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Sense making as communication

Zusammenfassung: Dieser Artikel analysiert, wie Niklas Luhmann in der Entwicklung seiner Systemtheorie die Phänomenologie Husserls verwendet. Ein besonderer Schwerpunkt liegt dabei auf dem Sinnbegriff. Beginnend mit Analysen von Luhmanns Übernahme Husserlianischer Begriffe wie Sinn, Noesis-Noema-Korrelation, Identität und Horizont, behandelt der Artikel die Frage, wie Luhmann eine Theorie kommunikativer Sinnggebung konstruiert. Diese Analyse führt zunächst zu einer Diskussion über die Unterschiede zwischen Luhmann und der soziologischen Phänomenologie. Am Ende des Artikels wird die Verwendung der Theorie als Grundlage für die empirische Forschung erörtert, ein besonderer Schwerpunkt liegt dabei auf dem medialen Diskurs.

This article aims at showing the highly original way in which Niklas Luhmann builds upon Husserl's phenomenology. Husserl is normally held to have exerted influence on the social sciences through Schütz and Garfinkel, and also through Merleau Ponty, but we shall here see that Husserl's thinking also has been taken in another direction. Luhmann is – in the Anglo-American World – associated with a theory of functional differentiation akin to Parsons. The theory of functional differentiation is however grounded on a more general theory of social systems (Luhmann 1982, xi) in which Husserl plays a significant role. The general theory of social systems is concerned with sense making systems. A strong link between the two theoretical levels exists: Function systems are mutually distinct subsystems of society because they make sense of information in mutually distinct ways.

That Luhmann is drawing on Husserlian phenomenology is an already well established fact (e.g. Merz-Benz/Wagner 2000; Bermes 2006; Knudsen 2006; Leydesdorff 2010; Nassehi 1993; Teubner 2001). My agenda here is three-fold. I will first analyze in some depth which elements of Husserl's thought Luhmann takes up and how he does it. I will then, secondly, relate Luhmann's phenomenology of communication to the sociological tradition of phenomenology, by which I mean Schutzian phenomenology, ethnomethodology, and conversation analysis. I will argue that sociological phenomenology, from the beginning, but over time increasingly so, has been preoccupied with the meaning schemata (a term that will be explained in full later) which guide expectations and which are used (and constructed) by social agents in order to make sense of one another in interaction. Within a Luhmannian framework, schemata are still of crucial importance, but they now no longer are only *social* schemata,

but also schemata that guide the perception of the material world. The crucial implication of this is that it hence is Luhmann who succeeds in constructing a true sociology of knowledge (of the world – while phenomenology is sociology of only social knowledge). Thirdly, I aim to show how we with Luhmann have a phenomenology of communication which can be used for empirical analysis of communication because the notion of meaning in Luhmann's work (via Husserlian phenomenology) has affinities to various theories of semantics and from there to theories of discourse. I develop this with a particular focus on media discourse. Before I get to these points, however, I will try to show in (I am afraid tedious) detail the similarities between Luhmann and Husserl.

Intentionality and communicative themes

Ever present in Husserl's philosophy is a strong intuitive notion of *intentionality*. The core aspect of consciousness, Husserl claims (building on his former teacher Brentano), is that it always is directed towards something. This ›directedness‹ – being ›conscious of something‹ – is the core feature of intentionality. Any perception, any thinking, in short, any intentional *act*, is an act of being ›directed towards‹ or ›containing something‹. ›Act‹, it must be stressed, has no connotation to ›action‹, but is related to mental occurrences such as perceptions, judgments, desires, beliefs, etc.

The content of intentional acts is ›structured‹ or ordered by meaning. An intentional act – or rather the part of it that Husserl calls the *reelle* content or *noesis* – bestows meaning to what is the object of the intentional act. This distinction between reality (object) and content does however not deny the existence of relations between the intentional act and the object that is intended to. A relation is established between the act and an ›object‹ through the meaning or sense bestowed by the act: Meaning always *refers* – it singles out something. Meaning, Husserl asserts, as do contemporary linguistic theories, has a *pointing* character (Husserl 1983, 309).

Husserl's aim is to explicate intentional acts and phenomenological content. He wants – through what he calls the epoché or transcendental reduction – firstly to ›bracket‹ reality and secondly to focus on the stream of consciousness *as such*. The focus of the analysis is not *empirical* mental occurrences – the subject matter of psychology – but on consciousness as such (Husserl 1995, 26); ›pure consciousness in its own absolute being‹ (1983, 113). Husserl also conducts another reduction, an *eidetic* reduction with which he reaches an insight into the basic categories and essences of meaning. To sum up, Husserl aims at describing the process of sense making not as an empirical process but the process as such. *Process*, here, first of all means that we are dealing with a flow of consciousness, or (transgressing slightly from the epoché – see below) with concatenations of cognitive acts.

Luhmann also performs an analysis of sense making but from a different starting point. In one of his main works, *Social Systems*, Luhmann writes that the question of what meaning is best can be answered by a phenomenological analysis (Luhmann 1995b, 60). He then adds the following footnote:

The language of this description suggests a psychic system reference. One can and must abstract from that. Husserl did so in the direction of a theory of the transcendental subject. We abstract in the direction of a comprehensive validity for personal and social systems. This means that in what follows concepts like intention, reference, expectation, experience, and action indicate elements or structures that can be assigned either to psychic or to social systems. On this theoretical level, the terminology does not yet bind us to one of these system references as opposed to the other. (Luhmann 1995b, 512)

Luhmann is thus to understand Husserl's theory of the transcendental subject as a still valid ›theory‹ of sense making psychic system (1997b, 50) even though Luhmann adds the critical note that the transcendental aspect is less important as sense making now also is located elsewhere. In addition to this, Luhmann himself investigates how another type of system, namely a communicative system, also functions through sense making. Sense making should be understood quite literally: Luhmann (1996, 19) at one place complains that the English *sense making* works better than the *Sinngebung* of his mother tongue. Luhmann pays little heed to the very core methodological and theoretical foundation of Husserl's thought namely the transcendental reduction. While the philosophical consequences of this are problematic and paradoxical,¹ it is for the current purposes more important that he starts his systems theory with a comparison between two types of systems he then subsequently distinguishes sharply between, namely psychic and communicative systems. But even though they are fundamentally different and belong to each others' environments, both types operate in the medium of meaning. And both of these types of system consist of elements which are not only temporal but ephemeral.

