level, every observation is identical with an individual (in the literal sense of being indivisible in further analysis) observer, and every individual observer is identical with exactly one observation. This freedom makes it seem unlikely that other observers will make indications referencing previous observations. Nevertheless, there seemingly are social systems. Luhmann calls this the “paradox of the probability of the improbable” (Luhmann 2012: 251).

The statement about there being systems can be read as an ontological statement, but then, so can be any statement that relies on the ontological nature of language. According to Gregory Bateson (1987: 372), communication was invented as a means to convey the relational-ontological world of one observer to other observers, so it does not come as a surprise that communication cannot escape ontologies. In the end, the statements mentioned here as ontological are statements in communication, made by individual observers, who have no choice other than to rely on the notion of semantic stability they see in language. But Luhmann’s sociological approach can be read as an attempt to de-ontologize society, and thereby language. As the successive actualization of communicative events is seen as highly improbable, much of the research program is focused on the investigation of how it does come about, not in the sense of ontological being, but in the sense of being observable to the effect that an individual observer can claim having observed it, with the hope of other observers corroborating this statement.

In sociological systems theory, society and language become de-ontologized on the grounds of investigations into expectations (Luhmann 2012: 8, 206, 253). For example, the empirical analyses Luhmann undertakes throughout his *Theory of Society* (notably in Chapter 2; Luhmann 2012: 113–250) do not count on the reliability of statements, but rather investigate how expectations about sequences of statements are established. The notion of such sequences is also observer-dependent: a connection such as action-reaction has to be understood as constructed by an observer, and an observer who has studied other observers will be very careful not to expect an ontological truth in a statement made either by herself or by others. This has an effect on the possibility of limiting contingency, as postulated in §§36–41: an observer who does not expect all other participants in a situation of mutual contingency to be bound by stable limits of this contingency also does not have to abide by them herself. Rather, she is free to re-interpret them to fit the ontological consistency of her own statements. Limits of contingency, if and when they are recognized, are themselves an ontological construction made by an observer, but in this they are no more or less ontological than any other statement in society. It might be helpful to reconstruct Matuszek’s statements made in §§36–41 as a structure of expectations: observers who claim to observe other observers may be analyzed with regard to how they expect contingency to be limited. This change in perspective allows us to view the proposed limits as a social function, which could be close to or even equivalent to the concept of “social immune functions” as described by Luhmann (1995: 403). This view then makes it possible to see the various precautions observers take to reduce the probability of being surprised, i.e., of their expectations not being met, by other statements they observe. Limits become important for the effectiveness of processes in communication, but they require hard work to be kept stable as communicative functions, and can never be relied on to the degree of ruling out unpleasant (or pleasant) surprises.

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Searching and Finding Ontology

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Constructivists have often been concerned with uncovering the ontological assumptions of epistemological realism to criticize its philosophical foundations. In Völker & Scholl (2014), we recently reinterpreted empirical studies about the media coverage of climate change by detecting and deconstructing hidden minimal ontological assumptions in the argumentation of communication scientists who derive normative criticism from the epistemological realism to which they are committed. The aim of our meta-analysis or second-order research was to criticize the practical (normative) consequences rather than to enter a theoretical (philosophical) debate. Krzysztof Matuszek’s target article pursues two different goals. On the one hand the author is interested in a theoretical debate about ontology and how to avoid ontological reasoning in constructivism and systems theory. On the other hand the author searches for more or less hidden ontological remainders in constructivistic reasoning in order to solve the problem of philosophical inconsistencies in the constructivist discourse.

In my commentary I argue that while Matuszek’s argumentation contributes to clarifying constructivist epistemology, his criticism does not have a strong impact on
constuctivism nor on Luhmann’s systems theory. To this end, I check how constructivist inconsistencies may have come about and whether they whether they significantly affect or even diminish the rigor of constructivist argumentation. Furthermore, I show that ontological assumptions are not relevant for constructivism. Finally, I refer to some specific arguments provided by Matuszek with regard to how he uses the concepts of ontology, reality, contingency and systems theory.

3 Matuszek’s criticism of systems theory and constructivism is mainly based on the deconstruction of specific arguments. Unfortunately, he interprets the verbal expression of the argumentation literally but fails to see the intention beneath the surface of language. The constructivist intention, however, is definitely anti-ontological: both constructivists and systems theorists claim to de-ontologize meta-theoretical standpoints underlying philosophical realism, which assumes the existence of things and facts that in principle can be recognized or observed correctly (Gadenne 2008: 154). The constructivist counter-position to ontology may carry its anti-ontological position to the extreme such that one could derive from it a negative ontology that simply reverses (positive) ontology into the assertion of non-existence, i.e., the denial of existence. Such a constructivist position would assume that it is impossible to (directly) recognize reality, which is also a kind of (negative) ontology because denying any ontological claim implies refraining from any hypothesis or statement about reality. So both arguments – the non-existence of reality and the impossibility of recognizing reality – are still ontological – albeit indirectly and unintentionally so – because they argue for a negative version of ontology rather than for transcending ontological thinking altogether – a position radical constructivism and non-dualizing philosophy seek to reach. Matuszek arrives at the conclusion:

