### [international association for cognitive semiotics]

2 ND CONFERENCE OF THE INTERNATIONAL ASSOCIATION FOR COGNITIVE SEMIOTICS

> LUBLIN 20-22.V 2016

### f abstracts [cognition]

[evo-devo

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# [iacs2016: about...]





**Cognitive semiotics** is the study of meaning-making writ large: in language and by means of other sign vehicles, as well as in perception, and in action. Cognitive semiotics investigates the properties of our meaningful interactions with the surroundings – as well as those of other animals – in all domains, in the natural as well as in the social world. It **integrates perspectives, methods and insights from cognitive science, cognitive linguistics and semiotics**, placing signs and sign use (in the broadest sense) into the wider context of cognitive, social, and neurobiological processes, using experimental methods, as well as classical text analysis and theoretical disquisitions.

**Cognitive Semiotics** as a field of study deals with questions concerning the nature of meaning as well as the role of consciousness, the unique cognitive features of human beings, the interaction of nature and nurture in development, and the interplay of biological and cultural evolution in phylogeny. To answer these questions CS integrates methods and theories developed in the human and social sciences as well as cognitive sciences.

The International Association for Cognitive Semiotics (IACS, founded 2013) aims at the establishment of Cognitive Semiotics as the transdisciplinary study of meaning. More information on the International Association for Cognitive Semiotics can be found at: <u>http://iacs.dk</u> One of the goals of the IACS conference series is to gather together scholars and scientists in semiotics, linguistics, philosophy, cognitive science, psychology and related fields, who wish to share their research on meaning and contribute the interdisciplinary dialogue





**Topics** of the conference include (but are not limited to):

- Biological and cultural evolution of human cognitive specificity
- Cognitive linguistics and phenomenology
- Communication across cultural barriers
- Cross-species comparative semiotics
- Evolutionary perspectives on altruism
- Experimental semiotics
- Iconicity in language and other semiotic resources
- Intersubjectivity and mimesis in evolution and development
- Multimodality
- Narrativity across different media
- Semantic typology and linguistic relativity
- Semiosis (sense-making) in social interaction
- Semiotic and cognitive development in children
- Sign use and cognition
- Signs, affordances, and other meanings
- Speech and gesture
- The comparative semiotics of iconicity and indexicality
- The evolution of language

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#### Local Organizer:

**Maria Curie Skłodowska University** (UMCS) was established in 1944 at the initiative of professor Henryk Raabe, its first Rector. UMCS is one of the largest and most important universities in Poland. Currently the number of students is almost 36,000. The university has 302 professors (157 full professors), 231 habilitated doctors, 826 senior lecturers, and 1829 teachers in total.

The University's structure embraces 11 faculties. The most active and influential are: the Faculty of Biology and Biotechnology, the Faculty of Chemistry, The Faculty of Mathematics, Physics and Computer Science and the Faculty of Philosophy and Sociology.

The Faculty of Philosophy and Sociology and - in particular - the Institute of Philosophy has its roots in the Chair of Logic and Methodology, which was established together with the Univeristy, in 1944. The first head of the Chair was prof. Narcyz Łubnicki. In 1947 the Chair of Philosophy was established. Today the Faculty consists of two institutes: Institute of Philosophy and Institute of Sociology. The structure of the Institute of Philosophy embraces 11 departments doing research in: esthetics, ethics, ontology, epistemology, logic, philosophy philosophy of mind, of language, cognitive science, methodology of science, cultural anthropology, philosophy of culture and others.

The **Cognitive Science** BA and MA programmes are realized by the **Institute of Philosophy** in cooperation with researchers from the Institute of English, the Institute of Computer Science and the Institute of Psychology and with the participation of researchers from Center for Cognitive Semiotics, Lund University, Sweden.

We offer courses in general cognitive science, i.e. in philosophy of





mind, artificial intelligence, cognitive psychology, neuroscience, cognitive linguistics and cognitive semiotics, as well as extracurricular courses devoted to special problems of cognitive science, some of them in English.

Students can choose between two "paths":

- the "Artificial Intelligence and Logic" path
- the "Sign, Language and Communication" path

Details: http://cognitivescience.umcs.lublin.pl

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# [keynote speakers]









Monday, 20th June, 9:30-10:30, Aula

Eva **Jablonka** jablonka[at]post.tau.ac.il Tel Aviv University, Israel

## Language, imagination, and the evolution of autobiographical memory

I suggest that the early stages of the evolution of symbolic, imagination-instructing language, which occurred in small cohesive social groups, led to the problem of distinguishing between the narrated experiences of others and one's personal, private past experiences. Humans made new types of mistakes, which are similar to those observed in young children where "false" (misattributed) memory is common, and became open to new types of social conditions, individuals manipulation. these with better In autobiographical memory had a selective advantage, and such memory developed and evolved through cultural, and possibly also genetic, selection. However, the flexibility allowed by imagination which enabled forward planning and sophisticated decision-making, meant that memory distortions, although controlled and moderated by autobiographical memory, could not be totally eradicated. An additional form of memory control, through social and linguistic norms, may have been employed in some special social conditions, and I interpret the language and the social norms of the Pirahã as the outcome of the cultural-evolutionary control of memory distortions, and suggest ways of testing some specific aspects of this thesis.