Meaning and semantics

A communicative system has many similarities to a, no longer necessarily transcendental, subject (or psychic system as Luhmann calls it). The following three starting points for Luhmann's theory have all been taken directly from Husserl's thought: 1) A social system also consists of streams of intentional ›acts‹ – but now not cognitive but rather communicative. 2) Communication, like cognition, operates through an ›intentional pointing out‹. Luhmann how-

1 See Knudsen (2006, 117-9) for a discussion of the paradox and Luhmann's notion of second order observation which arguably salvages the dilemma.

ever replaces Husserl's transcendental object with ›communicative theme‹ (Luhmann 1995, 76). The pointing out entails a selection: Luhmann's systems and Husserl's transcendental subject are both only ›aware‹ of certain things while the rest of the world is temporarily put into a passive background. 3) As already made clear, communicative systems share with cognitive systems the fact that they operate through meaning; they use symbolic meaningful entities for their operations.

Having performed the phenomenological reduction, Husserl is left with the phenomenological content of an act. This content is described as two-folded. On the one side is the intentional act as an actual event (in time) which Husserl calls *noesis*. Noesis is, as it is fixed in time, real (*reell*) but not psychological/empirical thanks to the transcendental reduction. We are instead dealing with sense bestowal *as such* and it is through the noetic element of the content that sense is bestowed (Husserl 1983, §88). Noesis is (drawing on the Greek origin of the term) *thinking* (actual/*reel*). Correlating with that is an abstract, ideal, or unreal, element, namely the intentional content or the *noema*. Noema is *the thought*. Noema is the ›intended as intended‹ (Husserl 1983, 214). It is an abstract, non-temporal, ideal entity – it is meaning or sense. Husserl also makes use of a third concept in relation to the perceptual ›input‹. This is named *hyle* and is the sensuous, ›raw‹ data that through noesis is ›structured‹, e.g. bestowed sense (205). *Hyletic* data are, Husserl says, *formless stuff* while the noesis creates *stuffless form*.

This transformation of *hyle* into noematic sense through noetic events echoes in Luhmann's theory in several ways. Firstly, communication selects. A certain communicative theme is selected, just like intentionality implies a direction of the intentional gaze and thus selection of a certain intentional object. Secondly, communication creates order out of noise, or form out of a formless medium: Luhmann describes sense making as precisely a process by which systems reduce complexity and create order out of noise or form out of a formless void. They do so by attributing meaning – what Luhmann also calls symbolic generalizations – to the communicative themes.

Husserl continues his analysis of meaning along two different routes: one is his detailed analysis of the noema-noesis correlation; the other is his horizon analysis. Luhmann in particular adopts Husserl's notion of horizon in his theory but I will also follow in detail Husserl's other track as there also here are important similarities and because an understanding of Husserl's noesis-noema correlation informs the understanding of Luhmann's notion of meaning.

The noesis-noema correlation is one of sense bestowal and sense bestowed; the noetic phase of sense-bestowal correlates with the abstract intentional content bestowed. Husserl's example regards the perception of a blossoming tree in a garden. Even if the tree should be felled, the *sense* (*Sinn*) of the perceived tree, the perceived as perceived (sense bestowed), remains as powerful or vividly as if the tree was actually there as a real (*real*) transcendent object.

What is left as *Sinn* is the ›tree‹, ›blossoming‹ etc. Husserl puts these words in double inverted commas to emphasize the change from the tree perceived to the perceived as perceived (1991, 214) and this is precisely the sense (*Sinn*) or the intentional content.

The other aspect of the noema is what Husserl calls the *thetic* character (1983, 310). This regards not the sense content of the noema but the ›quality‹ of the noema. For example, there is a difference between the noema of an act of *judging* and the noema of an act of *wishing*. As the noema always correlates with the noesis, also the noesis has a thetic character. Husserl makes a fundamental distinction between acts of *judgment* whose noematic sense is a proposition and acts of *experience* whose noematic sense is a singular meaning. However, several interpretations of Husserl (e.g. Hintikka 1975; Miller 1984; Smith/McIntyre 1982) claim that acts of experience such as the perceiving of a blooming tree in a garden also are propositional with the ›tree‹ being the subject and ›blooming‹ the predicate. Therefore, in the perception – for example an act of *experience* intending to such a thing as, say, a blooming tree – the noematic sense will be *complex*: the perception of a blooming tree has to entertain both ›tree‹ and ›blooming‹. In distinction to complex *experiences*, noematic senses of *judgments* are *composite* and thus propositional ›proper‹. These interpretations (it is worth mentioned that the here mentioned ›sense-as-content school‹ forms one of least four different schools of Husserl interpretation) hold that what Husserl calls predicate-meaning is a main part also of the noematic sense of an act of experience (1983, 313). In spite of not being propositional proper, noematic sense of an act of experience also has something akin to an object. Indeed Husserl argues that such *Sinn*, being a complex meaning structure, contains both predicate-sense and what Husserl calls a ›determinable X‹ (1983, 313). Thus, most of the sense of perceiving the blooming tree consists of the predicate-sense ›blooming‹ – in fact Husserl calls the predicate-sense the ›content‹ of the meaning. But the *Sinn* also contains a ›determinable X‹; ›something‹ towards which the predicate-sense is directed. In this case it is the tree even though ›tree‹ of course also itself has a descriptive content. If we on the other hand were dealing with a judgment, a propositional act, the noematic sense would be ›this tree is blooming‹. If it was an experience, there would be no judgment, and the noematic sense would be simpler, e.g. ›blooming tree‹. The latter is thus a singular (though complex) meaning, the former a proposition containing subject (S) and predicate (p). An attributive direct-object act (experience) entertains as noematic sense a single meaning, [Sp] while the meaning of a propositional act (judgment) is compositional [S is p] (Miller 1984, 48, 62).

The last three passages are all broadly representative of the ›sense as content‹ school of interpretation of Husserl which claims that all noematic *Sinne* – also *Sinne* derived from simple acts of experience or perception – are semantic entities. Hence they can be understood by means of linguistic semantics,

for instance possible-worlds semantics (but also through the notion of truth condition). Hintikka thus defines noematic *Sinne* as concepts which in turn can be understood as functions from possible worlds to extension (1975, 195, 201, 205). In other words, meaning (noematic sense) is the ›rule‹ that specifies which propositions under which conditions (possible worlds) have truth value, have extentionality (Smith/McIntyre 1982, 21).

