

tion rather than being an accumulation of accomplished structures” (Piaget 1968, pp. 57–58).

16 Saalman seems to think that “usefulness” (§21) is the sole criterion of viability. Consequently he ignores the feedback model (which is essential to autopoiesis as well as RC) and the inherent assumption of goals. Instead he presents the actions of an organism as though they had to be *caused* by an “actual reality” rather than by “situations ... purely constructed on a fictitious basis.” Actually, RC holds that the construction of experiential reality is “invented,” but not “fictitious” in the random sense. It is always hemmed in by constraints; and experiential reality is just as unforgiving as any ontic reality you could imagine.

17 The three paragraphs 22–24 seem to be focused on autopoiesis, but they reveal a flaw that pertains to all of Saalman’s arguments. He seems unwilling to accept the notion of a reality of which there is no evidence except the fact that certain ways of acting and/or thinking do not succeed. The failures throw no light on the nature of the obstacle, because they can be characterized and described only negatively in terms of what does not work. There is no way of gaining insights about obstacles from malfunctions, even “specifically structured malfunctions,” because any specification is necessarily in terms abstracted from experience and therefore has no purchase on reality. Needless to say, this limitation pertains also to the theory of evolution.

18 In his remarks on communication and interaction with others (§§25, 26), Saalman again ignores that in RC the construction of “others” is no more ad lib or random than the edge of the coffee table against which I so often knock my shin. Consequently, what I conjecture to be their thinking, intentions, and meaning is not arbitrary but subject to continual tests of viability.

19 The assumption of an “inter-individual conformity of the constructs” is the starting point of any consideration of how others think. Differences, however, are constantly introduced by the fact that predictions based on this conformity turn out to be wrong.

20 There is the peculiar notion that the brain thinks and has a point of view (§27). I would say that the brain is a physiologist’s construct and, on being observed, shows changes of electrical charge in single neurons. A neuro-

logist may consider this to be correlated with a subject’s activity of thinking, but hardly with a particular thought, let alone a thought referring to itself.

21 The argument of “plausibility” used in the three paragraphs 28–30 disregards the fact that the scale of plausibility to which it tacitly refers is derived from experience, that is, from the reality we have constructed, not from a reality presumed to be independent of our ways of perceiving and conceiving. I remember explaining this in my review (Glaserfeld 1993a) of the 1991 book written by Nüse et al.

“Once more into the breach...”¹

Dewey I. Dykstra, Jr.

Boise State University
<ddykstra@boisestate.edu>

Introduction

1 When a person’s understanding of a position does not fit the position in substantial ways, that person’s attempts to logically demolish that position uniformly fail. The real challenge is to find a flaw in radical constructivism (RC) from its own initial assumptions or some failure of these initial assumptions (Dykstra 2007).

The adjective “radical”:

A problem in language

2 Gernot Saalman uses the term “radical” in the sense of something “extreme.” For example, in §1, he contrasts “radical” constructivists with “moderate” constructivists. This adjectival usage of the word “radical” as “extreme” is a slang usage from the American sub-culture called “Surfers” which originated in the late 1950s or early 1960s. “Radical,” in their slang means: “At or exceeding limits of control or safety...” (Oxford English Dictionary OED 2007).

3 While this meaning of the word “radical” may be the most frequent use of the word in U.S. English today, it is not the sense in which Ernst von Glasersfeld applies the term to categorize different types of constructivism. “Radical” as “extreme” occurs in the OED as the *last* of a long list of usages. All widely applied well before the existence of the Surfer culture in the U.S., these other adjectival uses

are variations of the idea: “Going to the root or origin; touching or acting upon what is essential and fundamental; thorough” (OED, Entry 3.a). For von Glasersfeld, “radical” distinguishes the idea of constructivism that he intends from other notions, whether these notions are labeled constructivist or not. From the target article, Saalman does not seem to realize that von Glasersfeld is using the sense of going to the root or origin of and acting on what he believes is essential or fundamental (Glaserfeld 1975, 1985).

The hegemony of the realist perspective

4 There are many cases in which authors criticize RC from realist assumptions about the nature of human knowledge. Saalman seems to belong to them. As von Glasersfeld has pointed out in many publications (e.g., Glasersfeld 1975, 1985, 1991, 1995a), RC starts with assumptions about the nature of knowledge that are fundamentally different from those of realism. The initial assumptions of realism seem to include the notion that the result of our thinking can be an increasingly accurate picture or depiction of a mind-independent reality (MIR), as expressed by de la Torre & Zamorano (2001): “[W]e postulate the objective existence of physical reality that can be known to our minds...with an ever growing precision by the subtle play of theory and experiment.” In RC the corresponding assumption is that the result of our thinking is explanations of experience that fit the experiences for which the explanation was constructed. Regardless of the degree of fit, such explanations cannot be claimed to match a MIR, since they cannot be compared to such a thing itself.

5 Hence, the radical constructivist acknowledges the challenge of the Skeptics (cf. von Glasersfeld’s 1992). The realist appears either not to acknowledge it or to be unaware of it. For Saalman the challenge is exaggerated. He concludes that: “It is merely not possible to know how appropriate human cognition actually is” (§15). The realist backed into this corner seems to hang on to a thread, hoping desperately that somehow, just as a stopped clock is “correct” twice a day, the result of our cognition *might* sometime match an “outside reality.” How would we know when these two times a day are, if we have no access to a “real” clock in that “outside

reality?" The realists' own initial assumption appears to mask the challenge of the Skeptics from them.

