

Radical Constructivism in Three Dimensions

Jonas Maria Hoff • Rheinische Friedrich-Wilhelms-Universität Bonn, Germany • hoff/at/uni-bonn.de

> **Abstract** • The edited volume includes various articles dealing with the past, present and future of radical constructivism (RC) and the work of Ernst von Glasersfeld. From different perspectives, the contributors discuss the relevance of RC for different research questions and thus help to identify the viability of RC. This article attempts to structure the book and briefly introduces some of the contributions.



Review of Radikaler Konstruktivismus: Vergangenheit, Gegenwart und Zukunft: Ernst von Glasersfeld (1927–2010) edited by Theo Hug, Josef Mitterer and Michael Schorner. Innsbruck University Press, Innsbruck, 2019. ISBN 978-3-903187-52-8 • 486 pages.

« 1 » In the development of radical constructivism (RC), edited volumes have always played an important role. This applies both to the public distribution of constructivist thought and to the scientific discussion of the different approaches. These volumes repeatedly presented exchanges of completely opposing views, which led to the productive development of RC. In German-speaking countries, this is especially the case with the DELFIN series of the influential Suhrkamp publishing house as well as the seminal *Einführung in den Konstruktivismus* (“Introduction to Constructivism”), originally published in 1985, which saw its 16th edition in December 2016. The book *Radikaler Konstruktivismus: Vergangenheit, Gegenwart und Zukunft* (“Radical Constructivism: Past, Present and Future”), picks up this tradition. It is based on a conference to commemorate the 100th anniversary of Ernst von Glasersfeld that took place at the University of Innsbruck in 2017. It contains more than 25 articles by renowned authors from various countries and disciplines. Most of them refer intensively to von Glasersfeld and his concept of RC. The book does not have a formal structure by which the three dimensions, past, present and future, are clearly separated. Some contributions cover all three dimensions, while others focus only on one or two of them. This makes it admittedly difficult to review the book in its entirety. The wide range of topics does not seem to follow any specific structure either. According to the editors,

The genuine antagonist of RC is contemporary analytical philosophy

however, this plurality of areas is more beneficial than a disadvantage: It shows “that radical constructivism has developed into a genuinely interdisciplinary research program” (20).

« 2 » To give an overview of the book, I will review several important contributions below. Since, in the preface to the book (both in German and in English), the editors already provide small summaries of each chapter, my review will offer a different approach that seeks to add a structure to the book by highlighting thematic links between chapters. The thematic links I am going to unveil concern historical aspects as well as comparisons with other rival theories, the scientific application and the future of RC.

Development and genesis

« 3 » A first thematic group of articles focuses on the development and history of RC. Albert Müller (25–48) searched various archives for his article and found new material on the relationship between von Glasersfeld and Heinz von Foerster, who both are considered to be among the original proponents of (radical) constructivist thought. Some of their letters published in this chapter reveal insights into the history of their productive collaboration. We get to read one of the first letters that von Glasersfeld wrote to Foerster in March 1966, after their first contact, and in which the latter is still formally addressed as “Dear Dr. von Foerster” (31).

« 4 » Marco Bettoni (49–66) takes a less historical approach in his contribution, but with Silvio Ceccato’s thinking, he nevertheless illuminates an important benchmark for the development of RC. Ceccato had a great influence on von Glasersfeld in his early academic career in Italy. Bettoni discusses some of the links that connected them in his contribution. Ceccato’s theory of attention, which sees thinking as an operation of attention, plays a special role here (57–63). His theory says that thinking is mostly unconscious and is not about the passive recognition of objects. Ceccato understands attention not as a spotlight to make objects visible, but as an operation in which the objects have to be constituted in the first place (57). Even if Bettoni only speaks vaguely of this as a basis for RC (55), it is clear where the connection lies. From Ceccato’s theory follows a critique of the understanding of

knowledge as a representation of a mind-independent reality.

« 5 » An additional input about the development and history is provided by Karl H. Müller (335–355). Müller considers RC in the context of the history of the Enlightenment and positivism. From his point of view, RC, which became influential as a movement from 1985 onwards, is a very special phenomenon in all this, because it shifts from *Fremdaufklärung* (“third-party-enlightenment”) to *Selbstaufklärung* (“self-enlightenment”), distancing itself from critical rationalism, in particular (351f).

Theory comparisons

« 6 » Another topic that appears in some of the contributions is the question of the relationship between RC and other (mostly philosophical) theories. Two articles compare RC with Karl Popper’s critical rationalism. Volker Gadenne (305–316) argues against continuing to see both theories as strict opposites, because both criticize naive empiricism and describe understanding as an active process (314). At the same time, however, Gadenne also emphasizes that critical rationalism represents a realism. For him, the genuine antagonist of RC is contemporary analytical philosophy, because it tries to reach a (positively formulated) “truth” about the essence of objects (314f).

