doctrine of substances, rejects the possibility of knowing the truth and constructing any ontology.<sup>6</sup> Secondly, defining itself as the heir and successor of their ideas, radical constructivism does not see that it “inherits” not only the theses and principles that make it possible, but also the contradictions of its predecessors, sometimes insoluble.

### Defining context of radical constructivism

In modern research, three main points of view can be fixed regarding the historical and philosophical context of constructivism: one of which relates radical constructivism to ancient skepticism, another to subjective idealism, and the third to Kantian criticism. Let’s look at them in more detail and determine the most justified variant of genealogical kinship.

In one of his works, E. von Glasersfeld writes that ancient skepticism is the starting point of the development of radical constructivism:

The original seed of constructivist ideas was undoubtedly the sceptics’ realization that we can have no certain knowledge of the real world, because, even if we could discover how our knowledge is derived from experience, there is no way of discovering how our experience might be related to what there is before we experience it.<sup>7</sup>

<sup>5</sup> von Glasersfeld, E.: Knowing without Metaphysics: Aspects of the Radical Constructivist Position. In: F. Steier, ed. *Research and Reflexivity*. London: Sage Publications, 1991, p. 4.

<sup>6</sup> Olssen, M.: Radical Constructivism and Its Failings: Anti-Realism and Individualism. *British Journal of Educational Studies*, 1996, 44(3), pp. 275–295.

<sup>7</sup> von Glasersfeld, E.: Knowing without Metaphysics: Aspects of the Radical Constructivist Position, *ibid.*, p. 13.

M. Olssen in his criticism of radical constructivism also places it next to ancient skepticism: “In rejecting realism, constructivist theories of learning adopt a sceptical position. They reject the a priori assumption that objective knowledge constitutes a description of that which is known”<sup>8</sup>

A researcher of radical constructivists, S. A. Tsokolov, argues in a similar way. He writes that this trend is a kind of modern skepticism and continues to develop theses about the impossibility of reliable knowledge.<sup>9</sup> In his opinion, radical constructivism “for the first time linked the modern concepts of natural sciences and a number of humanities and the empirical material obtained by them with the ancient philosophical tradition of skepticism into a unitary epistemology of radical constructivism”<sup>10</sup>

However, how justified are such “kinship” ties? Note that the conceptual constructions of radical constructivists are based on cybernetics and neurobiology,<sup>11</sup> at the same time, ancient skepticism rejects any dogmatic knowledge. Moreover, as E. Smith writes, the question of the nature of radical constructivists seems to be extremely important (“In this volume, however, as in his other works, Glasersfeld places a primary emphasis on the nature of knowledge, with the process of obtaining/constructing knowledge playing a supportive role”<sup>12</sup> whereas an ancient skeptic would have refused to solve such problems at all.

How can a philosophy close to ancient skepticism be connected, as Tsokolov writes, with some kind of “empirical material” if the thesis about the fundamental unreliability of sensory experience is the starting point for skepticism? We cannot find either the “epoche” or the desire for “ataraxia” in the teaching of radical constructivists: instead of “serenity”, the desire for a radical restructuring of the concept of knowledge, science, and pedagogy. Therefore, the comparison of radical constructivism with ancient skepticism should not go too far.

According to the second point of view, radical constructivism goes back to Berkeley’s subjective idealism. V. I. Zhilin and S. V. Efimova can be mentioned as representatives of this position. In their opinion, it was Berkeley who “laid

<sup>8</sup> Olssen, M.: *Radical Constructivism and Its Failings: Anti-Realism and Individualism*, *ibid.*, p. 279.

<sup>9</sup> Tsokolov, S.: *Diskurs radikalnogo konstruktivizma. Tradicii skepticizma v sovremennoj filosofii i teorii poznaniya*. Munich: Phren, 2000.

<sup>10</sup> *Ibid.*, p. 49.

<sup>11</sup> *Ibid.*, p. 133.

<sup>12</sup> Smith E.: *Review: Constructing the Individual Knower Reviewed*, *ibid.*, p. 107.

the fundamental foundations of constructivism”.<sup>13</sup> Such a relationship is established by the authors due to the fact that Berkeley and the radical constructivists believe that “nothing exists except personalities. All other things are modes of existence of personalities”.<sup>14</sup> The authors also believe that “radical constructivists, like Berkeley, are convinced of the possibility of changing the outside world with their thoughts at their discretion”.<sup>15</sup>

However, do Berkeley and the radical constructivists really believe that “nothing exists except personalities”? Moreover, do radical constructivists really believe that it is possible to construct anything you want?

