ERNST VON GLASERSFELD’S RADICAL CONSTRUCTIVISM AND TRUTH AS DISCLOSURE
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Abstract. In this essay Clarence Joldersma explores radical constructivism through the work of its most well-known advocate, Ernst von Glasersfeld, who combines a sophisticated philosophical discussion of knowledge and truth with educational practices. Joldersma uses Joseph Rouse’s work in philosophy of science to criticize the antirealism inherent in radical constructivism, emphasizing that Rouse’s Heideggerian critique differs from the standard realist defense of modernist epistemology. Next, Joldersma develops an alternative conception of truth, in terms of disclosure, based on Lambert Zuidervaart’s work in aesthetics. Joldersma concludes by arguing that this notion of truth avoids the pitfalls of both realism and antirealism, giving educational theorists a way forward to accept some of the major insights of constructivism with respect to learning and teaching without having to relinquish a robust notion of truth.

Constructivism in education, which spans learning theory and epistemology, typically depicts learners as actively constructing their own knowledge, either individually or socially.1 Constructivism, which comes in various forms,2 continues to influence content areas such as math and science education as well as foundation areas such as educational psychology.3 It is a contested view, with advocates suggesting that it is a better framework for effective education, and critics countering that it is relativistic with respect to truth.4

In this essay I develop a novel approach to truth in addressing constructivism’s relativism. In the process, I will agree with constructivist criticisms of traditional

3. For constructivism’s influence in the area of math, see, for example, Anoop Gupta, “Constructivism and Peer Collaboration in Elementary Mathematics Education: The Connection to Epistemology,” Eurasia Journal of Mathematics, Science and Technology Education 4, no. 4 (2008): 381–386; in the area of science, see, for example, Andreas Quale, Radical Constructivism: A Relativist Epistemic Approach to Science Education (Rotterdam, Netherlands: Sense Publishers, 2008); and in the area of psychology, see, for example, Greg S. Goodman, Educational Psychology: An Application of Critical Constructivism (New York: Peter Lang, 2008).
epistemologies and their correspondence theories of truth. However, I will also agree with traditional criticisms concerning constructivism’s relativism. Maintaining these two critiques requires developing a different understanding of truth. The alternative sketch conceptualizes truth in terms of disclosure, based on the recent work of two philosophers, Joseph Rouse and Lambert Zuidervaart. I believe that this notion of truth gives educational theorists a way forward to accept some of the major educational insights of constructivism without having to relinquish a robust notion of truth.

Radical Constructivism

There are many versions of constructivism, and even categorizing them is difficult, but some self-identified types include cognitive, critical, social, and radical. Rather than attempting to cover this rather diverse waterfront, I will explore what is arguably its most extreme version, radical constructivism, and limit that examination to the work of its most well-known advocate, Ernst von Glasersfeld. Although there are other thoughtful radical constructivists, his analysis is the most well known, both for his philosophical discussions of epistemology and his elaborations of innovative educational practices.

Von Glasersfeld advocates teaching practices that encourage the learner to be an active participant in the learning process. He believes that learning, a conceptual activity, requires action by the learner, including reflection, verbalizing, and conversation. Although he recognizes memorization as a form of learning, he wishes to draw our attention to the activity of conceptualization central to learning. Knowledge, he argues, cannot be transferred from teacher to

5. See Phillips, “The Good, the Bad, and the Ugly.”

6. On cognitive constructivism, see, for example, Barry J. Wadsworth, Piaget’s Theory of Cognitive and Affective Development: Foundations of Constructivism, 5th ed. (Boston: Allyn and Bacon, 2003); on critical constructivism, see, for example, Joe L. Kincheloe, Critical Constructivism Primer (New York: Peter Lang, 2005); on social constructivism, see, for example, Paul Ernest, Social Constructivism as a Philosophy of Mathematics (Albany: State University of New York Press, 1998); and on radical constructivism, see, for example, Quale, Radical Constructivism: A Relativist Epistemic Approach to Science Education.


student simply by teachers putting it into words and students receiving those words. Instead, knowledge develops internally, by means of learners’ cognitive self-organization, where they transcend particular conceptual structures through reorganization.\(^{10}\) This often requires “presenting students with situations in which their habitual thinking fails,” thereby creating settings in which the “student’s network of explanatory concepts clearly turns out to be unsatisfactory.”\(^{11}\) The student’s current conceptual patterns are called up short by the situation, as devised by the teacher, so that new thoughts can be initiated. In doing so, the teacher does not transfer knowledge to the students, but creates opportunities for them to reconceptualize their experiences, thereby constructing their own knowledge.