« 7 » Armin Scholl (317–333) adds to the similarities between the two theories that both avoid ultimate reasons (321). He concludes by assuming that RC and critical rationalism simply argue on different levels. In his perspective, RC operates as the “corrective instance” of realism as a whole (332).

« 8 » Another contribution focuses on the relationship between von Glasersfeld’s RC and the philosophy of George Herbert Mead (67–76). Its author, Franz Ofner, sees the central difference as lying in Mead’s rejection of the possibility of ontological knowledge. In his view, von Glasersfeld’s RC “is based on a dualistic relation of reality and experience.” Ofner concludes that von Glasersfeld was therefore a (minimal) realist (76).

« 9 » All three comparative contributions mentioned so far ultimately concern the relationship between realism and RC. Peter M. Hejl (373–394), by contrast, takes a different approach by comparing RC with a concept he describes as “niche construction” (373). According to Hejl, this concept is linked to RC since both criticize aspects of the theory of evolution (selection). In contrast to RC, niche construction is not only concerned with the cognitive and epistemological dimension, but especially with physical and social aspects. For Hejl this results in the requirement that RC should be more involved in these aspects in order to achieve a more comprehensive understanding of construction (386). Hejl’s perspective suggests that both theories are complementing each other.

« 10 » Another comparison of theories can be found in Aleksandra Derra’s chapter (175–187). She discusses the potential of RC for feminist philosophy, thereby identifying similarities: “Both the radical constructivist approach and feminist philosophies of science reformulate the concept of objectivity” (178). Apart from that, she also observes that there are limits to their compatibility such as von Glasersfeld’s “constant focus on the individual cognitive subject and the individual experience” (185). Like Hejl, Derra calls for greater consideration of social constructivist ideas in RC (185).

« 11 » Willibald Dörfler’s chapter (95–110) also contains a theoretical comparison. In contrast to the others, though, Dörfler is only concerned with a very specific aspect, i.e., mathematical learning. For this purpose, he compares von Glasersfeld’s work with that of Charles Sanders Peirce and Ludwig Wittgenstein. While he highlights various differences, he argues against “a strong contrast between Glasersfeld on the one side and Peirce and Wittgenstein on the other” (106). Rather, one should focus on the relation “from the vantage point of complementarity” (ibid). From there, it can be seen that all three understand thinking and learning as actions (107).

Scientific application

« 12 » Dörfler’s article is a useful bridge to a third thematic focus of the book. Indeed, most of the contributions turn to concrete research questions that reflect less on RC per se than on its scientific application. In the case of Dörfler, it is about learning mathematics. Some other contributions also deal with the didactic dimension of constructivism in general. Dewey I. Dykstra Jr. (77–94), for example, describes the specifics of constructivist pedagogy. Using a concrete example, he discusses the possibility of its application. He shows that constructivist didactics can help students develop new questions and solve problems. In Dykstra’s view, constructivist teaching leads to better results than teaching that is conceived as “transmission of the appropriate canonical knowledge” (93).

« 13 » Three further contributions deal specifically with the didactics. Marzenna Cyzman (111–122) transfers von Glasersfeld’s ideas to language learning and teaching and, after examining some school material, states that “there is a need to read and actualise Glasersfeld’s works once again in order to prepare the practical programme of language teaching, based on radical constructivist assumptions” (120). In their contribution, Achim Barsch and Christoph Müller (123–146) use RC to develop a new understanding of reading comprehension to deal with different text types in German language teaching. All these contributions refer to the potential of RC for didactics and they come to positive results regarding its application possibilities. Not so Jack Lochhead, who comes to a slightly different conclusion in his chapter (147–155). He concentrates more on the difficulties encountered in the concrete implementation of radical constructivist pedagogy. According to him, the results of constructivism and cybernetics have hardly ever been implemented in schools, “because they threaten high value concepts already constructed in many minds” (149). Lochhead confesses: “I do not know why constructivism and cybernetics disturb people” (152). The question of why remains open, but the analysis is disillusioning.