This conception of meaning is dependent upon meaning having a pointing character (Smith/McIntyre 1982, 126). Husserl himself stresses that the noema facilitates a relation between the intentional object and its mental representation. A noema is a ›vehicle for directedness‹ according to Hintikka (Hintikka 1975, 206). Luhmann for his part (1997b, 34), talks of systems' sense making as a constant oscillation between self-reference and external reference. Through this oscillation, distinctions between the systems and their environments are constituted, and the system constructs external realities: Meaning has reference, but meaning is at the same time (or through oscillation) constituted self-referentially.

Luhmann draws on Spencer Brown's notion of form (1979), to theorize how meaning ›points out‹ something. Or perhaps one should say that the pointing out, the *distinguishing something*, is meaning (an idea that fits perfectly well with the above described interpretation of Husserl's noema). Form establishes a boundary between system and environment (Luhmann 1997a, 45, 51; see also Luhmann 1990a, 82; 1996, 24). Any act of sense making both constitutes (or reproduces) the system *and* creates meaning. That double folded process itself has two consequences. Firstly, the observation creates a distinction between system and environment and secondly between external reference and self-reference. This brings us back to the noema-noesis correlation. For Luhmann, the second distinction is compatible with Husserl's distinction between noesis (self-reference) and noema (external reference) (Luhmann 1995b, xli; 1997b, 33-34; 1998, 110). Luhmann's comparison may seem far-fetched. It is indeed quite a simplification but recall that noesis is the act of ›thinking‹, the bestowal of sense, while noema is ›the thought‹. Luhmann refers to them as *Vorstellen* and *Vorgestelltem* (1997b, 33). And the most important aspect that Luhmann and Husserl in this regard share is that noematic meaning for both types of systems has a pointing character; that it establishes a relation between the object that is intended to and the intentional content of an act.

Meaning as recursive complexity reduction

Meaning creates form out of noise, void, or *hyle*, but this structuring happens not so much through the meaning as through the operation whereby meaning is attributed – the noesis in Husserl's terminology. In a Husserlian terminology this noetic structuring happens through the classification and meaning attribu-

tion of / to the perceived, which happens based partly on memory and expectations (and habitus), partly in the stock of knowledge of the life world (Hintikka 1975, 198; Husserl 1973, 42, 52). What is attributed is noematic meaning, which is left as the durable result of the ephemeral noesis. The hyletic data is structured, through the noesis, by attributing meaning (semantic entities) that hold within them certain truth conditions (intension) and certain expectations. And this happens based on previous experiences and previously generated knowledge, on *recognitions*. When we experience a tree we are already familiar with such a phenomenon and we use this previous experience to decide if the tree at hand fulfils the truth conditions of our concept (noematic meaning) ›tree‹. This brings us to another immensely important aspect for phenomenology, namely how existing meaning functions as schemata that guide new sense making.

Luhmann remoulds the argument concerning *recognition* into one of *recursivity*. Luhmann argues that 1) sense making is a recursive process; 2) sense making involves classifications and identity attributions (what in the context of Husserl's thought is referred to as intensions); and 3) sense making is dependent upon, and itself creates, memory and (schemata for) expectations.

That sense making is recursive means simply that also social systems are dependent on the meaning previously generated. Similarly to Husserl's psychic systems that consist of concenations of mental (noetic) operations, communicative sense making systems consist of flows or concatenations of ephemeral (noetic) ›acts‹ (Luhmann 1995b, 47). These flows are flows in time, and therefore both types of systems are faced with problems of indefinite complexity: there are, first, indefinite numbers of single communicative or psychic ›acts‹ that need to be unified and there are, second, an indefinite number of possibilities for future acts, future occurrences in the world. Just like Husserl's transcendental subject, Luhmann's social system needs to condense the manifold of information into manageable size by (a) ›recognizing‹ (it should be ›recommunicating‹) the given phenomenon as identical to previously experienced phenomena or similar and thus belonging to the same class of phenomena and (b), based on this identification, to form expectations about the phenomenon so that there is time to direct the focus elsewhere (otherwise the system would be forced to observe the same phenomenon until the end of time).

Meaning as identity and expectations

Either explicitly or tacitly Luhmann often refers to Husserl's famous example of the perception of a table (Husserl 1983, §41). One can perceive of this table in many different ways and through many single acts, but with noematic sense, the single perceptions can be condensed into a perception of the table being the one same table. The intentional object can be given *identity* (Husserl 1995, 39, 42) or classified as belonging to the specie ›table‹. It is this core

element of Husserlian thought which Luhmann uses to construct a theory of sense making autopoietic systems with ephemeral elements. Luhmann (1995b, 92), mimicking Husserl's example of the table, describes meaning as *identities* (classifications) and as *symbolic generalizations* (990b, 75). Drawing on Spencer Brown's algebra of form (Luhmann 1995b, 94; 1997a, 45-47; Spencer-Brown 1979), Luhmann argues that meaning is the condensation of concatenations of (noetic) acts into single (noematic) entities: The table we communicate (observe) about now is the same table we observed a split-second before; the stream of consciousness/communication may consist of discrete (noetic) elements but through (noematic) meaning our observations are not equally fragmented. The theme of communication (*Vorstellen*) is attributed meaning – the *Vorgestelltem*. Symbolic generalizations are noematic *Sinne*, or as Luhmann simply states they are generalizations precisely because they generalise many discrete elements in time.

Meaning condenses sense impressions or judgments of a given entity in that they help to categorize the entities of experience or judgement (e.g. asserting that the entity at hand belongs to the category ›table‹ to which belong many other similar objects). Identity attribution thus leads to a recursive *modus vivendi* of the system (Luhmann 1997a, 47). In doing so, systems also form expectations (1995b, 94-97): Meaning enables the system to precipitate the information it receives. When coming upon a table the next time, the system does not (need to) start from scratch, that is, does not (need to) observe the table for a sustained period of time but instead immediately categorises it as a table and expects it to, say, be reasonably stable and level, be made of certain sturdy materials etc. The system uses its already generated meaning to interpret, categorize and form expectations about, the observed entity (Luhmann 1997a, 47). Meaning (symbolic generalizations) can reduce complexity because they are *time binding* (1993b, 93). If something is attributed identity as, say, a table, this identity remains over time and is thus the basis for the formation of expectations (Husserl 1983, §41; Luhmann 1990a, 34-5; 1997b, 31). On this background Luhmann talks not only of meaning as condensation (symbolic generalisation) but also of meaning as an actual/potential distinction: something actual (identity or generalization coupled with something expected).

