CogSem Notes
—Studies and Issues in Cognitive Semiotics

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These notes are dedicated to bringing information and comments on current research, reflection, and academic activities in the new discipline of cognitive semiotics, a field of studies in which cognitive science and general semiotics merge, collaborate or contribute to the inquiry into meaning and the mind. I am honored by the generous invitation and grateful to the editor of this important journal for the opportunity to offer its readers these *CogSem Notes*.

1. An International Journal: *Cognitive Semiotics. Multidisciplinary Journal on Meaning and Mind* (PAaB)

First, let me mention the existence, since 2007, of the international journal edited by a group of scholars related to The Center for Semiotics of the University of Aarhus, Denmark, and to the Center for Cognition and Culture, at Case Western Reserve University, Cleveland, Ohio: *Cognitive Semiotics. Multidisciplinary Journal on Meaning and Mind*, which is published by Peter Lang Verlag (www. cognitivesemiotics. com). The journal's # 4, spring 2009: *Anthroposemiotics vs. Biosemiotics*, was guest-edited by professors Göran Sonesson and Jordan Zlatev, who are the driving forces behind the newly founded *Center for Cognitive Semiotics*, at the University of Lund, Sweden. I asked the two eminent experts and founders to give us an account of the Center's activities, and here it comes, in our next section.

2. The First Two Years of the Centre for Cognitive Semiotics (CCS) at Lund University, Sweden (Göran Sonesson and Jordan Zlatev)

The Centre for Cognitive Semiotics (CCS) at Lund University was established in January 2009 with founding from the Tercentenary Foundation of the Swedish National Bank and Göran Sonesson, professor of semiotics, as its director and Jordan Zlatev, associate professor of linguistics as its deputy director. The goal of CCS is to unite scholars from many different disciplines—semiotics, linguistics,

cognitive science, philosophy, psychology, primatology, human ecology, architecture, theatre studies, musicology—under a single conceptual "umbrella", and to integrate the theories and methods from the cognitive sciences and semiotics (the general study of meaning) and philosophy (in particular, phenomenology).

The term "cognitive semiotics" has been proposed in different quarters a number of times for the last few decades. It is not clear that it has always been used to cover the same thing; in all its uses, however, cognitive semiotics seems to be concerned with integrating the stock of knowledge and theories existing in cognitive science and semiotics, often with the aim of creating an overall framework for the human and social sciences, with some grounding in biology. In the case of CCS in Lund, this involves putting an emphasis on the experience of meaning as in semiotics and phenomenology, while also using experimental studies and empirical observations as in the cognitive sciences, *in order to gain a better understanding of the processes involved in the evolution and development of meaning.* It also means taking a clearly humanistic stance when taking biology into account.

As has been pointed out, our perspective on cognitive semiotics has a distinct phenomenological slant. We believe the reflections pursued in the tradition starting out from Edmund Husserl have important contributions to make to our understanding of consciousness and different semiotic resources including language, and thus to the nature (and culture) of humanity. We also believe that phenomenological ("first-person") methods are fundamental for analysing the "design" of empirical studies and the results obtained. Our cognitive semiotics is thus phenomenological in nature.

Another common denominator of the research at CCS is the conviction that in order to understand what is specific to humanity, we need to consider the process, which is both biological-evolutionary and historical in nature, by means of which human beings became different from other animal species. More specifically, we investigate in what way the human meaning-making differs from that of other animals and how it is similar, how this human specificity emerges in evolution and history, how it develops in children, and what the neural basis for these cognitive-semiotic abilities are. Our conviction is that such studies of "children, apes, history and brains" must take place in parallel. Two general hypotheses characterize our research environment: (a) that the specificity of mankind is not found in verbal language alone, but in the means of conveying meaning more generally; and (b) that part of this specificity has emerged in historical time, without the need for any special biological adaptations. Indeed, if language is not the basis of all other semiotic resources (gestures, pictures, etc.), and if no other resource turns out to be so, it is conceivable for there to be

a general semiotic function, which depends on imitation, itself grounded in intersubjectivity (the experience of the other being both similar and dissimilar to oneself), which may have evolved partly in historic times.

CCS has set out to be a bridge between different subjects and research directions which already exist at Lund University, by means of (a) a theoretical apparatus which allows us to discover similarities and differences; (b) a common research seminar and a common master course, as well as common PhD students and guest professorships; (c) building infrastructure at Lund University Primate Research Station Furuvik (LUPRSF), and setting up an Infant Research Laboratory; (d) an integration of our international networks; (e) a cross-breeding of different subjects and research personalities.

During these first two years, we have conceived a series of sub-projects, which permit us to integrate new subjects and scholars into CCS, and for whose founding we will apply independently, notably a Narrativity project and an Amazonas project. The centre has its own web site (http://project. sol. lu. se/ccs) from which publications can be downloaded. We have a research seminar that comes together almost every Thursday during the term to listen to invited lecturers from other countries and also from Lund University, as well as to lectures by the members of CCS. Merlin Donald (Toronto) and Chris Sinha (Portsmouth) have spent time at CCS as guest professors. The founding brief of CCS does not allow us to employ PhD students, but we have been able to attract such students from linguistics, semiotics, human ecology, philosophy, and cognitive science to our seminar. An MA program is being designed. We have organised two internal workshops in 2009 and 2010. Lund University Primate Research Station Furuvik had initiated its functioning by means of other resources before CCS started, but our collaboration develops as we conduct a series of studies with the chimpanzees there. As a complement, we have taken up collaboration with Tacugama Chimpanzee Sanctuary in Sierra Leone. The Infant Research Unit has been set up within the Humanities Laboratory at Lund University.