The reasoning of RC does not admit any final evidence that could remain beyond constructivist doubt

Constructivism and cybernetics have hardly ever been implemented in schools

« 14 » In addition to the scientific application of constructivism in the didactic sector, there is a group of essays that are linked by a common research theme: the discussion of “fake news.” Three articles focus on this topic. Katharina Negeš’s contribution (205–216) deals with the constructivist significance of tolerance. The fake news debate only serves here as a starting point for further considerations (205f). Petra Herczeg (231–248) and Josef Mitterer (217–230) go into more detail on this debate. Herczeg interprets fake news as a kind of contempt for other persons (241). In her opinion, a person who spreads fake news denies other people the recognition that is normally given in honest communication. Over the last decades, RC has earned a steady reputation

Herczeg assumes that in RC it is possible to speak meaningfully of “facts,” but it is clear that her analysis is based on a realistic understanding of “facts.” She thus agrees with a definition of “facts” as having correspondence with “reality” (235). She also believes in the possibility of an approximation to this “reality” (237). For these reasons, her argumentation differs widely from and is thus incompatible with RC. Mitterer takes a completely different stance. He observes the debate from a philosophical meta-position and demonstrates that the distinctions between “true” and “false,” “fact” and “fake,” etc. “are based on non-distinctions” (225). According to Mitterer, these distinctions must be made “from a position where we do not and cannot distinguish between fact and interpretation, object and description, truth and falsehood” (225). In other words: “During the interpretation of a fact we cannot distinguish between the fact being interpreted and the interpretation of the fact” (225). When one’s own point of view is excluded from the distinction in this way, harsh judgments become possible (229). Mitterer finally warns against such a way of argumentation, thus also defending philosophical traditions such as RC.

The future of RC

« 15 » The contributions in the three topics discussed so far (history, comparison, and application) have mainly focused on the past and the present of RC. The fourth (small) group of contributions shares a common focus on the future of RC.

« 16 » In his contribution, Siegfried J. Schmidt (442–431) begins with some theoretical problems of RC, which need to be clarified in order to be able to persist in the future. For example, he mentions the problem of self-contradiction and the problem of dualistic concepts in constructivism (432). Regarding the second problem, Schmidt reminds the reader that “the observer does not observe ‘the reality’ in a neutral or objective way” (436). For this reason, he advocates (similarly to Mitterer) a “strict non-dualistic” (431) attitude. This also affects the first problem, insofar as the self-contradiction arises mainly when attempts are made to derive evidence from neuroscientific research to justify the position of RC. In order to solve the problem, Schmidt proposes to focus more on the principle that all thinking depends on “suppositions” that are put forward by an observer. No knowledge ever comes closer to the alleged mind-independent reality or the absolute truth – not even the sciences: “The difference between scientific and non-scientific problem solving lies primarily in the explicitness and the repeatability of operations and in its regulative parameters” (438f). The self-contradiction is thus resolved insofar as the reasoning of RC does not admit any final evidence that could remain beyond constructivist doubt. Schmidt’s contribution to the future of RC, therefore, lies in noting theoretical problems and proposing solutions.

« 17 » By contrast, Alexander Riegler (457–476) takes a more practical approach in his article, “Publish or Perish.” The title reflects the two possibilities that, according to Riegler, RC will have in the future. That RC is currently well on its way into the future is illustrated by Riegler in the rise of the journal *Constructivist Foundations* (CF), the *Constructivist E-Paper Archive* (CEPA) and the *Constructivist Encyclopedia* (CENCY). In particular, CF and CEPA have developed well in recent years and work at a high scientific level. That is why Riegler is confident, “to turn the often criticized but still crucial *Publish or Perish* into a constructivist *Publish and Flourish*” (472).

Discussion

« 18 » The book accomplishes what the editors promise in the preface (20): It shows the interdisciplinarity and topicality of RC by addressing eminently different issues. In particular, the comparisons of the theories and the theoretical contributions demonstrate that, over the last decades, RC has earned a steady reputation and can definitely compete with other philosophical labels such as critical rationalism.

« 19 » At the same time, however, it also shows that there are still theoretical problems that have not been fully resolved. For example, there is still the old question of whether it makes sense to speak of a mind-independent reality based on a dualistic distinction. In the volume, this is particularly noticeable in the debate about fake news, where Herczeg uses this distinction. Authors keep on being inconsistent about it, which also affects the evaluation of von Glasersfeld’s position and the relationship between RC and realism. In his work, is there a separation between thinking and “reality”? At first glance, the matter seems clear, based on statements such as this: “[RC] is an attempt to explain a way of thinking and makes no claim to describe an independent reality” (Glaserfeld 1995: 1). At second glance, however,

RC has never been a completely homogeneous theory

methodological doubts arise. Armin Nassehi, for example, argues that von Glasersfeld’s thinking is still based on the idea of a mind-independent reality because he assumes that such a reality is potentially resistant (Nassehi 2008: 162). These contrasting views justify Schmidt’s claim that clarifying this question is a future task of RC. Some years ago, Mitterer had already taken it as an occasion for criticism and linked it to the development of his *non-dualism* (Mitterer 2011), which has been described as “the third philosophy” (Riegler & Weber 2010).