Meaning horizons

The most often occurring definition of meaning in Luhmann's work – often with direct reference to Husserl's notion of the meaning horizon – is meaning as an actual/potential form (Luhmann 1990b, 23, 63; 1995b, 74; 1997a, 50). Husserl (1973, 32) operates with a distinction between external and internal meaning horizons which Luhmann integrates in his system theory (1995b, 76-77) Husserl also makes another distinction between object and act hori-

zon which Luhmann ignores and so will I, by and large, in this article. With the meaning horizon, Husserl shows that meaning is never fulfilled, that it is impossible to make sense of the world in full and that only partial views are possible. For Luhmann, this hypothesis becomes the prerogative of a system to select which we have already touched upon. All systems are faced with a high degree of complexity, we saw above, and meaning always entails a selection and thus a *reduction* of this complexity. Thus meaning equals selection: some is actualised – ›pointed out‹ as I wrote before, or *marked* one would say with Spencer Brown (Luhmann 1990b, 63) – while ›the rest‹ is left as the outside or the *unmarked* side of the form actual/potential.

However, the outside of the form needs careful elaboration. Meaning selects, but this does not mean that what is not selected is wholly marginalized or forgotten. The rest, the non-selected, remains as a horizon of potentialities which is an integral part of the meaning. This means that actual sense making always takes place upon a background of other ›things-in the world‹. The rest, the unmarked is not forgotten but remains there as a hidden and passive, yet still present background as a vital frame of other possibilities in the world (Husserl 1970, 143-49). For the late Husserl, this external horizon (I will turn shortly to the internal horizon) becomes the life world, that is, a shared background for meaning which among other things comprises a shared set of schemata or passive *doxa* which guides actual sense making (Husserl 1970, 164; 1973, 52-4). The notion of life world is of course fully absent in Luhmann's theory because it is replaced by a social system. Instead of individual sense making subjects whose experiences are ›co-ordinated‹ through shared schemata for sense making and shared meanings, there is now a social, communicative, system with its own schemata which guide its sense making. The next section will turn to these schemata.

Internal horizons, expectations and symbolic generalizations

Expectations are as written an important element of meaning. The *external* horizon (which for the late Husserl equals the life world) is the amount of collectively taken for granted ›stuff‹ in the world. It is on this background, that any given object or entity is selected, either cognitively or communicatively. But Luhmann also utilizes Husserl's *internal* horizon. The internal horizon is the potentialities of the *selected* object, that is, expectations to the phenomenon which is made sense of. Also here a selection or a complexity reduction is needed because – and this is a parallel to the external horizon – the complexity of the ›intentional object‹ cannot be grasped in full. A system reduces complexity both by making certain things centre of attention and by focusing only on some aspects of that given entity. Only some elements, aspects or characteristics of the entity is actualised, is made sense of, while the rest is left as a horizon of

potentiality. But once again it is not so that this ›non-selected‹ horizon simply is left as an all together passive background. The horizon is always motivated by previous experience, both Luhmann and Husserl argue; what is ›excluded‹ from the sense of a given phenomena is virtually included in the form of *possibilities* or *expectations* (see also Hintikka 1975, 200).

The central point for Luhmann is indeed that the internal horizon constitutes the expectations of the symbolic generalizations. Again the similarities with Husserl who speaks of the ›expectation-horizons of the multiplicities expected as normal‹ (Husserl 1970, 162) are striking. If we go back to the example with the table, we perceive of the table, generalize it as belonging to the category of table, which we have available to us as a linguistic category already formed by previous communicative operations, and at the same time form expectations about it. These expectations constitute the internal horizon. Based on previous experience, our perception of a table not only leads to the labelling and categorization of the intended object as a table but simultaneously to the formation of a certain horizon of expected possibilities. In this way, the sense making system at any given time reduces complexity, that is, gain time, by structuring the expectations of how the object might behave in the future. And the system uses already established meanings and expectations as schemata for new sense making and the formation of new meanings (symbolic generalisations). Meaning contains schemata for expectation that serve to structure the meaningful world (Luhmann 1995b, 286, 293; 1997a, 83). Husserl by the way uses the term ›structure‹ in a similar way (1983, 355-63; 1995, 53). The system gains time (reduces complexity) by not having to keep all options open. When we perceive of a table, we categorize it as such and immediately form rather stable expectations about it which has the effect that we no longer have to observe it at length just to make sure that it will not, say, start emitting toxic fumes or play guitar. Instead we can concentrate on other things. The system uses meaning as schemata in order to gain time and structure; to reduce the number of possible worlds.

Luhmann distinguishes between two types of expectations, cognitive and normative. Cognitive expectations are embedded in the type of symbolic generalisations we may call knowledge (Luhmann 1995b, 328) while normative expectations of course have to do with expectations about persons. The crucial distinction for Luhmann however is that when cognitive expectations are disappointed, new knowledge is needed while normative expectations most often are upheld and the actions which break with norms are sanctioned or condemned.

We saw that Husserl (1983, 337) makes a sharp distinction between empty horizons of possibilities and motivated ditto. Husserl uses the term *habitus* (we have until now simply used the term ›memory‹) to describe lived experiences which have created latent structures of expectations for new experiences (1973, 122). In addition to *habitus*, Husserl holds that the life world and its shared

meanings helps structure the expectations. In this sense, there is a clear link between the external horizon (life world) and the internal horizon of an intentional object as the former partly structures the latter. The life-world is absent in Luhmann's theory and replaced by the memory of the social system. As for the habitus, Luhmann avoids this particular theoretical term but as just written he does state that the system's structure is partly based on memory (Luhmann 1997a, 83). Also here, the past structure expectations to the future (see also 1993b, 35).

But expectations – or motivated horizons – are not only determined by past experiences: Also when we have no previous experience of the given phenomenon we encounter, there still are symbolic generalizations at hand for making sense of the phenomenon. Meaning has some abstract properties that help structure the expectations. Husserl (1983, 359) talks of ›ideal essences‹. At least all material objects are intended to as *res temporalis*, *res extensa* and *res materialis*. That is, all noematic sense bestowed to such intentional objects contains, or is built upon, ›ideal notions‹ of time, space and causality: We make sense of things by observing things' extension in space, their temporal transformations and their causes and effect. Within these basic structures or *schemata*, more restrictive motivated expectations are then formed. Luhmann in a similar vein talks of three meaning dimensions or meaning schemata through which meanings are formed (Habermas/Luhmann 1971, 48; Luhmann 1995b, 87-89). Here the three dimensions are the object, the temporal and the social dimensions.

