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The Term 'Sense' in Niklas Luhmann's Theory

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Abstract   The paper is about a key term of Niklas Luhmann's System Theory: the term 'Sense'. According to System Theory, 'Sense' can be defined as the medium of social reality: a universal medium of the systems of consciousness and communication that enables the reduction of the world's complexity (the environment of the systems). The world is made up of senseful operations, and as such it is bound to the systems also formed by these operations. The world as environment (the 'outside') and the identity of the observer (the system; the 'inside') are both effects of senseful operations. Sense is not a substance, but a relation. It is not essential but processual. The paper places the term 'Sense' in the context of some other important terms of System Theory, like 'medium', 'form', 'system' 'environment', and also gives a brief summary of the theoretical frame, inasmuch it presents the tradition of 'second order cybernetics' developed by Heinz von Foerster.

Keywords   sense, cybernetics, system theory, social constructivism, form, medium, Luhmann

Introduction

The theory of Niklas Luhmann is usually called 'system theory', even though he himself said this term would be only a 'brand' and nothing else (Luhmann 2009 [1984]. 7–15). Based on the brand 'system theory', superficial interpretations declare Luhmann's work to be a kind of structuralism, a maze of rigid system-categories. However, a deeper study of Luhmann's theory quickly makes it apparent that the Luhmannian systems are structures not defined by principles outside of them, but by momentarily existing operations of 'sense'. This paper is about this key term of the Luhmannian theory.

Heinz von Foerster's second order cybernetics and the Luhmannian systems

The Luhmannian term 'Sense' has two main roots. One is Edmund Husserl's phenomenology: the Husserlian impacts on Luhmann's work and the relations between the authors in general are very nicely presented in Jakob Arnoldis's paper 'Sense making as communication' and they are also expressed by Luhmann himself in his book on Husserl. That is why this paper starts with the other root, which is less known, even though it is as important as the Husserlian one.

This other root of the term 'Sense' (and Luhmann's theory in general) can be found in Heinz von Foerster's 'second order cybernetics'. The Austrian author Heinz von Foertser worked out a complex epistemology on the basis of classical cybernetics (Foerster 2003.). He tried to develop a point of view that replaces the linear and rigid structure of the object-subject (observer-observed) distinction. According to Foerster, the observer is really constructed by the observed and vice versa: 'observation' is nothing else but the circular relation between them. Observation as a relation defines the observer and the observed, so

the observer refers not only to the observed, but also to himself by the act of observation. This crucial self-reference of the observer can be taken as another main point of the circular way of thinking or – as Foerster named it – the "cybernetics of cybernetics". Humberto Maturana's famous definition sums this all up: "everything said is said by an observer" (Maturana 1987. 65–82.) So the relation of observer and observed (subject and object) is defined more as co-ordination than subordination.

Foerster sees the main difference not between subject and object (observer and observed), but between the *orders* of observation. His favourite illustration for this is the case of the blind spot. Using Foerster's terms, the first order of observation (our eye's direct observation) is unable to get a coherent and complete image about the world out there. What we can see is something we learnt to see: the image we "see" is a result of computing processes. Actually, it is our brain that "sees": it observes the observation of the eyes transmitted to the visual cortex. The blind spot can be seen only by conscious observation of the observation of our brain. This is self-reference (one of Foerster's a key terms): when we are looking for the blind spot, we are actually observing our own observation; we are observing ourselves as we are observing. In Foerster's blind spot experiment, we glimpse our own blindness. A paradoxical situation arises: we can see that we cannot see, so we see (that we cannot see). With the help of the introduction of a new (second) order of observation, the observation of the first order of observation will be possible. The second order of observation in that case is self-observation: we can observe *how* the first order of our observation works.

Cybernetics, says Foerster (or rather, "the first order of cybernetics", as he named the traditional form of cybernetics), uses feedback only on the level of the elements (objects) of the observed system. In spite of that, Foer-

ster's "second order of cybernetics" is circular insofar as the cybernetician takes himself as part of the observed system. The description of reality depends more on the describing system (subject) than on the "reality out there" (object). Foerster's "undifferentiated encoding principle" says that we only have data of quantitative kind. Our neural system "knows" only the place and intensity of any stimulus. All qualities of any impression are made by the observing system itself: that is the basis of the famous idea of "operational closure" developed by Humberto Maturana.