To begin with, Berkeley recognized God as the source of sensations. On this basis alone, it is difficult to put the English philosopher on a par with the radical constructivists. The radical constructivists themselves, despite the mention of Berkeley in the ranks of their predecessors, repeatedly “disavowed” subjectivist interpretations of their epistemology. So, Foerster gives proof called “the gentleman with the bowler hat”: if the solipsist

insists that he is the sole reality, while everything else appears only in his imagination. However, he cannot deny that his imaginary universe is populated with apparitions that are not unlike himself. Hence, he has to concede that they themselves may insist that they are the sole reality and everything else is only a concoction of their imagination. In that case their imaginary universe will be populated with apparitions, one of which may be he, the gentleman with the bowler hat.<sup>16</sup>

Foerster believes that this leads to the absurd and thus proves that radical constructivism is never reduced to solipsism.

E. von Glasersfeld, speaking about the goal of reconstructing the concept of knowledge, sets the frames beyond which radical constructivism should not go; it is necessary not only to get away from realism, but at all costs to avoid solipsism. “Some reconstruction is needed because, on the one hand, one can no longer maintain that the cognizing activity should or could produce a true representation of an objective world, and on the other, one does not want to end up with a solipsistic form of idealism”.<sup>17</sup>

According to another radical constructivist, A. Quale, the accusations of

<sup>13</sup> Zhilin, V. I. and S. V. Efimova: I. Kant protiv konstruktivistov. *The Science of Person: Humanitarian Researches*, 2014, 18(4), pp. 10–16.

<sup>14</sup> Ibid., p. 13.

<sup>15</sup> Ibid., p. 14.

<sup>16</sup> Watzlawik, P., ed.: *The Invited Reality*. New York: W.W. Norton & Company, 1984, p. 59.

<sup>17</sup> von Glasersfeld, E.: An Exposition of Constructivism: Why Some Like it Radical, *ibid.*, p. 22.

solipsism do not bear criticism. Standing on the point of common sense, he admits that the position of solipsism is false: “To start with, it is almost trivial (as has been remarked by many) to repudiate the position of solipsism, simply by pointing out that the world clearly does not always conform to our personal desires – a fact that is amply experienced by every one of us, every day”<sup>18</sup> and the solipsist position is also epistemically self-defeating.

To emphasize the demarcation with solipsism, radical constructivism in the person of Quale, as it seems to us, violates its own principles and speaks of a certain “human nature”, the essence of which is to inevitably assume the existence of other people and an independent common “empirical world”:

It is in our nature to assume that the world that each of us experiences is in fact there to be experienced. In other words: we all accept as a given ontological assumption that we share an experiential world with other people, and that it is accessible for us to act on this world, and to interact with each other in it...<sup>19</sup>

Of course, it would not be entirely correct to refer Berkeley to solipsism; however, the only thing that keeps both Berkeleyan and Fichtean versions of subjective idealism from the Solipsistic extreme is the idea of God, which is completely alien to the philosophy of radical constructivism. In addition, as we demonstrate, for radical constructivism, the presence of certain objects outside the subject’s consciousness is fundamental, which essentially contradicts subjective idealism in any interpretation. Thus, we cannot attribute radical constructivism to either ancient skepticism or subjective idealism.

### **Kant and radical constructivism**

From our point of view, the most consistent version seems to be the genealogical relationship between constructivism and transcendental idealism. Thus, Kant justified the inaccessibility of non-experience reality, pointed out the fundamental importance of the activity of the subject in relation to the given object of cognition and experience.

The Kantian principle of the activity of the subject is decisive for radical constructivism: the human world is an empirical world constructed by man, the knowledge of which does not claim to be true as a correspondence to ontological reality: “Following Kant, constructivism holds that the mind

<sup>18</sup> Quale, A.: *Radical Constructivism, and the Sin of Relativism*, *ibid.*, p. 242.

<sup>19</sup> *Ibid.*, p. 243.

actively processes the raw material of sensory impressions and the objects of knowledge produced are called experience which is organized in terms of constructs put together by individuals as they operate upon the world”<sup>20</sup>

However, according to the *Critique of Pure Reason*, a certain primary source precedes the constructing activity: the “thing in itself” affects sensuality and thereby triggers the process of constructing an object in the transcendental consciousness. Actually, in Kant’s philosophy it creates an insoluble contradiction: how is it possible to postulate a thing in itself if only the phenomenal world is available in cognition?<sup>21</sup>

Radical constructivism inherits this contradiction along with the principle of the activity of the subject. Formally, radical constructivism postulates the thesis of cognition exclusively of the phenomenal world, refusing to talk about anything beyond experience. However, in the texts of Glasersfeld, Roth, and Quale there are such provisions that allow us to conclude about the inevitable postulation of the “thing in itself”, and therefore about the inheritance of the Kantian contradiction.