Sense making is thus based upon, and entails the formation of, expectations which on the most basic level are structured based on ›ideal essences‹ or simply basic meaning schemata and which then are structured further by existing expectations inherent in symbolic generalizations, often preserved in language (Luhmann (1997a, 200) therefore calls them semantics), which for their part are the products of the systems' previous operations (see also Martens 2000, 262). In other words, the central and common phenomenological element which Luhmann brings into his systems theory is that sense making entails the constant use, formation, and reproduction of expectations which serve as schemata or ›scripts‹ for further sense making. It follows that uncertainty can be regarded as a crisis of these schemata. Or rather, that uncertainty forces the systems to operate with more plastic schemata for expectations. With greater uncertainty the horizon is ›bigger‹ write Husserl and Luhmann in unison. When faced with uncertainty, the observer is forced to approach inductively and to modalize the horizon expectations (Husserl 1973, 98; Luhmann 1995b, 422) – to leave room for more possibilities. And once systems encounter such uncertainties, the scripts or schemata for making sense of the world changes accordingly, and becomes more contingent and uncertain and often, in self-reflections, thematized as risk (Luhmann 1993b).

A phenomenology of communication

So far, we have examined how Luhmann has taken a series of concepts from Husserlian phenomenology and turned it into a theory of communicative sense making. Instead of cognition we have communication; instead of an intentional subject we have an observing and selecting system. But we still have sense making. The rest of this article could now explore how Luhmann uses this theoretical framework for, among other things, deliberations on the historical development of semantics (Luhmann 1980; 1997a), for instance of time (Gumbrecht 2001; Luhmann 1980) or of causation, or his theory of risk (Luhmann 1993b; 1995a) or contingency (1998, chap 3). However, instead of deliberating on these topics, I would like to point out some of the implications of this phenomenology of communication by firstly relating this Luhmannian type of phenomenology to other social phenomenological theories and secondly by discussing some of its implications for empirical analysis.

How does Luhmann's theory compare to the sociological phenomenology – the tradition from Schütz to Garfinkel to conversation analysis – which also is inspired by Husserl's phenomenology? The answer to this question necessitates, I will argue, a view of the *development* of this phenomenological tradition within social theory. Starting with Schütz and Berger and Luckmann (which I will call early phenomenology) and evolving into ethnomethodology and conversation analysis (which I will allow myself to call late phenomenology), this tradition has increasingly come to focus on what I will call social sense making, that is, sense making that involves making sense of other social agents (and the contingency of this). In what follows I will develop two propositions regarding phenomenological social theory and the divergence between phenomenological social theory's use of Husserl and Luhmann's ditto.

Phenomenological social theory has in the course of its development increasingly become preoccupied with what Luhmann would call normative expectations (as opposed to cognitive). The reason is that phenomenological social theory has become increasingly preoccupied with the (mutual) sense making of the other. That is, the focus is on how actors perceive, interpret, adjust and respond to the actions of others. As Berger and Luckmann made clear, a central element in early phenomenology was the common background, which consists not only of meanings and expectations relating to other human beings but also to the (objective) world more generally. Early sociological phenomenology addresses the big question which Husserl himself posed (but never really completely answered) with his late theory of the *Lebenswelt*, namely how it can be that subjects experience the world in more or less identical ways (Schütz 1962). The *Lebenswelt* is a shared (external) horizon, shared schemata for sense making and of course a shared stock of knowledge and meaning. In Schütz's work, the overarching question is to a large extent how a shared perception and knowledge of the world emerges. The question is of course also – incorpo-

rating Weber's notion of *verstehen* – how people make sense of and understand each other. Slowly however, these two strands bifurcate. The stock of knowledge made available to all actors become a theme in sociology of knowledge (Berger/Luckman 1991; Hekman 1986, 29), a field in which phenomenology comes to play only a minor role. The question regarding the perception of other social agents becomes the central question for ethnomethodology. This tradition has its tentative beginning with Garfinkel's PhD thesis (1952) with the telling title *The Perception of the Other*. From then on, the shared perception of the objective world (and the consequent cognitive schemata of expectations and memory) is pushed to the side in order to make place for elaborate analyses of precisely the perception of the other and how social actors struggle with the contingency of social interaction.

Phenomenological social theory – objecting to structural functionalism – puts much less emphasis on structures and instead focuses on the dynamic construction of schemata for understanding of the other. Phenomenological sociologist would hence object that Luhmann proposes a reversal to an idea of individuals drawing on a (structurally) given resource of meaning schemata. The ethnomethodological claim is in this regard that these are constantly produced through interaction and that interaction is a highly unstable and contingent process. Garfinkel's work is a case in point. Garfinkel draws heavily on Husserl but takes it in a different direction than Luhmann. Garfinkel states that social interaction and perception of the other is guided by ›background expectancies‹ that are used as a ›scheme for interpretation‹ (Garfinkel 1984, 36). Garfinkel indeed often uses a vocabulary reminiscent of Husserl's – agents ›intend to things‹ for instance. Garfinkel's important point is of course that these expectation horizons are not given prior to, but instead constructed in social interaction. This was one of his original motives for looking beyond Parson's interpretation of Weber (Garfinkel 1952, introduction) and instead turning to Schütz, and it is a predominant argument throughout later work. Social agents are not ›cultural dopes‹ (Garfinkel 1984, 68) but rational human beings that construct the ›rules‹ or the schemata through interaction.

In contrast to Schutzian (or early) phenomenology, Luhmann's theory is not concerned with a life world that consists of background expectancies and a shared stock of knowledge – in other words schemata for making sense of the world and other human beings. Instead, we have a sense making system of another sort, namely a communicative one, which nevertheless makes sense based on various meanings and schemata. Such a system makes sense both of things and of persons so to speak (as both belong to the environment of the social system) and hence the focus of a Luhmannian analysis is not *only* the perception of the other, as is increasingly the case with later phenomenology, but instead *also* with the schemata for making sense of things and the non-social world.

The first of the two propositions is therefore that it is Luhmann rather than early phenomenology who succeeds in constructing a true sociology of knowledge based on phenomenology. This is because it is Luhmann who creates a focus as much on human knowledge of the non-social world as on the social. Moreover, Luhmann with his focus on semantics and symbolic generalizations succeeds in including written and in some cases formalised and institutionalised meaning (for example scientific knowledge) in his theoretical scope, something which is in stark contrast to phenomenological social theory – especially ethnomethodology with its focus on non-codified ›ethno‹ or *folk* knowledge. And finally, Luhmann's theory is to an equal degree concerned with normative and cognitive schemata.