Niklas Luhmann's oeuvre can be interpreted as a combination of the second order of cybernetics and the theory of autopoetic systems, applied in the field of social sciences (Luhmann 1995.) . Concepts like the distinction between 'closed' and 'open' systems and the self-regulation of these systems were key problems of general system theory from the 1950s on. Closed systems do not take any material (possible element of the system) from their environment in their functioning. The elements of open systems are, on the other hand, in the condition of permanent streaming: they can transgress on the borders of the system. They are tending towards a more complex and differentiated state. Open systems are not only characterized by the production of entropy (like closed systems), but also by the transmission of entropy. The relation between system and environment is a specific problem of the theory of open systems.

One of the most important questions of cybernetics was how the states of systems can be stabilized under continually changing environmental conditions. The feedback models (developed for answering that question) seemed universal for classical cybernetics; that is why cybernetics could be considered to be able to describe technical, social and psychic systems.

After this brief summary of cybernetics and system theory the main questions of the Luhmannian way of system theory and cybernetics can be asked: 1. how can we define a system? 2. how is the distinction between the system and its environment produced and reproduced? 3. what is the exact operation that produces the distinction, and how is it able to decide (inside the system) what belongs to the system? According to Luhmann, these problems had been considered in two different ways in earlier system theory: some arguments took systems as substantial, some others as analytical categories. Luhmann rejects both, because both of them constitute observing positions outside the systems, so they consider system theory itself an observer outside the world it observes. They say – according to Luhmann's argumentation – that system theory as a scientific position of observation is not a part of the "world" it observes. Based on Foerster's theories of observation (summarized above), Luhmann can easily reject this position. His (and Foerster's) starting point is the negation of objective observation. The observer must enter into the observation. The distinction between observer and observed is made by the observer's act of observing himself as he observes. Observed (self)observation produces the observed (the result and matter of observation).

In connection with this, Luhmann claims we can see that systems cannot be defined by their borders because the borders are constantly changing, and there is no (objective) position of observation. His answer (and innovation) is the dynamic concept of the system. He says: "The system is nothing else actually but the difference of the system and the environment." (Luhmann 2004. 66.) A differentiated system does not equal the sum and connections of its elements, but it is built by system/environment *differences* – even as the differences between observer and observed construct the process of observation and the process of observation makes the difference between observer and observed in Foerster's theory.

The *medium* (in this case: tool, territory

and matter) is the sense. It is in this medium that the systems of communication and the systems of consciousness operate: both are characterized by specific ways of operation, and neither can be derived from the other. The basic operation in the case of the system of consciousness is *thinking*; in the case of the system of communication (the social system, says Luhmann) it is *communication*. They can appear for each other only as environment (it is not possible to derive communication from consciousness). We have to understand the forms of sense appearing in communication systems (the structures of sociality or "social reality") in a "sui generis" way.

Towards the right question about sense: "How does it function?" instead of "What is it?"

We can thus draw the following conclusions: 1. only autopoietic systems are able to observe. 2. the way of observation necessarily contains the element of self-reference. 3. the operations called 'observation' can be performed only in the medium of sense: the systems of consciousness and communication are sense-producing and sense-processing systems. (They operate in the sense and thereby (re)produce sense.)

The 'world' as an endlessly complex and as such unobservable environment must be reduced to forms delivered by the medium of sense. Systems are created in the sense: this medium enables the distinction between self- and other-references, which is the distinction of system and environment. Sense also enables the temporal continuity of this distinction (Luhmann 1997. 51., 54.). The complexity of the 'world' stays unspecified: any kind of order can be based only on the forms of sense which are done by distinction-drawings of systems. (Luhmann 1987. 44–46.)

The context of sense can be created by transgressing on the borders of the system: the system itself is able to interpret its environment as the 'other' side of the distinction between self- and other-reference (remember: when a system observes, it always observes itself and the environment, because observation is always drawing a distinction between self- and other-reference, between, so to speak, "Me" and the "World".) The main characteristic of the forms of sense is that they are able to mean themselves (as actual) and something else (as potential) at the same time (Luhmann 1997. 48.). Consequently, the world can be observed in the medium of sense, but it cannot be taken as something already given (which means that it only comes into existence in the process of observation). No kind of substantial world-concepts can be acceptable for the Luhmannian theory. For the systems of sense, the world cannot be anything else but information-potential from which meaningful identities (objects, symbols, signs) can be formed by the process of observation (Luhmann 1997. 46–47.).