« 20 » In this context it should be remembered that RC has never been a completely homogeneous theory. The book chapters dealing with the development of RC draw attention to the diversity of its sources. Von Foerster, Maturana, von Glasersfeld and others were each influenced by different ideas, which included their differ-

ent disciplinary backgrounds. Maturana was a biologist, von Foerster was an engineer who co-developed cybernetics, and von Glasersfeld was originally a linguist. Still, they all made crucial contributions to the *philosophy* of constructivism. The topics and methods of their work, therefore, differ from one another.

To better understand these differences, the contributions by Albert Müller and Marco Bettoni are especially helpful.

« 21 » All this concerns RC's preoccupation with its theoretical foundation, which is important, but which alone is not enough to prove its viability. Precisely because RC is not about "truth," mere philosophical reflection does not suffice. Rather, RC must be applied practically and demonstrate its potential to solve specific problems. This works especially well when RC is applied to various (scientific) questions. Several contributions of the book show that the perspective of RC, being so diverse, is beneficial for scientific and philosophical issues. Those articles illustrate that RC is a *tool* (Schmidt 2010) that can be used productively in different contexts. Unfortunately, a comprehensive discussion of its productive and potential applications cannot be done in chapters of just ten or fifteen pages. Therefore, the book cannot aim at providing conclusive answers and projections. Instead, it provides insights into theoretical work with RC – and this works very well. In this respect, it can also be read as a response to critiques that dispute the relevance of RC. Most recently, the former constructivist Bernhard Pörksen made such an accusation (Pörksen & Schulz von Thun 2020: 178f).

« 22 » At the same time, however, the book also illustrates that RC is still highly

dependent on its founding proponents, such as von Glasersfeld. It could easily be shown that it looks quite alike in the reception of Maturana, von Foerster and a few others. A new similarly influential generation of RC cannot be seen at the horizon – but perhaps that is not a problem at all? Perhaps RC

is currently at a transition point, between the past and the future? Especially in light of this, in the future it could be helpful to not only follow in the footsteps of important scholars, but to use the versatile ideas of RC in different contexts. That both Maturana (Maturana & Pörksen 2018: 32f) and von Foerster (Foerster & Bröcker 2014: 3) objected to being called radical constructivists perhaps offers a positive direction. The edited book has already taken important steps. It makes an impressive contribution to the past and present, but also to the future of RC.

References

- Foerster H. von & Bröcker M. (2014) Teil der Welt: Fraktale einer Ethik – oder: Heinz von Foersters Tanz mit der Welt. Carl Auer, Heidelberg. Originally published in 2002. English translation: Foerster H. von & Broecker M. S. (2015) Part of the world: Fractals of ethics – A drama in three acts. CreateSpace Independent Publishing Platform.
- Glasersfeld E. von (1995) Radical constructivism: A way of knowing and learning. Falmer Press, London. ► <https://cepa.info/1462>
- Maturana H. & Pörksen B. (2018) Vom Sein zum Tun: Die Ursprünge der Biologie der Erkenntnis. Carl Auer, Heidelberg. Originally published in 2002. English translation: Maturana H. & Poerksen B. (2004) From being to doing: The origins of the biology of cognition. Carl Auer, Heidelberg.
- Mitterer J. (2011) Das Jenseits der Philosophie: Wider das dualistische Erkenntnisprinzip [The beyond of philosophy: Against the dualistic principle of cognition]. Second edition. Velbruck Wissenschaft, Weilerswist. Originally published in 1992.
- Nassehi A. (2008) Die Zeit der Gesellschaft: Auf dem Weg zu einer soziologischen Theorie der Zeit [The time of society: Towards a sociological theory of time]. Second edition. VS Verlag für Sozialwissenschaften, Wiesbaden. Originally published in 1993.
- Pörksen B. & Schulz von Thun F. (2020) Die Kunst des Miteinander-Redens. Über den Dialog in Gesellschaft und Politik [The art of talking to one another: About dialogue in society and politics]. Carl Hanser, Munich.
- Riegler A. & Weber S. (eds.) (2010) Die Dritte Philosophie: Kritische Beiträge zu Josef Mitterers Non-Dualismus [The third philosophy: Critical contributions to Josef Mitterer's non-dualism]. Velbrück Wissenschaft, Weilerswist.
- Schmidt S. J. (2010) Radical constructivism: A tool, not a super theory! Constructivist Foundations 6(1): 6–11. ► <http://constructivist.info/6/1/006>

Jonas Maria Hoff studied Theology and German Studies at the Universities of Bonn and Salzburg. After his studies, he spent a research stay at KU Leuven, where he started working on his PhD project. From 2019 to 2020 he worked in the Secretariat of the German Bishops' Conference. Currently he is a research associate in the department of Fundamental Theology at the University of Bonn. His research project deals with the theological relevance of RC.

RECEIVED: 20 OCTOBER 2020

REVISED: 28 SEPTEMBER 2021

ACCEPTED: 4 OCTOBER 2021