4 Thus, we see that without ontological concepts it is impossible to formulate the thesis that cognizable reality does not exist independently of observation, and such a thesis is unavoidable since every first-order observation assumes the opposite. 219

4 Critics may now readily detect a self-contradiction in the argumentation of constructivism. So it is necessary to reflect on this obvious mistake in argumentation and ask for different explanations than those that consider ontology as unavoidable. Such alternatives could either claim that the discovered inconsistency is simply the consequence of linguistic inaccuracy or that constructivist thinking and arguing necessarily lead to self-contradictions. The latter would be a severe problem whereas the former explanation could be corrected by a more sensitive use of language. In order to resolve the problem of self-contradiction, I want to elaborate on the constructivist idea of de-ontologizing its epistemology. If systems theory and constructivism do not want to promote either a negative ontology or an epistemologically fundamental skepticism they will have to develop and follow an agnostic standpoint. That is also what Matuszek (§29) suggests. However, he seems to put skepticism on a level with agnosticism. There is an obvious analogy to religious agnosticism: it takes a third position beyond faith (positive ontology) and atheism (negative ontology). With respect to religious practice, agnosticism and atheism are very close as both agnostics and atheists do not practice religion, and this is independent of the fact that they legitimize their position in different theoretical ways. Also, epistemological agnosticism and negative ontology share the same practical consequence: reality is not accepted as a measure to justify or assess different reality constructions. No observer is privileged in the sense of being closer to reality if reality is either neglected (negative ontology) or does not play a theoretical role (agnosticism).

5 If the practical consequences of both positions (ontological agnosticism and negative ontology) are similar, does the criticism of argumnetative inconsistency then justify the criticism and rejection of constructivism altogether? Moreover, does the criticism of this particular inconsistency indirectly justify realism as the apparent opponent of constructivism? I claim that both questions, arising from the inconsistency of certain constructivist theorists (including Niklas Luhmann), have to be negated. Neither is a theoretical approach completely falsified if it includes minor inconsistencies nor is the detection of the inconsistencies in a theoretical approach (here: constructivism) proof of the opposing approach (here: realism).

6 The first conclusion is too far-reaching as no theoretical (philosophical) approach can be completely consistent in argumentation. The main question is whether certain inconsistencies can be taken into account or can even be accepted because they are not harmful for the whole system of the theoretical approach. Moreover, inconsistent arguments are subject to interpretation because they are expressed in ordinary everyday language, which is not necessarily logical in a formal sense. Matuszek underestimates the problem of understanding when he relies only on the denotative meaning of language and fails to include context such as the presumed intention beneath verbal expressions. In the case of (logical) consistency, understanding is easy to manage and accomplish. The more inconsistencies an utterance has, the more problematic it is to understand it. However, every language user can compensate for this by ignoring or downsizing certain inconsistencies in order to increase the possibility of understanding.

7 Moreover, in constructivism, understanding is not considered the recipient’s true representation of the communicator’s message but the recipient’s stabilization of her mental construction of understanding. Thus, constructivism itself cannot be determined as a single possible understanding of what constructivism is. This is not an

1 | One could be tempted to think that even the main proponents of constructivism are such “negative ontologists,” e.g., when Ernst von Glasersfeld refers to viability, Heinz von Foerster to the principle of undifferentiated encoding and Humberto Maturana to “objectivity in parentheses.” However, a clarification must be left for another occasion.

2 | These are not the questions Matuszek addresses, but they arise in the context of the problem of inconsistency. Therefore, they should be considered because they indirectly affect my argumentation towards Matuszek’s ambition to remedy constructivist fallacies and reformulate constructivism.
argument in favor of an arbitrary concept of constructivism. Rather, it reminds us to be careful when reducing a constructivist text to its denotative meaning. Any reader should be aware that there is an auto-constitutive relationship between the semantics of a text and the pragmatics of the reader as interpreter. My interpretation of constructivism includes its intention (supposed to be the core idea of constructivism) to ignore ontological problems by reasoning anti-ontologically. If constructivists fall back into the trap of ontological reasoning by using a negative ontology rather than a non-ontological or anti-ontological reasoning, a meticulous observer such as Matuszek will detect logical inconsistencies.