On the one hand, Glasersfeld, speaking about the adaptation of the cognitive organism, argues that the environment negatively manifests itself by weeding out non-viable constructs. He refuses to talk about a certain entity or a certain subject, about a certain “nature” that breaks out from the outside into the experience of the cognitive organism. According to Glasersfeld, “adaptation” should be understood as follows: knowledge – conceptual structures – are viable if they give the cognitive organism the expected results.<sup>22</sup>

However, let’s consider one example that Glasersfeld gives, illustrating this position.<sup>23</sup> Let’s assume that there is a cognitive organism, for example, a baby. The baby has already constructed a cognitive scheme in which rattles make sounds. The baby discovers the spoon. From the point of view of an adult – according to his cognitive scheme – this object is a spoon, “but from the infant’s perspective at that point, the item is a rattle, because what the infant perceives of it is not what an adult would consider the characteristics of a spoon but just those aspects that fit the rattling scheme”.<sup>24</sup> Trying

<sup>20</sup> Olssen, M.: *Radical Constructivism and Its Failings: Anti-Realism and Individualism*, *ibid.*, p. 279.

<sup>21</sup> Barbashina, E. V.: *Minimizaciya protivorechij ucheniya o veshchi samoj posebe v ramkah filosofii I. Kanta*. *Kantian Journal*, 2005, 25(1), pp. 14–34.

<sup>22</sup> von Glasersfeld, E.: *Cognition, Construction of Knowledge, and Teaching*. *Synthese*, 1989, 80(1), pp. 121–140.

<sup>23</sup> *Ibid.*

<sup>24</sup> *Ibid.*, p. 127.

to extract sounds from a spoon, the child comes to an unexpected result for him: obvious absence of sounds. Glasersfeld comments on this as follows: this cognitive organism finds itself in a situation where the expected result does not occur: the absence of sounds “generates a perturbation (‘disappointment’), and perturbation is one of the conditions that set the stage for cognitive change”.<sup>25</sup> In this case, a new cognitive scheme will be formed – the “spoon” scheme. According to Glasersfeld, the “rattle” scheme turns out to be unviable at the moment of the baby’s experience, it is discarded and a new one is formed instead – the “spoon” scheme. The same is the case with the rest of knowledge, including scientific, and with every worldview.

But Glasersfeld, emphasizing the constructive activity of the subject, ignores the fact that the inability of the spoon to make sounds does not depend on this activity. In other words, there is “something” behind cognitive schemas and experiences that prompts the cognitive organism to discard old cognitive schemas and construct new ones. It seems impossible for Glasersfeld to admit the existence of this “something”: it would weaken the “radicality” of his statements.

Another radical constructivist, A. Quayle, as already mentioned, defending radical constructivism from accusations of solipsism, allows himself to make a judgment about a certain “human nature” and comes to the need to recognize the general empirical world. In other words, he comes to the conclusion that the existence and cognition of a person is based on the acceptance of the “fundamental” premise of the existence of an independent reality.

G. Roth, having come to a number of unsolvable paradoxes of radical constructivism,<sup>26</sup> speaks of the logical necessity to admit a transphenomenal reality in addition to the constructed reality.<sup>27</sup> So, attempts to cognize, for example, the “real” brain turns into another construction, which implies its division into a “real”, but inaccessible, and a “real”, cognizable brain.

In other words, “blinded” by the discovery of the constructive role of the subject in his cognition and existence, constructivists with the pathos of radicalism reject the truth and existence of the transphenomenal world. However, they come to the need to postulate it.

<sup>25</sup> Ibid.

<sup>26</sup> Lectorsky, V. A.: Kant, radikalnyj konstruktivizm i konstruktivnyj realizm v ehpiistemologii. *Voprosy Filosofii*, 2005, 8, pp. 11–21.

<sup>27</sup> Tsokolov, S.: *Diskurs radikalnogo konstruktivizma. Tradicii skepticizma v sovremennoj filosofii i teorii poznaniya*, ibid.



## Conclusion

What significance does this Kantian contradiction of the thing-in-itself have for radical constructivism? The history of philosophy shows us that after the shaky ontological substantiation of the thing in itself by Kant (applying the categories of reason, defining it as a demarcation concept or as a transcendental idea), other philosophers – I. G. Fichte or Neo-Kantians<sup>28</sup> – tried to get rid of the thing in itself. Of course, the philosophy of the German Romantics and Neo-Kantians was not in danger of going into solipsism.<sup>29</sup> What cannot be said about radical constructivism: the rejection of the thing-in-itself makes impossible the requirement of E. Glasersfeld – making a “reconstruction of the concept of knowledge”, to get away from both realism and solipsism.<sup>30</sup> However, the need to admit a certain analogue of the thing in itself makes meaningless the “radical” statements of this direction. Therefore, G. Jacobi’s well-known remark about the contradictory role of the thing in itself in transcendental idealism can be reformulated in relation to radical constructivism: without breaking with transphenomenal reality, it is impossible to enter the philosophy of radial constructivism, but it is also impossible to completely get rid of it.

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<sup>28</sup> Sokuler Z. A.: Hermann Cohen and His Idea of the Logic of Pure Knowledge. *RUDN Journal of Philosophy*, 2021, 25(3), pp. 378–393.

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