In one of his essays, von Glasersfeld has summarized his approach to pedagogy in five points: (1) teaching involves creating opportunities for students to trigger their own thinking; (2) teachers not only need to be familiar with the curricular content, but they also must have available a repertoire of didactic situations in which such conceptual content can be naturally built up in a way that sparks the students’ natural interests; (3) teachers need to realize that students’ mistakes are not wrong as such, but are predictable solutions on the way to more adequate conceptualization; (4) teachers need to understand that specialized words in academic disciplines do not have the same meaning for a student as they do for the expert, and teachers must have an idea of the students’ present concepts, ideas, and theories; and (5) teachers must realize that the formation of concepts requires reflection, something accomplished by conversations among students and with the teacher.\(^{12}\)

Von Glasersfeld’s approach to teaching is innovative and inviting. His ideas enhance the role of the teacher in education and give a central place to the student in the learning process. In addition, they help educators move away from content-driven instruction to instruction that models the student as an active learner. It is innovative to explore how students see problems and to imagine their possible paths toward conceptual resolutions. It is helpful to get beyond judging student work in terms of right or wrong and to move toward understanding how students come to their particular answers in order to discover hitches in their procedures and conceptualizations. It is inviting to provide students with opportunities to understand that it is they themselves that need to discover how things do, or do not, work. Von Glasersfeld does not reduce learning to mere performance by the student, for the student’s understanding is what counts. But neither does he take learning as mere personal opinion about experienced reality. His many suggestions for teachers embody what seems right about teaching, that is, they set


\(^{12}\) Ibid., 10–11.
out an approach that makes central student learning rather than the logic of an academic curriculum or its utilitarian [economic, political] currency.13

Von Glasersfeld’s educational practices are not just practical tips given in a theoretical vacuum. He calls his view “radical” to distinguish it from the position that learning involves construction but does not imply anything about epistemology.14 He argues that his pedagogical insights follow from his theoretical approach to knowledge and truth. Moreover, he situates his theoretical approach between the radical environmentalism of the behaviorists and the radical geneticism of the sociobiologists.15 In contrast to both, he argues that humans have only themselves to thank for the world in which they find themselves. By this he means that “epistemic agents can know nothing but the cognitive structures they themselves have put together.”16 The world in which we find ourselves is a function of those cognitive structures. If we wish to improve our understanding of the world, we must investigate the mental processes that construct those cognitive structures. Echoing Immanuel Kant’s exploration of the function of the mind as a way to understand our experience of the world, von Glasersfeld argues that “radical constructivism maintains — not unlike Kant in his Critique — that the operations by means of which we assemble our experiential world can be explored, and that an awareness of this operating ... can help us do it differently and, perhaps, better.”17

Von Glasersfeld’s epistemological stance can be summarized as the process of making more deliberate the conscious construction of the cognitive structures by which the experiencing subject understands.18 For von Glasersfeld, this centrally involves a critique of the correspondence theory of truth, which depicts knowledge as a relation between cognition and mind-independent reality. He believes this involves the impossible task of comparing one’s cognitive structures to some mind-independent reality, and he argues that “God alone can know the real world, because He knows how and of what He has created it. In contrast, the human


17. Von Glasersfeld, “An Introduction to Radical Constructivism,” 6. In very Kantian language, he goes on to say, “our knowledge can never be interpreted as a picture or representation of that real world [in itself].” For more on Kant’s influence, see also von Glasersfeld, “Cognition, Construction of Knowledge, and Teaching.” 130; Ernst von Glasersfeld, “The Radical Constructivist View of Science,” Foundations of Science 6, no. 1 (2001): 39. It is his Kantian frame that makes von Glasersfeld’ approach different from John Dewey’s view of the student as embodied and interactive with his or her environment.

knower can know only what the human knower has constructed.”¹⁹ The best we can claim, as a human knower, is knowledge of our own mental constructs.

This does not leave us with mere opinion, however, for consciously revising constructs, central to constructivism, is guided by something he calls “fit.”²⁰ Fit involves “explanation, prediction, or control of specific experiences.”²¹ When we successfully explain, predict, and control, our conceptual constructions fit our experiences. In his words, “we form concepts and then we try to fit experiences into them.”²² Fit is not a direct relation between mind and some mind-independent reality, but a relation within the mind, that is, between concepts and experience. It is the idea of fit that von Glasersfeld uses to mark conscious cognition of the world, that is, knowledge. And it is through the relation of fit that knowledge is best characterized, with terms such as “useful, relevant, viable”²³ and as something that determines “what one can and what one cannot do.”²⁴

Fit also suggests a set of constraints, experienced in the first person, as we operate in the world — something von Glasersfeld describes as the idea that “the world is full of obstacles which we do not ourselves deliberately place in our way.”²⁵ Knowledge is a mental construct whose role is to help the individual navigate these constraints successfully by means of a predictable, regular understanding of the world. In place of depicting knowledge as representing a mind-independent world, it is a tool within the world of experience, a set of coherent, noncontradictory conceptualizations that negotiate the experienced obstacles.²⁶ The result is “knowledge [that] we ourselves have found useful and thus viable in our own dealings with experience.”²⁷ The notion of addressing experienced constraints puts a dynamic and practical edge on knowledge construction, where success is associated with particularly organized mental constructs. The world is navigated successfully because the subject has mentally constructed his or her experiences in a particular organizational pattern.