With the help of these general remarks I now address some of the key concepts Matuszek criticizes as inconsistent, which are ontology, reality, contingency and systems theory (sensu Luhmann). In accordance with Luhmann, Matuszek conceives of ontology “not with reference to what ontology is for ontologists ... but as a result of observation that distinguishes between being and non-being” ($§32$). In every constructivist understanding (or re-interpretation) of ontology, ontology should be the result of observation, i.e., the result of reality construction. However, is it then possible to use ontology as a characteristic that distinguishes between realism and constructivism? The re-interpreted concept of ontology does at least not qualify as a way to detect hidden ontological assumptions in constructivism. For empirical research this means that while in the philosophy of realism the concept of reality serves as an independent parameter, in constructivism reality is considered a dependent parameter or result of observation. Matuszek consequently arrives at the conclusion that Luhmann de-ontologizes ontology and that “reality is a contingent cognitive construction” ($§32$). Does this not imply that there is no ontological problem, which is the peg to Matuszek’s article and argumentation?

When Matuszek criticizes the distinction between construction and reality for its ontological consequences, he does not seem to consider that Luhmann’s concept of reality is already de-ontologized and should not be understood as realists understand it. Matuszek continues to argue “that this distinction is ontological because it concerns the existence of the cognized reality” ($§13$). Again, I do not follow this conclusion as Luhmann’s understanding of the empirical matter of his systems theoretical approach (in contrast to Talcott Parsons’s merely analytical concept of systems theory) does not imply any independently existing reality (in the ontological sense). Matuszek refers to Luhmann’s claim to provide an empirical theory in a way that (social) “systems are empirically observable units” ($§20$). Empirical research does not necessarily include ontological assumptions, (Scholl 2008: 176f). The assumption of an outer world to be investigated does not necessarily mean that we have to prefer an objectivist approach to empirical research. From constructivism we can learn that the distinction between subject (researcher) and object (of research) simply serves to characterize different ways of practicing empirical research: some parts of social scientific research paradigms (particularly qualitative methodology) clearly make the observer (researcher) visible, whereas other parts (particularly quantitative methodology) use an objectivist approach in which the observer remains invisible. Both research strategies can be interpreted in the light of constructivism (Scholl 2008: 178), i.e., without reference to ontology.

Again, Matuszek seems to follow this course of argumentation, when he states: “…it is evident that Luhmann is not a realist, nor does he take an intermediate position between realism and constructivism” ($§23$). Luhmann takes the position of a naïve realist just to have a starting point that “only has a preliminary methodological meaning” (ibid). However, Matuszek criticizes the controversy between realist and constructivist interpretations of systems theory as ontological itself and reproaches interpreters for ignoring the dynamics of Luhmann’s systems theory. I definitely reject this reproach as it does not matter whether Luhmann simply takes the realist position only for didactical (methodological) reasons of an underlying (actual) constructivist argumentation or he develops his argumentation from realism to constructivism dynamically. In the end, Luhmann’s systems theory is only conceivable upon the basis of a constructivist epistemology, as the distinction between system and environment necessarily implies both the plurality and contingency of observing systems. Neither of these basic assumptions is compatible with any ontological understanding of objects or reality.

In the next step, Matuszek criticizes Luhmann’s concept of contingency being ontological “because it refers to universal and necessary conditions of the possibility and limits of cognition” ($§41$). Indeed it appears that contingency is the last philosophical anchor of a theory that has no (ontological) foundations because its sonars detect no bottom ($§28$). Matuszek seems to segregate the concept of contingency from the concept of observation. With respect to constructivism, contingency is not considered a philosophical axiom but an empirical and (therefore) observer-related phenomenon. First-order observation does not work on the basis of contingency. Rather, contingency comes into play in the case of second-order observation only. In a self-referential way it is “contingent” itself. In comparison to classical logic, contingency is not simply the opposite of non-contingency (determination) but has a reflexive structure insofar as the contingency of contingency includes the contingent decision of whether to prefer contingency or determination. In conclusion, the choice of whether to prefer contingency or determinism is not decisive but oscillates between contingency and determinism depending on the level of observation, which can be first-order or second-order. It is this logical structure that is a distinctive characteristic of radical constructivism as well as of Luhmann’s systems theory and that challenges classical concepts of logic because it implies a positive reference to such paradoxes.

Although Matuszek strictly applies Luhmann’s systems theoretical logic and argumentation, he sometimes seems not to take this kind of self-reference seriously enough. This leads me to Matuszek’s final criticism:

The idea of many realities reveals the blind spots of observed observers, but overlooks the blind spot of the theory itself. Thus, there is one reality of systems theory, which every social and psychic system observes in its own way.**

($§43f$)
Operative Constructivism

It’s About the Truth in Science

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> 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?

"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 “reality” 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.

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“Believe It or not!” — It Is About the Truth in Science (or the Unwillingness to Tolerate Ambiguities)

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"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 refuted 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:

"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 Nikolaus 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.

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