But, going back to Garfinkel, is this at the expense of the abandonment of the dynamic focus of phenomenological social theory and its critique of Parsonian notions of a normative repository *a priori* to human action? Luhmann's theory may be read as though he retreats to a Parsonian type of structural functionalism which assumes the existence of a fixed set of norms. I will however argue that Luhmann's theory contains a radical departure from such a position.

Social systems are for Luhmann, as already mentioned, sense making systems. Like psychic systems, social systems are active and ›intentional‹ systems. They operate ›intentionally‹ precisely because intentionality always implies the active selection of something on a background of other possibilities (Hintikka 1975, 195). Such ›intentional‹ sense making processes always happen based on ›background expectancies‹ (horizons) that are used as a ›schemes for interpretation‹ to repeat the quote from Garfinkel above. These expectations are primarily based upon previous sense making, hence social systems approach the future based on its previous ›experiences‹ (Luhmann 1993b, 35) just like psychic systems or subjects. The schemata are therefore never stable because the system constantly encounters new information that needs to be made sense of and incorporated into the existing schemata. Luhmann talks of the system's irritability and says that a social system is in a constant cyclical process consisting of the stages memory, irritability, information processing, reality construction, and memory (and thus schemata formation Luhmann 2000, 98). The system encounters information that does not fit existing cognitive or normative expectations and is subsequently forced to readjust the schemata, or, in the case of normative schemata, to sanction transgressions.

I recapitulate these elements in Luhmann's theory in order to emphasise that Luhmann's notion of expectation does not denote fixed sets of normative ›rules‹ that are given prior to the observations and operations of the system. On the contrary, the expectations or schemata are products of the system's observations, that is, products of the ›intentionality‹ of the system; products of the prior sense made by the system. The second proposition is therefore that Luhmann's social systems do not contain rigid, prescribed structures, norms or schemata.

The structures are instead the result of a (contingent) history of the system itself. One could further this argument by comparing the rigid Parsonian AGIL schema where each subsystem sustains the overarching system through the fulfilling of specific roles with Luhmann's notion of autopoiesis where a subsystem's only prerogative is its own reproduction. Or one could extend this by discussing how Luhmann combines his notion of autopoiesis with that of observation (and hence intentionality). The conclusion in any case remains that Luhmann's theory of communicative sense making views expectations and schemata as processes, not as pre-given entities.

According to Luhmann, it is above all the mass media, one of the function (or sub) systems of modern society, which are the main creators of the social system's memory and expectations and thus schemata. Science and law (two other sub systems) of course also create schemata of respectively cognitive (science) and normative (law) memory and expectations, but it is the mass media that to the widest extent create the general ›background knowledge‹ (Luhmann 2000, 66) from which new communication can proceed.

This is best exemplified with the news media. News media have, through their news criteria, their focus on events that break with our expectations as to how the world and our fellow human beings (ought to) behave. However, news media and other mass media do not only respond to ›irritation‹ but also create new schemata of memory and expectations, a new ›background‹ (Luhmann 2000, 98). News media in other words respond to and recreate both cognitive and normative expectations.

Also science and law and science are constantly reacting to irritation. Science is as an institution seeking to establish all that can be known and expected about the world and things in the world. But at the same time the scientific endeavour is to find new uncharted areas of investigation which then must be analysed (Knorr-Cetina 1999). Law, built on normative expectations, is of course less proactively seeking the new and unknown and instead reacts to violations of expectations through sanctions. New legislation (in Luhmann's theoretical lens placed on the system of politics) is also a response to irritation.

I wrote earlier that this Luhmannian phenomenological analysis differs from phenomenological social theory in that focus here not only is on schemata for making sense of other actors but also of the world. And it is concerned not only with common sense like in Schütz's work (Albersmeyer-Bingen 1986) or the ›ethno‹ knowledge like in Garfinkel's but with all forms of knowledge, both common sense and highly specialised, formal, and institutionalised ditto. Why that is should now have been made clearer. To this can be added two further issues: Firstly, we are dealing with a stock of knowledge made available to social agents through culture and institutions such as education and science, and by means of various media (writing, news media, ICT etc.). And secondly, in terms of empirical study, this stock of knowledge as a result becomes more tangible. We are dealing with *representations*; textual, algebraic, discursive, figurative.

Meaning and empirical analysis

This leads us to questions regarding empirical analyses of the meaning. For reasons of limitations of length of the article, I will here concentrate on the meaning created by the news media. Media analysis is already an established field of research. The methodological and theoretical focus is on news as *discourse*. Phenomenology and ethnomethodology has some influence in this field (Altheide 1996), but the main force has generally been critical discourse analysis which has focused on ideology and the relationship between discourse, social practice, and power (Fairclough 1995; Laclau/Mouffe 1985).

Investigating the relations between social interests and media discourse is not far from sociology of knowledge such as the Strong program (Barnes 1977; Barnes/Bloor/Henry 1996) which investigates relations between social interests and science (see the conclusion of article). The key question is how to reconcile Luhmann's theory of meaning and communication with theories of discourse. The key to the answer is that Luhmann's notion of meaning, being derived from Husserl, is propositional.

Meanings which describe are in linguistic semantics called descriptive, representational, or – the term I will use most in the following – *propositional meaning*. Propositions are logical entities that contain a subject and a predicate, e.g. \langle the cat smells \rangle . Another vital part of their definition is that they can be known, believed and doubted (Lyons 1995, 141) again showing the basis for using this term in relation to knowledge. While propositions in the classical definition are compositional, $[S \text{ is } p]$, we saw above that singular Husserlian/Luhmannian meaning may also be defined as propositional; $[Sp]$. We may therefore use Luhmannian theory to analyse both propositional (descriptive) meanings and concept meanings. Concept meaning has to do with single words while propositional meaning has to do with sentences, texts, or, as a general term, expressions.

Singular meanings are important as classifications (symbolic generalizations) and the meanings and expectations entailed in these often are of critical importance for media discourse analysis. Generally however, the subject of news discourse analysis is *utterances* of sentences. These utterances are describing events, meaning that they assert propositions, wherefore they are a subclass of utterances, namely *statements*.

A good deal of, but not all, the meaning of statements consists of the *propositional content*. Propositions can be simple or complex just as sentences can contain one or more clauses. Any proposition expresses a description of its subject as seen above. Statements can be analyzed in terms of the logical properties of the propositions that they purport to express. This includes negation, entailment, conjunction, disjunction, modality and other terms known from formal logic. Luhmann for example refer specifically to modal semantics in his work on cognitive expectations and complexity (1995b, 320-330).