For von Glasersfeld, the crucial insight of constructivism requires locating mental activity within the consciousness of the individual subject. He states that "constructivism necessarily begins with the [intuitively confirmed] assumption that all cognitive activity takes place within the experiential world of a goal-directed consciousness." Any particular activity of mental construction takes place within individual consciousness. Thus central to understanding knowledge production is its location within the individual mind, including its construction of a stable, familiar world by organizing the incoming flow of experience. It follows for von Glasersfeld that "knowledge, no matter how it is defined, is in the heads of persons, and that the thinking subject has no alternative but to construct what he or she knows on the basis of his or her own experience." This epistemological individualism gives rise to his idea that knowledge is relative to each person, involving "constructs that each user has to build up for him- or herself. And because they are individual constructs, one can never say whether or not two people have produced the same construct." Von Glasersfeld clearly holds to a form of relativism, in which different people construct different cognitive structures in their dealings with experience.

The Inadequacy of a Realist Critique of Radical Constructivism

Von Glasersfeld's position on knowledge and truth has been strongly contested by many educational theorists. Although von Glasersfeld appeals to experience in lieu of access to the objective world, Peter Davson-Galle suggests that this is not an adequate substitute. Aharon Aviram goes further, arguing that von Glasersfeld's relativism will ultimately be self-defeating in that it entails denying the existence of objective reality. Although constructivism must embrace the idea of progress in knowledge development in order to constitute a learning theory, William Cobern and Cathleen Loving maintain that von Glasersfeld's denial of a reality beyond an individual's construction blocks the possibility of such improvement. Derek Meyer, more strongly, concludes that this leaves von Glasersfeld with the self-undermining position that knowledge is simply the creation of mental objects, and

cannot exclude fallacies, psychotic states, or hallucinations. These criticisms can be generalized, as Michael Matthews does, as a confusion of knowledge with belief, where knowledge is said to involve evidence-based justifications connecting it to a mind-independent reality, in contrast to beliefs, which are merely individual subjective mental constructs. These criticisms converge on von Glasersfeld’s denial of a correspondence conception of knowledge, which consequently entails a worrying relativism with respect to truth.

These are important criticisms of von Glasersfeld. Because for him knowledge is in the mind of each person, where no two people will build the same cognitive construct, it is difficult to understand how a pernicious relativism can be avoided. Critics such as Matthews and others come to this analysis from the perspective of a correspondence theory of truth and knowledge. Matthews, for example, appeals to the “justified true belief” understanding of knowledge, where knowledge is a belief under particular conditions — namely, that it is true and that the believer has good evidence to make this judgment. Although Matthews is critical of von Glasersfeld, they share a basic assumption: they both frame their thinking about knowledge within what has often been called a representationalist theory of mind. By this I mean an understanding of knowledge as a (mental) proposition about which something is claimed. Matthews claims that it corresponds with a mind-independent reality, whereas von Glasersfeld claims that it does not. The basic difference is not about the centrality of mental states as such, but about the possibility of correspondence. Matthews and the other critics represent the realist position in that regard, and von Glasersfeld’s constructivism is a form of antirealism.

The debate between antirealism and realism is an enduring philosophical controversy — much of it within philosophy of science — regarding knowledge, reality, and the relation between the two. Just as there are many forms of antirealist constructivism, there are a bewildering variety of realisms — including naïve, critical, scientific, theoretical, semantic, metaphysical, comprehensive, referential, and entity realism — as well as conflicts over how to categorize its various versions. We do not need to adjudicate among all of these in order to

37. Ibid.
identify the main critics of von Glasersfeld’s constructivism as realists. These critics are what I will call, generically, representational realists, something that bridges semantic and ontological realism. Semantic realism involves the idea of truth as a correspondence between mental representation and thing, and ontological realism involves the notion of a mind-independent reality with objective, knowable features.\(^{41}\) By representational realism I mean the general position that knowledge is portrayed as representational, usually as justified true belief. Knowledge is thus a particular sort of cognitive, mental representation, specifically, one that is said to bear a correspondence to, and to be caused by, some mind-independent object, which in turn is thought to possess most of the properties and features that are, or can be, portrayed as the content of those representations. Knowledge, on this construal, involves a set of beliefs that are true because they formally correspond with some mind-independent reality, where truth is rightfully claimed because of some justification.\(^{42}\) Thus, a realist such as Matthews frames knowledge as beliefs that have satisfied an “evidence condition.”\(^{43}\) Matthews maintains that this condition creates the correspondence between two extant things, a mental representation and some mind-independent reality, which justifies the claim that the representation is true. Robert Nola points out that the correspondence between a mental representation and some external reality does not need to entail a picturing or some other imitative duplication in the mind of objective reality — a more “minimal notion of correspondence” will suffice, such as a Tarskian “1-to-1” pairing between proposition and reality.\(^{44}\)

I would argue that a realist’s correspondence account of truth, such as that of Matthews and Nola, is not an adequate answer to von Glasersfeld’s relativism — that representational realism is not up to the task. The basic flaw in the correspondence theory is its inability to adequately answer the enduring question of how mental representations can be known to accurately depict mind-independent reality, given that one’s access to such reality is through cognitive processes and products. Radical constructivists such as von Glasersfeld are right to suggest that evidence and justification in the theory are already mind-dependent, and so cannot establish an independent foothold on the objective features of a mind-independent reality. Michael Lynch gives the classical objection to the correspondence theory when he states, “we cannot step outside of our skins and

