« 13 » I detect an obvious contradiction within this argument: I cannot see and accept that there is only one reality of systems theory. Apart from the fact that Luhmann's theory of social systems is not the only variant of systems theory, every theoretical text needs interpretation. Otherwise we would not need any articles to clarify positions and arguments. From a constructivist perspective, every interpretation by a reader constructs a world of its own. Of course my own effort to reconstruct an authoritative interpretation of what I consider the core idea of constructivism is observer-related (i.e., depends on my interpretation as reader/author). It is my empirical experience that other authors/readers argue in different ways even though they consider themselves constructivists as I do. From this it follows that there is more than one reality of systems theory. The "realness" of these constructed realities translates to communicative realities. Within the system of (social) science, the author of the article and of this commentary both have sincere intentions and neither of us claims to construct "virtual realities." Rather, our argumentations are related to the system of science, including its rules and habits for how to communicate and what to communicate about.

« 14 » In conclusion, my argumentation aims to abstract from specific arguments by starting with what I consider the core idea of constructivism, the intention of the whole approach irrespective of some particular arguments that seem to be misleading or inconsistent (with respect to the approach on the whole). Therefore, I grade aspects of the constructivist and systems theoretical approaches as major and minor. Focusing on the major arguments (which I call the core idea of or the intention behind these approaches) helps to ignore or correct the minor aspects – a strategy we apply in everyday life very often as well. Of course the distinction between major and minor aspects and the assumption of constructivism's core idea is observer-related and should therefore be considered contingent, too. I appreciate Matuszek's ambition to detect hidden ontological remainders in systems theory and constructivism in order to clarify and develop both approaches. However, I wonder whether the consequences of this effort are reflected clearly enough: is it necessary to rebuild or to renew Luhmann's systems theory or is it sufficient to just comment on a couple of ambiguous passages within Luhmann's texts in order to clarify them? I favor the latter alternative over the former (cf. Scholl 2012). Therefore, from my perspective, Matuszek's article does not offer "a new, coherent interpretation of ontological and epistemological questions in Luhmann's theory" (Abstract: Implications) but helps to comprehend Luhmann's complex theory by giving a place to his specific perspective.

Armin Scholl is professor at the Department of Communication in Münster, Germany. His research fields and teaching focus are theoretical and empirical journalism research, theories in communication studies, epistemology and methodology in social science and counter-public/alternative media. Web site: http://www.uni-muenster.de/Kowi/en/personen/armin-scholl.html

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"Believe It or not!" – It Is About the Truth in Science (or the Unwillingness to Tolerate Ambiguities)

Heike Egner
Alpen-Adria-Universität Klagenfurt, Austria • heike.egner/at/aau.at

> Upshot • On an epistemological level, Matuszek argues convincingly that Luhmann's epistemological ambiguities could be embedded in a coherent constructivist approach. However, what do we gain by being assured of this and why is it so difficult to tolerate ambiguities in an otherwise highly elaborated theory?

« 1 » As Krzysztof Matuszek has already stated in his target article, there is an astonishingly increasing interest in epistemological and ontological debates concerning the theory of social systems (§1). Besides Niklas Luhmann's considerations on ontology (mainly to distance himself from traditional perspectives), it is especially one sentence in the first part of Luhmann's *Soziale Systeme* that provokes the controversy on the question of whether Luhmann argues from a realist or constructivist point of view (§19): "The following considerations assume that there are systems. Thus they do not begin with epistemological doubt" (Luhmann 1995: 12). By labeling this statement as a mere methodological distinction for analytical and empirical reasons (§20, §50) rather than a hint to any epistemological or ontological proposition, Matuszek argues convincingly to embed such statements in an epistemological framework of social systems theory that allows the reader to be certain that Luhmann argues conclusively, i.e., from a coherent perspective that is consistently constructivist.

« 2 » However, what do we gain by being certain or assured that Luhmann's theory of social systems is anchored, finally and undoubtedly, in constructivism (or, on the contrary, in realism)? Why is there such an urge for certainty, for first principals and a final justification of the truth that does not require further justification (§30)? For sure, any theoretical notion creates order and when this order is reified and understood in an ontological way, one gains certainty in an otherwise inscrutable world. But is it beneficial to aspire to certainty within sciences in this way? John, Rückert-John & Esposito (2013: 8ff) point to the phenomenon of an obvious re-vitalization of ontology of scientific findings, especially when they are transferred into non-scientific debates and, thus, are subject to being translated for the general public by mass media. They argue that in cases where scientific topics (such as gender differences, motives of ecological and social action, freedom of will or social, environmental and climate change) easily connect to everyday experiences, scientific findings tend to be discussed no longer on the basis of theories but rather on the basis of a final cause, i.e., the truth. This in turn seems to foster ontological arguments within science itself. For instance, in his comment on how to deal with the rise of creationism on the occasion of the "Year of Darwin" in 2009, the biologist Josef Reichholf even came up with the statement:

> "Evolution is no theory […] As the history of life, evolution is a given fact just like the history of

the earth and the history of the cosmos; just natural history and nothing else." (Reichholf 2009: 165, my translation)[1]

« 3 » In his response to this statement, the architect Wolfgang Sonne insisted on an understanding of science as only theory-based; otherwise science would only be another type of fundamentalism:

"The key feature in this issue is that the sciences can only win this argument by insisting straight to the point that Darwin has indeed developed a theory. It is the only way to maintain the difference between statement and object, which enables us to verify or falsify a statement […] Those who turn scientific theories into a question of faith – and this is done by declaring them as facts – have already lost the battle with religion." (Sonne 2009: 272, my translation)[2]

« 4 » Another example would be the current high profile academic and public debates on climate change that have turned into a religious war about the right kind of faith when discussed in public and in the media (for a reflection on this see Aufenvenne, Egner & von Elverfeldt 2014: 121).

