

« 10 » The link between RC and Piagetian constructivism is still open for discussion. Any difference might not altogether be a bad thing, but may raise new problems. In 1970 Piaget was interviewed by the American magazine *Psychology Today* (Hall 1970). One of the questions he got was: “How do you see the future of psychology?” Piaget replied: “With optimism. We see new problems every day.”

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Reflecting on Constructing Constructivism

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> **Upshot** • Hugh Gash's paper on constructing constructivism is inspiring, insightful, and important in many respects. However, and for that reason, I want to reflect on some critical aspects in terms of metaphorical uses of expressions and ongoing processes of medialization and digitization. Lastly, I am going to point out critical potentials of constructivist thinking as related to education.

« 1 » The title of Hugh Gash's target article, “Constructing constructivism,” is challenging in at least two respects. First of all, knowing about the theme of the special issue on the “Forty Years of Radical Constructivism in Educational Research” is crucial in this case. Otherwise it would suggest a claim to not only a meta-analysis of RC as it relates to education, but to constructivism in general. Of course, the abstract dismantles such ideas promptly, at the same time generating curiosity about the paper. However, there remains another challenge that is related to the phrase

constructing constructivism. Although selection criteria are not explicitly mentioned at the beginning, the selective survey points to both relevant conceptual considerations and exemplary educational applications. In so doing, and by way of connecting conceptual considerations and educational applications, the author's understanding of constructivism as well as his selection of fields of educational research and profession development becomes clear. Moreover, the target article is an important contribution to constructivist discourses as they relate to education from both historical and systematic perspectives and it illuminates results from empirical research and options for designing educational practices. While the target article brings together all of these aspects, it can be read not only in the sense of *constructing* but also in the sense of *re-* or *de-constructing*.

« 2 » Kersten Reich has pointed out the importance of an interplay of three observer perspectives within constructivist thinking in educational research (Reich 2010: 118–145):

- 1 | self-activity, self-determined education, self-guided learning, autonomy and self-confidence, building up relations, and creating things together, which are relevant keywords with respect to *constructing*,
- 2 | *re-constructing* by acquiring a sense of time, cultural spaces, social worlds and symbolic forms, developing a sense of history of knowledge, and learning about motives of others, and
- 3 | pointing out omissions, revealing or uncovering forgotten aspects, becoming aware of contingent dynamics, and knowing that things could be different as perspectives of *de-constructing*.⁴

Reich develops all of the three perspectives with a view to symbolic dimensions, imaginary ones, and realities (ibid: 122–142). Although Gash does not explicitly distinguish between constructing and re- or de-constructing, all of these three aspects come

4| By relationing and combining dynamics of *constructing*, *re-*, and *de-constructing* as three observer perspectives, Reich (2010: 118–145) avoids pitfalls of self-sufficient theorizing and self-righteous forms of deconstructivism. For a summary of a trenchant critique of problematic aspects of post-structuralism and “New Philosophy,” see Schmidt (2012: 137f).

together in the target article. In §3, for example, Gash explains constructivist thinking in terms of “a multi-layered set of concepts interpreted in a variety of ways by the communities of people who use the word.” Based on brief re-constructions of thoughts of others, he constructs his characterization in a way that does not exclude other options. To the contrary, with the expression “it involves a series of ideas, including the following” he indicates that additional or other accentuations could be argued. Similarly, Gash's way of bringing the “social dimension into sharp focus” (§9) immediately suggests itself as a way of pointing out underestimated or sometimes forgotten aspects in radical-constructivist discourses.

« 3 » In the section “Stages of constructivist thinking” (§§3f), the author describes three stages, namely

- 1 | “appreciating that knowledge is constructed,”
- 2 | “recognizing that radical constructivism implies that there is no match possible between knowledge and reality,” and
- 3 | “teasing out the ramifications of this counter-intuitive position in one's social world” (§4).

The way Gash elaborates on these three stages in the paragraphs of this section is comprehensible, coherent, and plausible. The distinctions are always helpful, not least for didactical purposes. At first sight, one is tempted to agree when he says: “It can be argued that a description of the development of constructivist ideas applies both to the literature about constructivism and to ways individuals come to understand it” (ibid. §4). Having said that, there are counter-examples both in everyday life and in academic discourse. Who does not know at least one example of a break-up of a long-term relationship in which instability or disruption of the versant social world acts as a starting point for doubts about knowing, reliability, and “reality,” leading to thoughts about one's construction of knowledge? Moreover, development of constructivist thinking as related to education and educational studies has been described differently by, for example, Frieda Heyting (1997).⁵

5| Cf. also my discussion of various concepts of constructivism in educational research (Hug 2011).