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\(^{41}\) On this score, Kant was not a realist. Although he might justifiably be construed as acknowledging a mind-independent reality, the thing-in-itself, such reality is not accessible by means of theoretical (pure) cognition; see Desmond Hogan, “How to Know Unknowable Things in Themselves,” \textit{Nous} 43, no. 1 (2009): 49. Similarly, although von Glasersfeld does not deny the existence of a mind-independent reality, he too is not a realist, for he also denies the stronger claim that we can know the thing-in-itself, or that determinate content of our mental representations correspond with particular features of mind-independent reality.


\(^{43}\) Matthews, “Constructivism and Science Education,” 127.

compare our thoughts to the world as it is in itself.”45 To be able to do so, he argues, requires evidence to enter the mind as absolute facts, namely, facts whose contents are not relative to any conceptual scheme. And this would mean having access to something completely outside of our conceptual schemes and having the ability to identify it for what it is rather than in relation to a conceptual scheme. Lynch argues that nothing presents itself in this manner, that there are no schema-independent facts.46 Because of this, he rightly concludes, the correspondence theory falters on the criterion of justification.

I would argue that von Glasersfeld’s constructivism, although innovative, is an inadequate attempt to answer this weakness. It fails because he, in effect, merely replaces a “realist conception of truth with some epistemic surrogate.”47 Raf Vanderstraeten and Gert Biesta argue that constructivism’s “arguments get almost always caught within an old epistemological framework, which constructivism precisely tries to abandon.”48 I would suggest that this applies to von Glasersfeld’s radical constructivism as well. Rather than transcending the problems of realism, he retains too much of the realist’s representationalist framework while attempting to give a different answer, and hence can rightly be accused of having an epistemic surrogate. Von Glasersfeld’s problem is not that he is too removed from semantic realism, but that he has not adequately left it behind. Although he wishes to replace the correspondence theory of truth with one of fit, the language of subjective construction means that he continues to accept representationalism’s basic framework as a way to think about the cognizing subject in its relation to the world. His modification is to advocate for an epistemic substitute, replacing correspondence with fit, which he argues does not require access to mind-independent reality.

In short, both von Glasersfeld’s constructivist antirealism and his critics’ semantic realism remain framed by what Jürgen Habermas calls a philosophy of consciousness.49 This is the idea that our primary contact with the world is as a conscious, individual, cognizing subject — a mind — that stands in cognitive

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46. Lynch agrees that some facts might appear to be absolute, independent of all conceptual schema, but maintains that this is an illusion. Instead, these are what he calls virtual absolutes, because they fit within every conceptual scheme. His argument is that for virtual absolutes, there is always an appeal to a conceptual scheme in order to understand the fact [proposition], whereas for absolute facts, no such appeal is needed, as they are understandable outside of all conceptual schemes. In other words, virtual absolutes always already require concepts to be understood, unlike absolute facts.


relation to a world. The argument between realism and antirealism is in-house, between correspondence or fit, while both remain framed in terms of consciousness and cognition. Representational realists and radical constructivists dispute whether the conscious cognizing mind can access the mind-independent world, or whether it has to make do with conscious experience. What is taken for granted in both is the construal of the human subject as primarily a conscious cognizing mind. Because von Glasersfeld does not question this depiction of the subject, his stance on the relation between world and mind becomes relativist, for he believes that the cognizing mind is not capable of accessing mind-independent reality. The relativism associated with his radical constructivism is a function of remaining within a philosophy of consciousness.

Overcoming relativism without falling back into the problems of representational realism requires getting beyond the philosophy of consciousness that frames it. This requires an expanded understanding of the human subject and its relation to the world. Rather than depicting the subject exclusively as a conscious mind, it requires understanding the subject as an embodied being. On this view, cognition is always already embodied, where thought emerges from our bodily capacities and actions in the world. It is on this expanded understanding of the human subject that a more robust notion of truth can be developed. To build my case, I will first give my own critique of von Glasersfeld’s constructivist antirealism, based on the work of the philosopher of science Joseph Rouse. Then I will articulate my alternative understanding of truth, based on work of the aesthetics philosopher Lambert Zuidervaart.

Knowledge Through Embodied Practices in the World

Joseph Rouse holds a view of (scientific) knowledge that follows Heideggerian lines, where “science [is] a way of acting on the world, rather than a way of observing and describing it.” This is an attractive alternative for knowledge development, one that can get us beyond a philosophy of consciousness. It is from this vantage point that Rouse provides an important critique of both realism and antirealism. Rouse’s critique of realism centers on making problematic the connection between the embodied practical success of scientists acting on the world and the validity of the correspondence theory, where realists too quickly equate “practical validity with a realist construal of truth as correspondence” (KP, 141). But the latter is a claim about the way that scientific theories, and more generally beliefs, refer to mind-independent entities, namely,
that they "have the characteristics the theories ascribe to them" (KP, 127). For a realist, truth is thus not about practical validity, but about the accuracy of a conceptual picture. And this relies not only on being able to neatly distinguish between observational elements and conceptual ones, but also on being able to tell a convincing story about how observational data connect to real properties of the mind-independent objects. But both of these are problematic. Rouse’s central insight is that these two problems do not really matter for science. Realists misconstrue science as a theory-generating enterprise rather than a practical engagement with the world. Rouse’s criticism of realism is that it remains, in my terms, framed by a philosophy of consciousness.