« 5 » In his target article, Matuszek also tries to create certainty and assuredness, even though he operates on the other side of science (if we take "reality" and "theory" as the opposing positions). He is certainly not arguing with facts or "the reality;" he rather argues on a highly elaborated level within the theoretical framework of the theory of social systems. Nevertheless, his article also shows an urge to be certain and assured. And it is this that strikes me. For sure, it is of great importance that theories are consistent and coherent, if we want to work with them. I would argue that Luhmann's theoretical framework does this already. In this, I agree with Hans-Georg Moeller's appreciation that opens his interpretation of Luhmann's work:

"It is striking that Niklas Luhmann's (1927–1998) social system theory *often provides the most advanced, adequate, and applicable models* for understanding how things work in contemporary society" (Moeller's 2012: vii, my emphasis).

« 6 » In a way, Matuszek acknowledges the explanatory potential of the theory of social systems ("justification by effectiveness," §34) as well, but this does not seem to be sufficient for him as long as there are any epistemological ambiguities, such as the introductory sentence in Luhmann's first chapter in *Soziale Systeme* implies. He completes this thought (§34) with the amazed statement: "Luhmann seems to say: 'I start this way. Here are the effects. Make it better, if you can!'" To me, this is science in best practice – disclose your premises, develop your "narrative" for creating order in the inscrutable world and describe the effects (as far as they are known). In his wise notion of non-dualism, which can be understood as an epistemology beyond the dualism of ideas (culture) and object (nature), Josef Mitterer would call this a "description from now on," neither true nor false, just a description that has overruled previous descriptions and that will be the subject of further descriptions and transformations. Taking this seriously, any knowledge as well as any "thing" is subject to change in its description. "Knowing for sure" and "being certain" is then a very limited option. No matter how difficult it might be, in science it will be helpful to stay "alienated" from the subjects we deal with and not get too accustomed to them.

« 7 » However, modernity obviously brought us a shift from an ontological to an observer-dependent world (§§28f and, e.g., John, Rückert-John & Esposito 2013: 7f). Nevertheless, any observation, be it second- or higher-order, includes in some way or other an ontological core, since any observation has its blind spot, i.e., the observation is based on assumptions that are taken for granted and presumed without reflection. From this, John, Rückert-John & Esposito (2013: 8ff) point out that even in an observer-dependent world, ontology obviously creates a *functional blindness* that cannot be circumvented, and in which ontology is used to de-ontologize the observations. This creates circularities in the lines of arguments as well as paradoxical outcomes, which can only be seen with further (second-order) observation. And this again contributes to a complexity that cannot be ascertained in ontological terms and needs to be de-ontologized, etc.

« 8 » In his article, Matuszek wants to clarify some doubts on the side of constructivism. With this, I would argue, he perpetuates the long established controversy between realism and constructivism instead of mediating between them. Ultimately, neither constructivists nor realists can "prove" the truth of their epistemology. After all it comes down to a question of faith – with all the difficulties of faith within (or versus?) science mentioned above. Despite the described shift in social structure (§7) that has led to a domination of functional differentiation and that supposedly has resulted in a complete collapse of the ontological view of the world, there are still many "fishermen" (§7, Luhmann 2013: 196) out there, who take for granted what they can observe. These fishermen not only belong to the Outer Hebrides (ibid), but also populate many different scientific disciplines. Unfortunately, they do not care about debates in the constructivist community and it is an open question as to how we can all come into discussion and try to find a shared (non-dualistic?) epistemology. This is a necessary step to tackle finally the huge open questions of the 21st century. For this, we need to be able – and willing – to tolerate ambiguities.

Heike Egner is a full professor of geography and regional studies at the Department of Geography and Regional Studies at the Alpen-Adria-Universität Klagenfurt (Austria). Her research interests include philosophy of science in geo sciences, observation theory, systems theories and complexity theory, sustainable development, social aspects of global environmental and social change.

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1| Original text: "Evolution ist keine Theorie […] Die Evolution ist als Geschichte des Lebens ebenso eine Gegebenheit wie Erdgeschichte und Geschichte des Kosmos; Naturgeschichte eben und nichts anderes."

2| Original text: "Der Clou der Angelegenheit ist, dass die Wissenschaft nur den Streit argumentativ nur gewinnen kann, gerade indem sie darauf insistiert, daß Darwin eine Theorie entwickelt hat. Denn nur so kann sie die Differenz zwischen Aussage und Sache aufrechterhalten, die es ihr ermöglicht, die Sache zu belegen oder zu falsifizieren […] Wer aber naturwissenschaftliche Theorien zu einer Glaubensfrage macht – und genau das geschieht, wenn man sie zur Tatsache erklärt – der hat den Streit mit der Religion schon verloren."