Propositional or descriptive meaning is the most formal form of meaning, hence propositional meaning is basically context *independent*. But as statements are utterances and utterance meaning is context dependent, we will therefore need to have a notion of *utterance meaning* to complement the notion of propositional meaning. This is by the way in distinction to analysis of the propositional content of formalized scientific knowledge where context matters relatively less.

Utterances are fundamentally polysemic. A given utterance can express a range of different propositions. Which one, or ones, is dependent on context and on interpretations and ultimately the ontological beliefs and epistemic culture of the interpreter. The meaning of *I can't find the port* is quite different depending on whether one is at sea or at home about to have desert. The written utterances of news articles need of course to be less ambiguous in order to secure understanding but also here a range of aspects are dependent on context. That, among other things, goes for *implicatures*. Some things are entailed or strictly implied by the logical elements of sentences but much more is so to speak conveyed by utterances without being uttered.

So far we have only talked about the meaning of single sentences and single utterances of sentences. News discourse is strings of statements that have cohesion and/or coherence, that is, statements which build on each other and/or have the same referents or related or mutually relevant referents. Statements are the articulation of meaning by means of sentences and sentence fragments. Statements are by the way what Foucault takes to be the basic elements of his discursive formations in his method of archeology. His aim is to give a definition of the basic element of discursive formations which neither is grammatical sentence, nor logical proposition, nor speech act (Foucault 1972, 80-1). I will not use any of Foucault's terminology but elements of his attempt to arrive at a notion of statements that is neither purely logical nor purely pragmatic (i.e. focused on speech acts) can also be found here. This generally is what creates similarities between Luhmann's analysis of semantics and Foucault's archeology.

News discourse has of course meaning derived from the meaning of the statements of which they consist. However, parts of the meaning of texts also consist of the meaning of the order of the statements. Simply the chronological order of the statements of a text is meaning bearing. One may based on that distinguish between the *local* (or *micro*) *meaning* of the statements that a text consists of and the *global* (or *macro*) *meaning* of the text taken as a whole. For example, the thematic ordering of a text changes the meaning of that text. I will therefore talk about *structures* of a text as something that is meaning bearing on a global level.

News stories have typical structural elements such as headline, lead, background, specifications etc. (Dijk 1988a; 1988b). This structure is meaning bearing in two ways. First, it creates meaning because it orders statements accor-

ding to importance with the most important being uttered first. Secondly, it assigns different roles with different status to different sources. Hence a news story may have holders of power, experts and lay people in one singly story. These different roles are often instantly recognizable (and important forms of context dependent meaning). Such structure influences reception of information and also make different news as a genre (and the various subgenres) instantly recognizable for the receivers. Such structures – I will in turn call them *discursive structures* or *thematic structures* – *frame* a text. We can, say, when watching a TV program in a foreign language, easily classify the type of program without understanding what is actually being said.

We saw above that any utterance of a sentence that contains a proposition is a statement of that proposition. On a macro level we can similarly say that the article as a whole states a (macro) proposition. Hence, an article is a macro statement. This emphasizes why the discursive or thematic structure is so important for the meaning of the global text. Those statements that are granted importance by the discursive structure are the ones that will play the biggest role on the macro level. Granting importance normally also means focusing on specific *themes*. This thus also shows how the notion of theme is connected with both discursive (or thematic) structure and thus with the global meaning of a text.

In summation, Luhmann's theory of meaning and communication can be converged with a methodology of news discourse analysis which studies the statements (micropropositional content) and the structures of statements (macropropositional content) of which news discourse consists. Such a line of analysis is arguably most developed in the work of Teun van Dijk (1985; 1988a; 1988b; 1998).

Conclusion

Luhmann begins his »studies in sociology of knowledge«, *Gesellschaftstruktur und Semantik* (1980) by arguing that social structure correlates with semantics. We may add to that social structure and institutions are (re) produced through semantics. Sociology of knowledge analyses knowledge because of this correlation with social structure, that is, analyses knowledge in order to uncover the social and cultural influence on knowledge and the reproduction of power through knowledge (Eisenstadt 1988). Much in the same way, the aim of media studies is often to analyse dominant media discourses and how these create or enforce social structures and institutions.

What Luhmannian theory offers in this regard is a theoretical and methodological apparatus for analysing meaning and the generalisations and expectations embedded in meaning. This article has attempted to elaborate on the theoretical part and briefly outline the methodological part in regard to media

discourse. Luhmann's theory also posits a range of other assets. It distinguishes between different types of knowledge (by means of their belonging to different subsystems) yet it applies the same theoretical frame to all types of knowledge and norms. It clearly identifies empirical data for analysis, namely communication, text, discourse and other types of representations. While semantics are the foundations for all subsystems or institutions of society, communication in three function systems are regarded as being particularly important; science for generating cognitive expectations (i. e. knowledge), law for generating normative expectations and mass media for generating both cognitive and normative ditto. And perhaps most importantly, it provides a dynamic perspective on semantics and their reproduction through communication. In his own empirical analyses, Luhmann was primarily interested in the bigger historical transitions of society and the correlating shifts in semantics. His most well known study is perhaps his analysis of the historically changing meanings of love (Luhmann 1986), but he also undertook a series of other studies of semantics which include both cognitive and normative expectations on a more general level including different forms of knowledge, conceptions of time and causation, religious worldviews, ethics, politics, educational programmes etc. (Luhmann 1980; 1981; 1993a; 1997a, 893-1115). The same type of analysis may however also be applied to more micro changes in semantics (e. g. Arnoldi 2003) precisely because the semantics constantly change and mutate and because these changes correlate with social, institutional and organizational changes.

