Constructed Aspectual Reality

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1 Gernot Saalmann presents in his paper an exposition of radical constructivism that throws together such diverse thinkers as von Glasersfeld, Maturana, Varela and Luhmann. He presents their views as something of a unified front, although actually only Glasersfeld consistently represents radical constructivism. In his exhibition and critique of radical constructivism Saalmann fluctuates between ontological, epistemological and neurophysiological arguments that have often little bearing on the original ideas of radical constructivism. For example, his discussion on sensory coding (§16) is hardly relevant to the basic tenets of radical constructivism. "Sensory coding" entails that there is information in the environment that can be transmitted to the organism through senses; a model denied by radical constructivism (see e.g. Glasersfeld 1995a, pp. 115–116).

2 Saalmann criticises the anti-realism implied by radical constructivism and proposes that one should instead embrace critical realism. While anti-realism is, indeed, a problematic consequence of radical constructivism, Saalmann over-emphasises it. For example, the very sound claim that the impossibility to step out of one's cognitions does not entail their insufficiency (§15) can probably be accepted by a constructivist. Then again, the claims "[the human cognition] is *absolutely not* realistic" (§24) and "knowledge cannot be appropriate to reality" (§28) are exaggerated. Radical constructivism is, rather, guilty of a matter-of-fact withdrawal from explicit ontological discourse. It "makes no claim to describe an independent reality" (Glasersfeld 1995a, p. 1). This does not mean that the idea of non-verifiability of one's subjective experience would entail its being erroneous. It simply means that, in a rather Wittgensteinian fashion, the constructivist abstains from speaking of that which cannot be spoken about.

3 Saalmann is, however, right when claiming that the rejection of realism goes too far (§15). Detachment from ontology is problematic in many senses. Even when no ontology is explicated, some implicit ontological commitments are made. There must certainly exist someone who does the construction, and this someone consists of something that has made the act of construction possible. The right approach to this problem is not, however, to embrace a classical approach to ontology, such as Saalmann proposes. We should not regress back to a theory of representations.

4 The problem is that the very moment we commit to a theory of cognitive representation – to "human cognitive constructs [referring] to reality" (§34) – we commit to an ontology of discrete objects with observer-independent existence. While realism may be "critical," it still implies that deep down there exists some ontological correlation between the "pictures in the mind" and the "furniture of the world." This, however, spells trouble. We should be able to compare "the furniture" with "the pictures," but this we simply cannot do (cf. Glasersfeld 2004). Picturing the pictures would, of course, result in just more pictures. Knowledge is not a picture of the world (Glasersfeld 1995a, p. 14).

5 As a solution to the problem of anti-realism in constructivism, the commitment to a theory of cognitive representation is unacceptable. The epistemological problem we face in cognising the world is not that of whether our cognitions are right, but the fact that the variety of viable cognisations is so huge that there is simply no sensible way of saying which of our cognisations would be the primary or "correct" ones. Viability is determined pragmatically and context-dependently: a viable cognisation is one that works in a given context of action.

6 There is, however, some truth to the notion that viable cognitive constructs must have some correspondence with reality (§21). Without accepting the dubious idea of correspondence, we can commit to the constructivist views and yet maintain a degree of reality. We should acknowledge that while the world is epistemologically inexhaustive, we can deduce from experience that the world – whatever it *is* – exhibits certain structurality which limits our constructions of it. (For a more detailed account, see, e.g., Järvilehto 2007.)

7 The construction of the reality is *not* "performed on a merely random basis" (§13). As Glasersfeld (1990, p. 6) claims: "All action, be it physical or conceptual, is subject to constraints." The nature of these constraints is out of our epistemological reach and thus "we cannot even imagine what the structure of the real world might be like" (Glasersfeld 1990, p. 3). But the world *exists*, in all of its unknowability, and it is, of course, very much real. Cognition does not represent the world, or deliver us pictures thereof, but rather establishes a functional fit with the world. We do not need pictures of the world because we already have the world. This is the sense in which the constructed reality is indeed very real. It is, however, problematic, if not impossible, to absolutise any single view on reality in the ontological sense. Experience teaches us that pretty much everything can be approached, perceived and interpreted differently under different circumstances and by different living beings.

8 The reality that constructivism implies is *aspectual* as concerns the cognising subject. Whatever we construct is an aspectual and functional relation in the world: it is not a picture or a representation but a particular way to act in the world according to the needs of the specific situation. All these aspects *are* the world, but they simply aren't the whole world. Thus Saalmann is right in claiming that "[i]nteractions succeed because the reality constructs of the individuals overlap and contain reality to a certain extent" (§26). What is constructed *of* is the reality, with no other, "deeper" reality behind this. The actual resulting construct is, however, always context-dependent, conceptual and practice-laden, and thus cannot be expressed as an ontological entity. And that is where the limits of our cognition and the limits of our knowledge are drawn.

Reality and People

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1 My remarks are based on the view that mind-and-world structures of subject-inclusive experience (the only available starting-point for thinking) are created by individual and collective subjects, and are not derived

from pre-existing subject-exclusive structures (zero-derivation (0-D) structuring; see my papers in CF and the Karl Jaspers Forum). I will comment on two points.