Research within CCS has hitherto taken place within five interconnected themes: (a) evolution of cognition and semiosis ("meaning-making"); (b) ontogenetic development of cognition and semiosis; (c) historical development of cognition and semiosis; (d) cognitive-semiotic typology; (e) neurosemiotics.

(1) The theme *cognitive and semiotic evolution* is dedicated to answering the question how human beings are different and similar from other species, and how this specificity has emerged in evolution, also with reference to the part played by language and other semiotic resources. A lot of time has been required to set up the experimental settings and to design the studies in detail. We have

finished the first study, which investigates the ability of apes to interpret different kinds of indexical and iconic signs by means of an object choice task. We have also made a study concerning the importance of empathy for contagious yawning, while we are planning further studies on indirect imitation and on the differences resulting from conveying the same information with diverse semiotic means. While the first study took place in Furuvik, the second was carried out in Tacugama, where we have the advantage of more subjects, who spend their life in a relatively natural environment.

(2) Within the theme *ontogenetic development of cognitive-semiotic abilities*, we are concerned with the emergence of semiotic and cognitive abilities in children, and with the part played by language and other semiotic resources. We have concluded a first study, corresponding to the phylogenetic study involving iconic and indexical signs mentioned above, and we have started with the one corresponding to the empathy study. Other studies involve the analysis of gesture and speech development in Thai and Swedish children, based on a longitudinal video corpus of naturalistic interactions. Studies of the gestures of blind children are being planned.

(3) The theme *historical development of cognitive-semiotic abilities* was designed to investigate properties of human beings which are more or less universal, but which cannot be explained on a biological basis. So far, we have looked at the relation between linguistic and cultural-material factors in the particular case of the Arawak language and neighbouring languages in the Amazonas region. We have also been concerned with micro-changes in the context of contemporary urban environments. Moreover, we have taken an interest in narrativity as a specific form of human cultural development manifested variously in different semiotic resources. Finally, we have investigated iconicity as a factor in the historical changes of Indo-European languages.

(4) Going beyond classical linguistic typology, the theme *cognitive-semiotic typology* looks at co-variation between language and other semiotic resources, as well as in relation to cognition. The goal is to formulate explicit cognitive-semiotic explanations for general patterns in linguistic and other structures, and to arrive at a better understanding of the relations between language, cognition/consciousness and other semiotic resources, as well as other aspects of culture. So far we have on-going studies concerned with movement metaphors and emotions, the future tense and beliefs in after-life, grammatical structure and rhythmic perception, fictive motion, gestures for time reference, and finally verbs of perception as related to oral and written culture. Some of the languages involved are Swedish, English, Bulgarian, Thai, Kammu, Seedia, Bunun, Japanese, Aymara, Khoisan, Eastern Bantu, and the goal is to work both with large language samples and smaller ones, requiring field work.

(5) Our final theme is *neurosemiotics*. This term has often been used simply as a synonym for neurolinguistics, but we are interested in finding neural correlates of semiotic resources neglected in the classical paradigm. This is the part of the programme so far the least developed. We are still trying to find a collaborator with a background in neuroscience who is willing to go beyond neurolinguistics. Meanwhile, we have been planning a number of studies, also in the form of computer simulations. We will start with the process of perception, which we will scrutinize with the help of holistic models, exemplified by sequences of pictures exposed at different time intervals, as a variation on the famous Kuleshow-effect. The "neuro-phenomenology" of Varela and Thompson has been an inspiration.

This is more or less where we stand at the end of the first two years of activity. Obviously, much remains to be done, but we are confident that we will be able to accomplish most of the specific goals in the next 2—3 years. The major challenge, however, is to contribute to the creation of a new academic discipline, interdisciplinary like cognitive science, but without its reductionistic tendencies—embracing the richness of lived experience and meaning, while studying it rigorously and "scientifically". This, we believe, would be a major step to "mending the gap between Science and the Humanities".

3. Semiotics and "Cognitics": Signs Versus Things (PAaB)

The most salient difference between semiotic studies and cognitive studies, both of meaning, or sense-making in the human mind, is that semiotics studies *sign* relations, whereas "cognitics" (the French term cognitique is used of cognitive computation as a branch of engineering) studies *things* and their properties as represented in a mind or a mechanical system. This division *signs/things* seems unpractical, especially if it turns out that the cognitive representations are in fact sign relations of some kind. So is this the case? In cognitive robotics, percepts obtained through sensors must be interpreted by knowledge structures in order to guide the "acts" and operations of the robot. If the robot is mobile and interactively related to a human habitat, these knowledge structures have to be space-time representations showing the robotic entity itself in the current situation (S^c) and comparing this situation to a goal situation (S^g) determined by an initial situation (S^i). Any S^c is of course localized between S^i and S^g. Therefore, the representation must combine the "on-line" immediate percepts, linked to S^c, with the non-perceptual, temporal frame S^i—S^g, that is, the continuous, extended "something" supposed to exist between these poles; and it must let the former be the *signifier* of the latter, which will show what it "means": its *signified*. This semiotic relation occurs naturally in human working memory, as we link what we sense to what we believe the situation to be. (Cf.

the map with a deictic indication saying: "You are here!", thus responding to an implicit question: "Where [in a global frame] am I [my body in its local situation]?") A human situation is equally a frame with a goal dimension, going somewhere, and some initial conditions, coming from somewhere. When we look at our calendar or on our road map, we similarly read our "position" as a meaningful instruction or suggestion as to what to do next. This sign relation, between local and global configurations, in our representation of things around us is, I think, an *iconic projection* occurring in our mind or system. The criterion of iconicity in this sense is that a minimal variation in the signifier will "mean" a corresponding variation in the signified; this is true of all images. Thus, *being somewhere* is a semiotic structure.