References

- Albersmeyer-Bingen, Helga (1986): *Common Sense – Ein Beitrag zur Wissenssoziologie*. Berlin: Duncker & Humblot.
- Altheide, David L. (1996): *Qualitative Media Analysis*. Thousand Oaks: Sage.
- Arnoldi, Jakob (2003): *Making Sense of Causation*. *Soziale Welt* 54, 405-427.
- Barnes, Barry (1977): *Interest and the Growth of Knowledge*. London: Routledge & Kegan Paul.
- Barnes, Barry/Bloor, David/Henry, John (1996): *Scientific Knowledge*. London: Athlone.
- Merz-Benz, Peter-Ulrich/Wagner, Gerhard (eds.) (2000): *Die Logik der Systeme*. Konstanz: UVK.
- Berger, Peter L./Luckman, Thomas (1991): *The Social Construction of Reality*. London: Penguin Books.
- Bermes, Cristian (2006): *Anschluss verpasst? Husserls Phänomenologie und die Systemtheorie Luhmanns*. Pp. 18-37 in: D. Lohmar/D. Fonfara (eds.), *Interdisziplinäre Perspektive der Phänomenologie*. Dordrecht: Springer.
- Dijk, Teun A. van (1985): *Structures of News in the Press*. Pp. 69-93. in T. A. v. Dijk, *Discourse and Communication..* Berlin: de Gruyter.
- Dijk, Teun A. van (1988a): *News Analysis*. Hillsdale: Lawrence Erlbaum Associates.
- Dijk, Teun A. van (1988b): *News as Discourse*. Hillsdale: New Jersey.
- Dijk, Teun A. van (1998): *Opinions and Ideologies in the Press*. Pp. 21-63. in A. Bell/P. Garrett (eds.), *Approaches to Media Discourse*. Oxford: Blackwell.

- Eisenstadt, Shmuel N. (1988): Explorations in the Sociology of Knowledge: The Soteriological Axis in the Construction of Domains of Knowledge. *Knowledge and Society* 7, 1-71.
- Fairclough, Norman (1995): *Media Discourse*. London: Edward Arnold.
- Foucault, Michel (1972): *The Archeology of Knowledge*. London: Routledge.
- Garfinkel, Harold (1952): *The Perception of the Other*. Harvard.
- Garfinkel, Harold (1984): *Studies in Ethnomethodology*. Cambridge: Polity Press.
- Gumbrecht, Hans Ulrich (2001): How is our Future Contingent? *Theory, Culture and Society* 18, 49-58.
- Habermas, Jürgen / Luhmann, Niklas (1971): *Theorie der Gesellschaft oder Sozialtechnologie – was leistet die Systemforschung?* Frankfurt a.M.: Suhrkamp.
- Hekman, Susan J. (1986): *Hermeneutics and the Sociology of Knowledge*. Cambridge: Polity Press.
- Hintikka, Jaako (1975): *The intentions of intentionality and other new models for modalities*. Dordrecht: D. Reidel.
- Husserl, Edmund (1970): *The Crisis of European Sciences and Transcendental Phenomenology*. Ewanston: Northwestern University Press.
- Husserl, Edmund (1973): *Experience and Judgment*. Evanston: Northwestern University Press.
- Husserl, Edmund (1983): *Ideas Pertaining to a Pure Phenomenology and to a Phenomenological Philosophy (first book)*. Dordrecht: Kluwer Academic Publishers.
- Husserl, Edmund (1991): *On the Phenomenology of the Consciousness of Internal Time*. Dordrecht: Kluwer Academic Publishers.
- Husserl, Edmund (1995): *Cartesian Meditations*. Dordrecht: Kluwer.
- Knorr-Cetina, Karin (1999): *Epistemic cultures: how the sciences make knowledge*. Cambridge: Harvard University Press.
- Knudsen, Sven-Eric (2006): *Luhmann und Husserl*. Wiesbaden: Königshausen & Neumann.
- Laclau, Ernesto / Mouffe, Chantal (1985): *Hegemony and Socialist Strategy*. London: Verso.
- Leydesdorff, Loet (2010): *Luhmann Reconsidered: Steps Towards an Empirical Research Programme in the Sociology of Communication?* Pp. 149-173 in: C. Grant (ed.), *Beyond Universal Pragmatics. Essays in the Philosophy of Communication*. Oxford: Peter Lang.
- Luhmann, Niklas (1980): *Gesellschaftsstruktur und Semantik, vol. 1*. Frankfurt a.M.: Suhrkamp.
- Luhmann, Niklas (1981): *Gesellschaftsstruktur und Semantik, vol. 2*. Frankfurt a.M.: Suhrkamp.
- Luhmann, Niklas (1982): *The Differentiation of Society*. New York: Columbia University Press.
- Luhmann, Niklas (1986): *Love as Passion*. Cambridge: Polity Press.
- Luhmann, Niklas (1990a): *Essays on Self-reference*. New York: Columbia University Press.
- Luhmann, Niklas (1990b): *Soziologische Aufklärung 5*. Opladen: Westdeutscher Verlag.
- Luhmann, Niklas (1993a): *Gesellschaftsstruktur und Semantik*. Frankfurt a.M.: Suhrkamp.
- Luhmann, Niklas (1993b): *Risk – a Sociological Theory*. New York: De Gruyter.
- Luhmann, Niklas (1995a): *Das Risiko der Kausalität*. *Zeitschrift für Wissenschaftsforschung* 9/10, 107-119.
- Luhmann, Niklas (1995b): *Social Systems*. Stanford: Stanford University Press.
- Luhmann, Niklas (1996): *Die Realität der Massenmedien*. Opladen: Westdeutscher Verlag.
- Luhmann, Niklas (1997a): *Die Gesellschaft der Gesellschaft*. Frankfurt a.M.: Suhrkamp.
- Luhmann, Niklas (1997b): *Die Neuzeitlichen Wissenschaften und die Phänomenologie*. Vienna: Picus.
- Luhmann, Niklas (1998): *Observations on Modernity*. Stanford: Stanford University Press.
- Luhmann, Niklas (2000): *The Reality of the Mass Media*. Cambridge: Polity Press.
- Lyons, John (1995): *Linguistic Semantics – An Introduction*. Cambridge: Cambridge University Press.
- Martens, Wil (2000): *Gegenstände und Eigenschaften*. Pp. 257-302. in: P.-U. Merz-Benz / G. Wagner (eds.), *Die Logik der Systeme*. Konstanz: UVK.
- Miller, Izchak (1984): *Husserl, Perception and Temporal Awareness*. Cambridge: MIT Press.
- Nassehi, Armin (1993): *Die Zeit der Gesellschaft*. Opladen: Westdeutscher Verlag.
- Schütz, Alfred (1962): *Collected Papers 1: The Problem of Social Reality*. The Hague: Martinus Nijhoff.

- Smith, David Woodruff/McIntyre, Ronald (eds.) (1982): *Husserl and Intentionality*. Dordrecht: D. Reidel.
- Spencer-Brown, George (1979): *Laws of Form*. New York: E. P. Dutton.
- Teubner, Günther (2001): *Economics of Gift – Positivity of Justice: The Mutual Paranoia of Jacques Derrida and Niklas Luhmann*. *Theory, Culture & Society* 18, 29-47.

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