I will discuss the correspondence between sense and information later; now I would only like to emphasize that information is closely connected to the observing systems. Luhmann's concept of information is deontological: information can be produced only by the operation of observation of observing systems and does not have any ontological character.

The Places of Sense

If we want to ask the question "what is sense?", we can hardly find a right answer within the Luhmannian theoretical context and terminology. The question in fact is an ontological one. According to the Luhmannian point of view, sense is not 'something' we could define. We cannot observe sense as a whole, because it is impossible to take an observing position that enables that. It is impossible to observe sense, because there is no observing position outside of it. Sense contains (makes

possible) all potential observations and observing positions. So we cannot observe sense, because we are inside of it when we observe. We cannot see it; we cannot define it as 'something' (Karácsony 2003.).

Thus, the right question should rather be "How does sense function?" For answering that question, first of all it is worth examining *where* sense functions. In other words: what is the vehicle of sense? In the Luhmannian theory these vehicles are the autopoietic systems of consciousness and communication. We have to keep in mind that these are coequal kinds of systems. That is why it is impossible to say that consciousness is the primary vehicle of sense, and why Luhmann argues in many texts for a concept of sense which is not bound to any form of "subject" (Luhmann 1987, 1997, 2008.). He rejects the identity between sense and subjective intentions. (He says in that case the next question would stay unanswered: "What is then the sense of the subject?" – If we accept the term "subject", we already presuppose sense.)

There is no ontological basis or vehicle that would bear sense (subject or consciousness for example), so we have to understand it independently of all these (Luhmann 2006.). Sense is neither the advent of the spirit in the world (Hegel), nor vice versa (Husserl) (Luhmann 2008. 15.). Luhmann describes sense neither as substance nor as phenomenon, but as relation or context (Luhmann 1987. 19.). Sense is not a content of consciousness but a rule of selection. It is a distinction; in fact it is a basic medium / form-difference (Luhmann 2006. 217.) in the form of potential/actual. The self-referential side of the difference is the actual, which is always connected to the other-referential side, the potential. The medium of the sense is a horizon of (potentially referable) possibilities, and the forms of sense are actualizing some of them: these are the "contents" of sense. Sense reduces the complexity of the environment (world) in that way, and also keeps the complexity as the horizon of potential:

sense is nothing else but a selectively working relation between the system and the "world" (Luhmann 1987. 23.).

The answer for the question about the place of the sense can be formulated: sense is *between* the system and the world. In other words: it is *in the relation* of the system and the world. More precisely: it is *the relation itself.* Sense appears always in certain forms but it always transgresses these forms, because it makes other possibilities imaginable. The relation of the systems and sense is a constitutive and contingent one. (Contingent because potential options are always there; any order, any form of a system is only a possible one among others.) (Luhmann 1987. 20–21. and Luhmann 2006. 223–224.).

The functioning of sense is characterized by the urge of selection. It must keep the complexity on the external side (outside the system), and it must reduce it on the internal side (inside the system). Systems come into existence by selective reduction of the horizon of potentialities (which is the medium of sense). Systems are the forms of sense. The system is actual, the world is potential. The borders of the systems are borders of sense drawn moment by moment. They are contingent, and they can change in every moment.

Sense as medium and form

The term 'form' can be defined as the unity of a certain distinction and marking which always takes place in a certain medium. The form is the actualization of the medium: it makes actual some potentialities of the medium by distinction (selection). Sentences, for example, are forms of the medium 'language' (Luhmann 2006. 214–217.). So the form selects a certain terrain of the medium, and signs it as field of further operations. Luhmann names this terrain 'marked space'. This is the inner side of the form: then, further distinctions can be drawn. These further operations in the

marked space are called 're-enties' (Brunczel 2010. 28–46.).

If we take a closer look at the medium of sense, it becomes obvious that we have to specify what we said about its potential character. For being able to offer potential options for form-creating operations, the horizon of sense cannot be infinite. Its potentialities cannot be applied to anything. The world cannot be "whatever". The infinite character of possibilities, the reference to "anything" is narrowed down by the process of repression which limits the possible options (Luhmann 2008. 25.). The process of repression marks a set of options as 'possible' (this is the marked space), set apart from the 'impossible'. ('Possible' is anything what can exist or happen.) The marked space of the possible is open for the re-entry: that is, further operations can be done which make further distinctions between actual and potential (both must be possible!) – and this is how the 'real' comes into existence (Luhmann 2008. 15–16.).