As we have seen, von Glasersfeld readily accepts such practical validity without a correspondence theory, relying instead on his constructivist notion of fit. Thus his reminder that "constructivism is definitely antirealist" should come as no surprise. But von Glasersfeld does not take this far enough, for he maintains that although experience constrains a subject’s mental representation of that world, we have access to that experience only through those cognitive constructions. This accords with Rouse’s depiction of constructivists as antirealists, for he argues that central is their denial of “sharp distinctions between observational and theoretical statements” (KP, 128). But that denial is an “in-house” argument according to Rouse, one that continues to frame the problem as set by the realists. Rouse’s criticism of constructivist antirealism comes from a different angle — a Heideggerian one. He argues that, prior to conscious experience (for example, observing or theorizing), “we are already engaged with the world in practical activity, and the world simply is what we are involved with” (KP, 143). In my terms, von Glasersfeld’s mistake is that his view, like that of the realists, is also still framed by a philosophy of consciousness. He too supposes no access to the world except by means of conscious experiences, whereas Rouse argues for embodied interaction with the world. For Rouse the world is not first of all that which is consciously experienced and represented by a mind, but is first of all that with which the bodily agent interacts. Thus von Glasersfeld’s notion of constraints is too subjectivistic and intellectualistic, for it relies exclusively on conscious experience and cognitive representation as the way to understand human interaction with the world. Rouse’s corrective means that we can base our knowledge in our embodied practices in the world, not merely on consciously experienced constraints and mental constructions. Instead of connecting what there is with what can be mentally constructed, Rouse connects it with what we can do as embodied beings (KP, 145). Rouse is connecting reality not with theoretical constraints (that is, experienced reality constraining conceptual constructions) but with our ordinary, everyday, bodily being in the world; he is arguing that our practical dealings with the world come before

54. Moreover, Shaun Gallagher maintains that there is growing evidence that “the structural and functional design of the body shapes the way that we experience the world.” Shaun Gallagher, “Intersubjectivity in Perception,” Continental Philosophy Review 41, no. 2 (2008): 164.
conscious conceptualization of it ($KP$, 155). Our purposeful, embodied interaction with the world deflates the need to speak merely negatively of the world as a set of consciously experienced constraints, as von Glasersfeld does. By contrast, Rouse posits a way of being in the world that is prior to (self) consciousness, whereas both the representational realists and constructivist antirealists have the conscious mind (subject) as the starting point for person-world interaction. For Rouse, the existence of a real world is already implied in our practical, embodied dealings with it, thus it is real before we might consciously and cognitively represent it or theoretically construct a picture of it.

As previously noted, on Rouse’s view, we do not first of all cognitively construct the world. The world that manifests itself to us in our practical dealings provides an enduring context for any conceptualization. In his words, “Instead of saying that we construct the way the world is, we could just as well say that the world shapes the meaning of our words and deeds” ($KP$, 157).55 For this to work, our interactions with the world must come prior to the dichotomization between conscious subject and represented or constructed object. Active, bodily movement in interacting with the world provides the enduring context for our understanding of the world.56 The notion of interpretation can be thought of as indicating such a context. Rouse argues, “interpretation does not make the world the way it is; it allows it to show itself the way it is” ($KP$, 159). By this he means that interpretation plays the role of understanding the world with which we are already practically involved and in which we already live and move. As such, interpretation is not construction. Precisely because our embodied, interactive practices in the world are prior to our conceptualizations, we can portray the latter as interpretations rather than as constructions.

As I have noted previously, Rouse moves the discussion forward by pointing out that the quarrel between the representational realists and the constructivist antirealists, although significant, is an in-house one that remains embedded in a philosophy of consciousness. More particularly, Rouse alerts us to the fact that constructivism, too, still strongly relies on a position in which mind and world are already dichotomized into conscious subject and cognized object. Although von Glasersfeld wishes to have the cognitive activity of construction replace realism’s representationalist spectator epistemology, his notion of fit ends up being, as Rouse might say, a kind of realism with scruples ($KP$, 147), where the constraints of experience on construction function as observable entities within consciousness. Rouse, by contrast, advocates a way of being in the world that gives us a better context for thinking about interpretation, alleviating some of the burden that von Glasersfeld’s constructivism places on cognitive activity in terms of constructing the world. In fact, Rouse’s analysis leaves us with the more manageable task

55. See also Johnson, The Meaning of the Body, 10.

of viewing understanding not as construction but as interpretation. This more hermeneutic view of understanding, because it involves an embodied interaction with the world, will alleviate the need to choose between representational realism and von Glasersfeld’s antirealism, leaving us with the possibility of a more robust understanding of truth.