Basically, she distinguishes between three groups of versions:

- 1 | versions evolving around the principle of the primacy of theory in relation to empirical observations in the 1970s,
- 2 | versions referring to the realization principle and assumptions about the constitutive power of education as, for example, elaborated in Wolfgang Klafki's critical-constructive theory of education (Klafki 1976), and
- 3 | more recent versions dealing with the work of Ernst von Glasersfeld, Humberto Maturana, Paul Watzlawick, Richard Rorty, Nelson Goodman, Niklas Luhmann, Siegfried J. Schmidt, and others.

I think that we can learn a lot by way of contrasting such overviews and basic distinctions and thus develop both a deeper understanding of meanings of the expression "systemic-constructivist" in the field of tension between relatively concrete individual constructions and ethnomethodological micro-perspectives on the one hand and abstract systems theoretical perspectives on the other.

« 4 » But speaking of "stages" is also problematic. It suggests clarity, but it raises questions, too. Is it about a series of positions or stations one above the other? Is it about stages in the sense of phases of development, about periods of time, arenas, or settings? Metaphorical uses of expressions such as "stage" call for explanation and also constructivist reflections (cf. Krippendorff 1993). The assumptions of the logics of developmental levels of constructivist thinking seem problematic. This argument counts for both logical approaches to developmental stages within constructivist thinking and forms of situating constructivism in other sets of "stages." A well-known example of the latter is the widespread classification of the world of learning by distinguishing between behaviourism, cognitivism, and constructivism. As discussed in Hug (2010), this classification is problematic because it suggests thoroughness and tendencies of an evolution from the lower to the higher. Apart from difficulties with an umbrella concept of constructivist learning – summarizing various approaches related to different constructivist discourses – there are other difficulties. Every solid handbook on concepts, models, and theories of learning shows that the manifold of forms and important issues of

learning is not entirely covered by a trinity of behaviourism, cognitivism, and constructivism. Such a trinity does not cover, for example, conscious or unconscious dimensions of learning, emotional learning, or learning of organizations, generations, or societies.

« 5 » In §10 the author writes about a shift from the "teacher/child interface" to the "child/experience interface." Furthermore, he elaborates on the "teacher/learner interface" and "learner/experience interface" (§§22f). While the corresponding descriptions provide valuable insights into empirical research and a first orientation for the reader, again, a concern comes up beyond the scope of the details described. How is the interface metaphor used in these cases? What does it elucidate, foreground, and show? How does it hide certain aspects and what could we learn from a metaphorical analysis in order to understand better both the projects described and possible relations to other endeavors in collaborative and cooperative learning, enhancing experiential spaces, and professional development that do *not* refer to constructivist ideas and concepts?

« 6 » I can agree on the claim that "children today live in a digital age" (§26). At least, many of them do. And I also see a need for concepts and applications in order to understand and enable micro-perspectives of learning better (Hug 2012a). But apart from the use of digital resources (§28) and from media as tools for video demonstrations (§41), media largely seem to act as blind spots in the deliberations in the target article. Although I do not want to underestimate efforts to "improve literacy achievement by finding ways to engage the children in their reading and writing" and "engagement by designing a learning environment where meaning is socially constructed through collaborative learning in the pupils and where enthusiasm for writing throughout the study and illustrates how the social side of learning is important" (§40), I think we have to aim at reconsidering the role of literacies in view of ongoing processes of medialization and digitization. Moreover, there is a need for clarifications of relations of literacy, mathemacy, oracy, and picturacy⁶

6 | These terms are used analogously to the term "literacy" – the basic argument is outlined in Hug (2012b).

if we take markers such as *mediatic turn* or *digital turn* as not just academic marketing gags. And which approaches for the description and critical analysis of manifold interplays of modes of construction could do better than undogmatic, context-sensitive, and open-minded constructivist approaches?

« 7 » In conclusion, I want to make some remarks on critical potentials of constructivist thinking as related to education. This thinking and, especially, systemic-constructivist pedagogy have been criticized as a tautologic and affirmative endeavor, as functionalist pragmatism in the service of neo-liberal developments, as ideological superstructure corresponding with an unleashed capitalism, etc. Such claims can be easily rebutted on the basis of deliberations presented in Gash's target article. But there is more to it than that: constructing constructivism can also be associated with sounding out options for designing spaces for education based on design theory (cf. Krippendorff 2006) that was not developed for educational purposes in the first place. Furthermore, it can be related to explorations in the area of tension between the active role of individuals, media, and algorithms, and also between action learning, action-oriented (media) pedagogy, and the inspiring world of media activism. And it can point up viable options between the ongoing bureaucratization of schooling and calls to "Build a School in the Cloud" at https://www.ted.com/talks/sugata_mitra_build_a_school_in_the_cloud. But why throw out the baby with the bathwater if the full critical potentials of constructivist thinking have not been exploited so far?

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