Repression operates with negation. The possibility of negation separates the possible from the impossible. 'Possible' is anything (and only that is possible) that can be negated: this is the marked space open for re-entry of further (in that case dividing 'right' from 'false') operations. So the possibility of negation is the operation of repression. (Sense itself cannot be negated, because it contains negation as such. Even the sides of distinction meaningless/meaningful are meaningful.)

Following repression, the next step is making concrete forms. One principal tool of that is time, which enables the continuity of form-making (in the order of before/after). At this point, it is important to keep in mind that operations are happening instantaneously, they do not have extension in time. To keep up a continuous existence, systems must reproduce their operations and exactly that helps time in the form (distinction) of before/after which marks the present of the operation and divides

it from the past (not actual any more) and from the future (not actual yet) (Luhmann 2008. 13.; Luhmann 1997. 52–53.).

In addition to time, there are two other dimensions in which sense comes into existence (makes negations possible): the material and the social ones (Luhmann 2006. 225.; Karácsony 2003.; Luhmann 1987. 31–32.). The social dimension of sense includes the experiences of *Me* and *Others* referring to each other (in Luhmann's words: ego and alter). Different concepts of the world are applied to each other in forms of communication: consenses and dissenses. Communicable forms of sense come into existence in this dimension. (This aspect of the Luhmannian concept of sense is very close to the Husserlian term 'intersubjectivity'.) Sense creates a kind of normative and technical aspect in this dimension in order to make possible processes of communication (between systems of consciousnesses which are operationally closed for each other).

The material dimension reduces the world to the schema of thingness. It emphasizes that the aspect of communication according to it is always about something: it marks something in the world and the marked object becomes actual by the marking (divided from the not-marked rest of the world which stays potential). The material dimension is closely connected to the social and temporal ones: these give context to the material sense (Luhmann 1987. 32.).

Systems operating in the medium of sense are able to assign causality to the continuity. This way they can transgress the borders of themselves by assigning causality to their environment.

By the interplay of the dimensions the form of information in the use of sense comes into existence. The function of sense (as we have seen above) is a selective relation of the system and the world. As we have also seen, sense is not a content of consciousness but a set of rules of selections. Contents enter into the experience (in the case of systems of con-

sciousness) and communication (in the case of systems of communication) as information. Information is actually also an operation; the application of form, selection. It is a conscious selection led by sense and as such it is always contingent (Luhmann 1987. 26.).

Regarding systems of communication we have to draw the conclusion that we cannot conceptualize communication as a transfer of information or sense, but only as mutual sense-actualization on the basis of common structure of sense delivered by the social dimension of sense.

Regarding the systems of consciousness, the most important term is 'experience'. This is nothing but surprising information: informative modification of the expected; an overwriting of former premises. Experience is the continuous reconstruction of the senseful constructed reality (Luhmann 1987. 27.). Information is the selection (and marking) of something. The structures of sense (its applied forms) make the preconditions of being able to gain information value. Events are not pieces of information on their own: they only become information in the medium of sense. Information can be marked only by selections that are interpretable for the system (that are contained by the sense-context of the system). As novelty (information) cannot appear only that has been given formerly as possible (Luhmann 2008. 38.).

The novelty and connective potential of information mean that during a certain operation of sense it narrows the terrain of potentiality in which later operations can be done. In other words: information makes a re-entry, divides new marked / unmarked spaces and by that it reduces complexity (entropy). (Luhmann 1997. 46.).

Summary

Sense is the universal medium for the systems of consciousness and communication that enables the reduction of the complexity of the world. It makes possible the observation of the world by forms that transgress on themselves (transgress the 'actual' in the direction of 'potential'). The forms of sense mark the world as a horizon of potentiality. In the forms of sense, systems are able to observe the world and themselves. (Keep in mind: system-borders are always drawn in sense. They are sense-borders.) The world is formed by senseful operations and as such it is bounded to the systems formed also by these operations. The world as environment (the 'outside') and the identity of the observer (the system; the 'inside') are both effects of senseful operations. Sense is not a substance but a relation. It is not essential, but processual.   ✻

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