6 In §1, Saalmann has translated a passage of von Glasersfeld's that was originally in German as: "Instead of an iconic relation of conformance or reflectance we can apply the relation of matching." There is no example in any article in English by von Glasersfeld in which he uses the word "matching" in such a context. Von Glasersfeld goes out of his way to point out that he uses the word "fit" quite pointedly and words such as matching are not consistent with the idea he intends.² Is it possible that Saalmann made this error because he translated the original passage as a realist and not from an understanding of RC?

7 Later in the same paragraph, Saalmann suggests that while MIR and constructed truth may have different specific properties, the two are nonetheless covariate with each other. This is but a restatement of the realist *assumption*. One need only point out from the history of explanations that features of accepted explanations are covariate with sets of specific experiences with the phenomena. But when these sets of experiences have expanded, our explanations are no longer covariate with them. This disequilibrium between explanation and experience has moved us to construct new explanations. We must ask: "How would we know when there are no more expansions of the set of experiences to be explained?"

8 Still, the challenge of the Skeptics looms. How do we know that covariance with experiences also means covariance with an MIR, itself? In life we never get to see Nüse's (1995) fuel tank, how much is in it, or indeed that it is a fuel tank. We *only* get to see the gauge. This is the point of the Skeptics' challenge. Laboring under the hegemony of realism Saalmann *assumes* the fuel tank can be known. He appears to understand neither the nature of the Skeptics' challenge nor RC.

9 In §8, Saalmann refers to "perception deceptions." Such a characterization also exists nowhere in the English writings of von Glasersfeld. The possibility of a perception deception depends on the capacity to know a MIR itself. The capacity to detect a perception deception is implied by initial assumptions of realism. Such a capacity is specifically not possible from the initial assumptions in RC. Hence, the concept of perception decep-

tion is not one that makes any sense in RC. Here again, we have evidence of Saalmann working from initial assumptions of realism to formulate his critique rather than the initial assumptions of RC. By abduction, not understanding the distinction between these sets of assumptions means not understanding RC.

10 RC is accused of ambiguity (§9) and arbitrariness (§15). One notices in §11, that Saalmann concludes that a consequence of RC is that "a seemingly real complete world would be simulated for everyone" and that "this...would in turn imply that knowledge of" these worlds "would be completely *useless*" (emphasis in the original). Add these three items together and it is not hard at all to imagine that Saalmann's notion is that "knowledge" for a radical constructivist is some kind of "laissez-faire" entity. It need have no limits or constraints and still be acceptable for the radical constructivist. This is in spite of the explanation given in radical constructivist literature that our thinking is about constructing explanations of our experience. Our explanations are constrained by the fact that they have to fit our experiences.

11 Obviously, this all depends on what might be meant by the word "useless." As Saalmann himself points out several times in his piece, radical constructivists hold that they construct knowledge to fit experience, to be viable, and that, in the terms of Maturana and Varela, this constructed knowledge enables the maintenance of autopoiesis. But apparently this does not rise to the standard of usefulness for Saalmann, although it does for radical constructivists. One is left to imagine Saalmann's standard for usefulness is the achievement of a true picture of a MIR or the known approach to such. Nothing else is good enough because it does not meet realist criteria. Alas, this should come as no surprise since it is clear he is operating from the initial assumptions of realism and not those of RC.

Conclusions

12 I have pointed out that since no conclusion is logically valid outside of the initial assumptions on which it is based, we learn nothing new when realists criticize RC from realist initial assumptions. Also, given the evidence, Saalmann apparently does not fully grasp the essence of RC.

13 All of this is not to say that neither realism nor RC can be criticized. But the only net effect of a critique of RC by one who is still laboring under the hegemony of realism is to display some of the many ways RC is not commensurate with realism and not understood by the author of such a critique. To use another term from current slang in use in the U.S., *duh!*

Notes

1. From a monologue by Henry V in the play of the same name by William Shakespeare. "Once more unto the breach, dear friends, once more..."
2. Indeed, the passage should be translated as "Instead of the iconic relation of a perfect match or mirror image we may posit the relation of fit." (von Glasersfeld, personal communication).

Observations on an Observer's Attachment to the Idea of Reality

David A. Reid

Acadia University <david.reid@acadiau.ca>

1 As Maturana (e.g., 1987) has often reminded us, everything said is said by an observer. What I say here I say as an observer and reflects who I am, what I can perceive and what sense I am prepared to make of that. Similarly, what Gernot Saalmann says in his article is said by an observer and reflects who he is, what he can perceive and what sense he is prepared to make of that. I describe myself as an English speaking mathematics educator with a family background in neuroscience. Saalmann does not describe himself in his article but appears to be (to me as an observer) a German speaking sociologist. Given that we are different observers it is no surprise that we make different observations about radical constructivism.

2 One observation we agree on is made in §3. The authors he quotes would not all agree to be described as radical constructivist (or constructivists at all), there are important differences between them (for example in what is being constructed), and there are some significant reinterpretations of key ideas (for example, operational closure, autopoiesis,