But Rouse does not provide us with a substantive account of truth. His notion is limited to something he calls “a deflationary account of truth” (KP, 142). He accepts a deflated version of Alfred Tarski’s semantic notion of the truth, but acknowledges that, as a function of ordinary sentences, it “is almost never at issue in debates over realism” (KP, 142). Truth, he argues, is something that is applied only to sentences in a natural language, such as English or Dutch, and even then it does not add anything beyond the assertion itself. Instead, he argues that linguistic practices constituting sentence formation are situated in a “field of meaningful interaction . . . [that] allows things to show themselves as they are in a variety of respects” (KP, 160). Here we have the idea of disclosure, allowing things to show themselves. Rouse does not develop this further with respect to truth, however. Yet I believe that the Heideggerian insight of disclosure is key in developing a more robust conception of truth.

**Truth as Disclosure**

The Greek word *aletheia* connotes a state of affairs that discloses itself as it is. It is this idea that Martin Heidegger appropriated for his understanding of truth as disclosedness. When something is disclosed, it is not there as a pure given, but rather as something that could be concealed or suppressed. As a result, disclosure has a normative function with respect to knowledge. It is these two features — disclosedness and normativity — that I wish to draw on for an alternative notion of truth. To elaborate this idea and develop these two dimensions, I will build on the recent work of Lambert Zuidervaart, who has developed a robust notion of truth by building on Heidegger’s account. Drawing on Heidegger’s concept of *understanding*, one of the three primordial modes of being in the world, Zuidervaart elaborates his own idea of the notion of disclosure. For Heidegger, understanding is a way that humans are in the world, which he took as one mode of disclosedness. Central to being human is holding oneself open in one’s relation to oneself, to other human beings, and to the world.

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57. According to Rouse, a substantive truth theory [such as correspondence, coherence, or pragmatic] is one that not only imputes truth [to, say, propositions or representations] but also theorizes the underlying character of truth [say, as dependent on a common source of justification, such as the senses]. See Joseph Rouse, *Engaging Science: How to Understand Its Practices Philosophically* (Ithaca, New York: Cornell University Press, 1996), 196.


59. Lambert Zuidervaart, *Artistic Truth: Aesthetics, Discourse, and Imaginative Disclosure* (Cambridge: Cambridge University Press, 2004), 79. This work will be cited in the text as *AT* for all subsequent references.
Disclosedness through understanding involves what Heidegger called projections of one’s own potentials and possibilities. Zuidervaart describes the projections of understanding as prepredicative, which means that they are not explicitly stated or consciously developed. Moreover, I would argue, because projections are not conscious constructions, they are best understood as constituting the way humans are bodily in the world. Understanding as disclosure is closely connected to embodied presence.

Zuidervaart argues that understanding involves an encounter with the world. To be human is to be open to the world, and through this openness things can be encountered as uncovered. Moreover, understanding involves interpreting the purposes for which an entity exists, doing so by elaborating its embeddedness in a purposeful whole (AT, 81). Thus an entity is disclosed by understanding its interrelatedness with other entities. I would argue that this practice depends on construing the knower as an embodied being, an engaged agent, who is continually open to the world. On that construal, understanding is not a mind constructing a mental representation but an embodied openness to the world, encountering entities as uncovered in their interrelatedness.

On the other side, the notion of disclosedness means that entities are in the open, standing in the disclosur e associated with understanding (AT, 106). Zuidervaart argues that in its discoveredness the entity is available in many ways. In the context of a discussion about constructivism, of special interest is Zuidervaart’s claim that one of the ways an entity becomes available is as accessibility for assertions (say, in propositions). For Heidegger, an assertion involves an abstraction from the multiplicity of relations to the purposeful whole. Zuidervaart goes beyond this view, arguing that not only would it be fair to say that the asserted entity allows itself to be asserted, but that the asserted entity “calls for the assertion” (AT, 89). The language of availability, allowance, and call indicates, at minimum, that the asserted is a not a construction by human minds, but instead relies on a kind of disclosure of the entity having to do with its assertability. Zuidervaart calls this particular mode of being available an entity’s “predicative availability” (AT, 88). By this he means that entities are available in many ways for embodied human practices, one of which is making assertions; that is, entities are available for humans to make assertions about.

60. There are three projections involved in understanding, which Heidegger labeled fore-having, foresight, and fore-conception, and which Zuidervaart calls prepossession, preview, and preconception.


Of interest here with respect to constructivism is the status of assertions for Zuidervaart. If someone makes an assertion about something, he or she does not intentionally construct the content of that which is asserted. We do not impose our assertions on entities and we do not construct the identity of those entities as such. That is, what is asserted is not a mental representation, or a mental state (a state of consciousness) with meaning or content \((AT, 88)\). The asserted is the entity itself, in a particular mode of disclosure. Zuidervaart’s formulation changes the status of propositions precisely because it is an embodied human making the assertion about the world. Instead of cognitively constructing meaning, an assertor lets the asserted stand out as itself in a certain way of its being uncovered. Predicative availability is one way in which entities in the world engage us. It is this that makes asserting an interpretive practice rather than one of construction. That is, asserting something is one response to disclosure, to the way entities stand out in the open.