Reality with and without subjects

2 Gernot Saalman accepts "cognitive constructivism," but objects to the denial of reality by constructivists (§§5, 15, etc.); instead he advocates a structuring realism: "Human constructs refer to reality" (§34).

3 The word "reality" means a reliable structured background for thinking and living. But although the terms "realism" and "reality" are frequently used in the paper, and are variously characterized as anti-metaphysical, non-objectivist, critical, and pragmatic, their operational (subject-inclusive) meaning remains unclear.

4 Specifically, one would need to know whether or not Saalmann proposes that reality is mind-independently pre-structured.

5 If yes, and it appears at times that Saalmann implies objectivity and mind-independence (subject-exclusion) for reality, this amounts to ontic-metaphysical reality in the traditional sense (although he writes that he wants an "anti-metaphysics"). And in that case one would also have to know whether that implies theistic creation, non-biological autopoiesis (such as events following the presumed Big Bang), or something else.

6 If not, as may be implied in his endorsement of "cognitive constructivist" principles (Saalmann also agrees (§15) that it is "impossible to step out of one's cognition"), "reality" has an operational meaning which does not clearly differ from the "working-reality" proposed in 0-D.

7 The latter means within-experience structuring and positing of working-structures that are not derived from any pre-structured entities. This is followed by feedback-testing of their suitability and reliability (viability) during use. Like the more general term "working metaphysics-ontology," working-reality is extrapolated from the "working-hypothesis" concept of science; it implies no instrumental reference (§9) to a postulated mind-independent reality. It also obviates the need for "anti-metaphysics." Traditional objectivity similarly becomes the tool of "working-objectivity." 0-D offers no absolute certainties, but instead a working-reliability which needs monitoring. This suffices for dealing with perceptual deceptions (§8) and action (§21).

8 Rather than having to choose between acceptance and rejection of "reality" (or, thirdly, an agnostic attitude), 0-D means a change from a postulated fictitious un-testable mind-independently pre-structured reality to a human mental tool of working-reality that is structured within individual-and-collective experience. It can be analyzed and modified as needed, similarly to other tools such as language or mathematics.

Objects within subjects

9 Related to this is another difficulty in Saalmann's paper: an apparent random switching between (a) phenomenological reasoning, which respects the constructivist emphasis on primacy of subject-inclusive experience, and (b) traditional objective reasoning, for instance neuro-physiological or cybernetic, which disregards it and thereby causes subjectivity to vanish. The switching presumably expresses an assumption on the part of Saalmann that (a) and (b) are identical. This suffices for time-correlation studies between variables, but obscures the epistemic relations.

10 Concepts arise and remain within the mind; so, therefore, do all objective considerations. This confinement of objectivity to the bubble of individual-and-collective subjective experience determines the nature of reality and of the mind-brain relation. But that is often neglected because it is difficult to work with, with no external guarantors being postulated. The (a) = (b) conflation in Saalmann's paper hides it, and so do notions such as "the mind-brain" or "the embodied mind." Workers in psycho-physiology and second-order cybernetics may also neglect it. Two (probably not always intended) implications of this view are that the mentioned conceptual difficulty is dealt with by denying that it exists, and that which Jaspers has called "brain-mythology" is promoted to the standard of discourse for the mind-brain question.

11 "Brains" and "systems" are objects of thinking, "objects" are structured mental tools within experience. But experience cannot become an object of thinking, because its center cannot become structured, and furthermore, even if completely structured it would have to be an object within itself, which is impossible.

12 One can observe a cat observing a mouse, either its behaviour or the relevant brain functions, or formalize or model the informational aspect of this activity as an observing system; but none of these objective functions is what the cat experiences.

13 A subject (subject-inclusive experience) cannot become an object, not even in the same person. In principle I can observe my own brain function. I might watch my hippocampal region light up on a screen when I try to remember something new – this lighting-up shows that hippocampal activation occurs when I do this – but neither the observation nor the activation are identical with my memorizing effort. My brain can produce epileptic seizures, and it works (in a limited way) when I am under general anaesthesia, but that is not "me." I am not neuronal activity (though I need it for being me) or an informational system (though I process information in order to be me); no system is me.

14 Neuro-physiology and cybernetic studies of observing systems are important areas of research. But they are (working-)objective in type; not what the subject being examined experiences, nor the experience of the subject doing the analysis and within which the studies take place. Subjective experience is at the center of phenomenology and constructivism, but not of objective studies.

Conclusion

15 If we keep ourselves in the picture, the role of reality in constructivism, which emphasizes the centrality of subjective experience, is clear. Working-reality, and working-metaphysics-ontology more generally, are needed as a central part of everyone's structuring of experience. To decide between affirmation and rejection of reality of an unspecified type, or of absolute metaphysical reality, is redundant. Working-reality includes the subjects; it is operational, critical, and pragmatic. Working-reality and working-objects are structured by structuring subjects, not by themselves; observations are not made by themselves, but by observers. In practice it is not possible to structure the world continuously at every moment, and temporary reliance on posited (working-) agencies is required. However, we should remain aware that in principle we can and have to remain the responsible kybernetes.