Assertion is only one kind of human activity in a whole range of practices that characterize the embodied way that humans are in the world. For example, besides making assertions, humans manufacture artifacts, organize communities, and govern political entities. Zuidervaart argues for a variety of human practices in order to emphasize that asserting is not a privileged way of being in the world. And this is important for him because he wishes to argue against privileging a notion of truth associated with assertions, something that the philosophical tradition does in its correspondence theory of truth — and that von Glasersfeld agrees is the only plausible definition in order to reject it. Yet, Zuidervaart’s rejection of privileging a propositional notion of truth does not mean he is throwing out the truth of assertions. Instead, he wishes to embed a notion of asserted truth in a larger, more comprehensive theory of truth. In all cases, including asserting, Zuidervaart wishes to connect truth with disclosedness. As such, he says, we cannot make propositional validity the key to a general theory of truth.

Zuidervaart instead argues for a broad construal of truth as life-giving disclosure \((AT, 96)\). This requires, he suggests, a variety of truth-marking principles, each of which discloses something normative associated with a particular set of human practices. Norms are principles that obtain or hold for sets of social practices, principles that a group of people hold jointly. Zuidervaart suggests principles such as resourcefulness for the practices of production, solidarity for the practices of community building, justice for the practices of governing, as well as correctness for the practices of asserting — these are multiple forms of truth as disclosure. In other words, “being in the truth” requires faithfulness

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65. It is this that makes Zuidervaart’s notion of truth, also for propositions, more substantive than Rouse’s deflationary account. Rouse restricts truth to sentences rather than embedding it in a larger understanding of truth as disclosure.
to these sorts of principles. What makes each of them true is that it is life-giving, namely, leading to human and other creaturely flourishing. Thus fidelity to certain principles would shape these human practices toward societal and earthly well-being. For example, being faithful to the principle of justice would shape social practices and institutions in a way that facilitates increases in equity, including better distribution of resources and enhanced security for currently marginalized populations. Faithfulness to the principle of stewardship would shape particular social practices toward the reduction of conspicuous consumption and environmental degradation. Ultimately, I would suggest, human flourishing will involve living in such a way that not only enables all humans to live meaningful lives, with adequate resources, but does so in a manner that will ensure that future generations are able to live meaningfully as well. The life-giving disclosure through such faithfulness depends, according to Zuidervaart, on how well those social practices align with these truth-marking principles.

This gets us beyond the constructivist critique of truth as correspondence associated with the philosophy of consciousness. For Zuidervaart, truth is “a calling that comes to us from beyond ourselves and beyond the entities and people with which we have dealings” (AT, 108). Truth is a process of life-giving disclosure that involves an enigmatic call from beyond ourselves, others, and the entities that populate the world. The call involves an unchosen responsibility toward doing what is right. In responding faithfully to the principles, we succumb to a felt responsibility, and thus we implicitly acknowledge that the call comes from beyond ourselves without having to be clear about from where it comes. This gets us beyond the notion that in the development of knowledge there are no truth claims, but instead only matters of fit. Von Glasersfeld focuses attention on the mental states of individual conscious subjects instead of something beyond ourselves. Zuidervaart’s theory of truth turns us back to something outside ourselves and our dealings in the world.

Part of what makes Zuidervaart’s idea appealing is its normative dimension. For him, truth as a call from beyond ourselves gives rise to the possibility of intersubjective agreement, that is, something people hold in common. Thus, succumbing to the call of the principle of correctness gives rise to possible intersubjective agreement about assertions. And fidelity to the principle of solidarity makes possible intersubjective agreement about how to live together in community. At the same time, for Zuidervaart, truth is also the call that itself pulls people together, holding them in a relation of commonality (AT, 108). Thus, being held by the principles of solidarity and correctness will itself bind people together. This double hold — actively coming together in agreement and passively being held together by mutuality — is key for Zuidervaart’s notion of truth as normative, specifically, as life-giving: “What helps distinguish true disclosure

from false is life-promoting and life-sustaining fidelity to principles that people hold in common and that hold them in common” \(\text{\textit{AT}}, 207\). Fidelity to truth-marking principles implies faithfulness to that which will open avenues that allow humans and other creatures to flourish.

However, this is not to say that truth exists, as it were, by itself, in some specialized transcendent [or metaphysical] realm. Instead, for Zuidervaart it occurs in conjunction with the opening that constitutes disclosure. He states that truth “is a calling that urges upon us the necessity and desirability of practices and institutions that are attuned to that which sustains validity” \(\text{\textit{AT}}, 108\). Truth involves the felt responsibility for engaging in social practices that sustain human flourishing, according to Zuidervaart. Truth is not something that transcends time and place but rather something within the temporal-spatial world that directs human practices toward a life-giving orientation. But in order to avoid reducing truth to being a merely human response, he distinguishes between disclosure and validity — validity is our human response to truth as disclosure. This distinction allows Zuidervaart to assign responsibility to humans for the difference between right actions and unjust ones, sustainable practices and environmentally damaging ones, correct assertions and mistaken ones \(\text{\textit{AT}}, 107\). He argues, “the facts that entities resist and exceed our grasp [what Heidegger called ‘refusal’] and that entities present themselves as other than they are [what Heidegger called ‘obstructing’] are humbling reminders of human finitude and fallibility” \(\text{\textit{AT}}, 115\).

Humans are the source of misunderstanding and error in their interpreting of that which is disclosed. Thus the validity of the knowledge claims is on the human side of things, in response to disclosure. Zuidervaart cautions, “all the human practices and institutions in the world, no matter how well they support discovery, understanding, reorientation, and right conduct, cannot guarantee that what needs to be disclosed is disclosed” \(\text{\textit{AT}}, 115\). The knowledge constituted by particular human social practices, whether scientific or social or political, are human responses attempting to interpret that which is disclosed.

**Conclusion**

Zuidervaart’s notion of truth as life-giving disclosure, by distinguishing it from validity and human practice, is a good alternative to constructivism’s philosophy of consciousness. It is the latter that forces von Glasersfeld to abandon a notion of truth and retreat to a notion of fit in order to describe the knowledge-world relation. By contrast, Zuidervaart’s notion of truth as disclosure follows from the idea that humans are always already bodily in the world, and it is distinct from the conception of truth as something that needs to be established through argumentation about how the conscious mind might access mind-independent reality. Thus, bodily being in the world allows for Zuidervaart’s notion of truth as something that comes as a call from beyond humans, as life-giving disclosure in the world. This approach still gives much responsibility to humans in the

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development of knowledge, for, as previously stated, validity is not the same as disclosure. For example, a particular, asserted claim — say, within biology — may be valid according to certain commonly held criteria and yet not settle once-and-for-all questions of disclosure. What appears to be disclosed — say, the discovery of a new structure in the cell’s cytoplasm — might well be beyond our present grasp, or manifest itself in ways that in hindsight were misleading. The roots of such nondisclosures are not the entities themselves, but the finiteness of the human grasp and the fallibility of human interpretation. Put differently, invalid claims or practices are not the fault of the world, but that of human finiteness and fallibility, as von Glasersfeld also would assert. The responsibility for getting things wrong epistemologically falls on the human side of things. Because humans can make mistakes, overreach, and go astray in their engagement with the world, there is a difference between the call of truth in disclosure and the validity of human responses.

Zuidervaart’s position thus does not undermine von Glasersfeld’s educational insights. Instead, I would suggest that Zuidervaart’s approach can actually form a better conceptual ground for von Glasersfeld’s constructivist learning practices than his own antirealist epistemology. Zuidervaart’s emphasis on human responsibility gives conceptual grounding for von Glasersfeld’s insistence that students themselves must be active in knowledge development. Yet Zuidervaart’s argument for responsibility in the human response to disclosure, connected to the Rousean idea that such responses involve embodied engagement in the world, alleviates the need to interpret student learning as cognitively constructing knowledge in the head. Rather, learning involves actively responding in the context of the truth-marking principles that call the student to, say, correctness in assertions or solidarity in community. At the same time, Zuidervaart’s notion of validity, recognizing the finiteness and fallibility of human practices, gives a natural place to von Glasersfeld’s emphasis that students can and do make mistakes in the process of developing knowledge.

But more robustly, Zuidervaart’s emphasis on the life-giving character of truth as disclosure gives a normative orientation to education itself, thereby situating von Glasersfeld’s insights into teaching and learning within education as a normative practice. We might think of education as a site of particular social practices that responds to a variety of truth-marking principles. The validity of education, in its particular response to truth as life-giving disclosure, might require actively engaging students in multiple projects, ones in which they jointly respond to the call of resourcefulness in production, solidarity in community, justice in governance, as well as correctness in assertion. That is, we might view education’s task as taking up the call to engage students in many ways of being in truth, where teaching might be construed as an invitation to fidelity to these sorts of principles. What would make them valid is the evidence of their life-giving

orientation. Teaching might then involve questioning, opening, unsettling, and more generally transforming students’ engagement with the world toward such an orientation. This would likely employ many of von Glasersfeld’s educational insights in order to lead students toward practices that foster personal, other human, and other creaturely flourishing. Thus education’s fidelity to normative principles could shape the next generation’s practices toward human flourishing. Since principles for Zuidervaart are themselves historically learned, contested, formulated, ignored, and misunderstood, and truth is thus historical, education would also be the site for discourse and debate about the principles themselves. Co-opting Zuidervaart’s insight, normative education could involve a “process of life-giving disclosure marked by human fidelity, to which a differentiated array of cultural practices and products . . . can contribute in distinct and indispensible ways” ([AT], 207). The principled character of such education is what would make it normative. And the necessary involvement of the student’s active participation is what makes it sympathetic to many of the educational insights of constructivism.

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69. Zuidervaart, “Truth Matters,” 158. It is this that makes truth a dynamic correlation, something that has no counterpart in the correspondence theory.

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