Monday, 20th June, 17:30-18:30, Aula

Bruce **McConachie** bamcco[at]pitt.edu University of Pittsburgh, USA

### **Improvising Communication in Pleistocene Performances**

In his essay for The Social Origins of Language (2014), Jordan Zlatev effectively synthesizes much of the relevant scholarship on the topic to argue that the co-evolution of human intersubjectivity and morality preceded the emergence of symbolic language. My talk accepts the outlines of Zlatev's overview, including his assumptions about multi-level selection and cultural group selection, and examines the period near the beginning of the narrative he sketches, when hominin performances significantly departed from primate Several scholars, including Zlatev, have adopted a version of play. Merlin Donald's mimesis to explain this break and I agree that the ability to imitate must have been important for early proto-human communication. But before a gesture and/or a sound could be widely copied, the group of hunter-gatherers that invented that particular visual-aural sign must have provisionally accepted it before the sign could carry communicative value. My paper will introduce a theatrical-musical term to explain this process: improvisation. In short, I will argue that selected bands of *Homo ergaster*, the species from which we evolved, improvised their way toward the sharing and understanding of communicative intentions and meanings that eventuated in performances of proto-languaging.

Like their ancestors a million years ago, professional improv actors and musicians today rely on playful intersubjectivity and behavioral





norms to shape their collective creations. Improvisers in both art forms do more than exchange information; they generate a world together based in mutual trust and cooperation. In other words, contemporary improvisers require the same kinds of mirror neuron systems, joint attention abilities, and turn-taking morality that our proto-human ancestors likely began to practice during the early Pleistocene period.

Alloparenting, the sharing of parenting responsibilities among trusted others, was likely a necessary first step to enable the kinds of empathy and norms that facilitated communicative improvising within bands of our ancestors. The evidence presented by Sarah Hrdy in her Mothers and Others (2009) is guite persuasive regarding the importance of alloparenting among Homo ergaster for the kinds of trust and cooperation that early improvisers required. I will also draw on the impressive field work of Jerome Lewis, who details the evolutionary significance of play, the easy mixing of musical and gestural communicative codes, and the important morality of "reverse dominance" in the lives of contemporary hunter-gathers. the Mbendjele of the Congo. In addition to practicing a fully symbolic language, groups of these African pygmies continue to engage in iconic modes of communication to perform what Lewis calls "spirit plays," rituals of collective singing and dancing that employ a surprising amount of collective improvisation. These spirit plays, which involve a wide range of meanings and functions - from learning key skills in hunting and gathering to representing their social and spiritual hierarchies — are intended to charm the spirits of the forest. While recognizing that Mbendjele culture is fully modern in most respects, Lewis reasons that their mixed modes of traditional communication probably offer clues to the proto-languaging practiced by Pleistocene hunter gatherers in Africa a million years ago.





Tuesday, 21 June, 9:00-10:00, Aula

Simon **Kirby** smkirby[at]gmail.com University of Edinburgh, United Kingdom

## The Evolution of Linguistic Structure: where learning, culture and biology meet

Language is striking in its systematic structure at all levels of description. By exhibiting combinatoriality and compositionality, each utterance in a language does not stand alone, but rather exhibits a network of dependencies on the other utterances in that language. Where does this structure come from? Why is language systematic, and where else might we expect to find this kind of systematicity in nature? In this talk, I will propose a simple hypothesis that systematic structure is the inevitable result of a suite of behaviours being transmitted by iterated learning. Iterated learning is a mechanism of cultural evolution in which behaviours persist by being learned through observation of that behaviour in another individual who acquired it in the same way. I will survey a wide range of lab studies of iterated learning, in which the cultural evolution of sets of behaviours is experimentally recreated. These studies include everything from artificial language learning tasks and sign language experiments, to more abstract behaviours like sequence learning, and have recently even been extended to other species. I will conclude by suggesting that these cultural evolution experiments provide clear predictions about where we should expect to see structure in behaviour, and what form that structure might take.





Tuesday, 21st June, 16:15-17:15, Aula

Frederik **Stjernfelt** stjern[at]hum.aau.dk

Aalborg University, Denmark

### **Propositions and Cognition**

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Propositions are traditionally a core subject of logic and rarely play center stage in cognition.

This talk introduces and discusses the cognitive possibilities in Peirce's alternative conception of propositions which is more applicable to cognitive issues than the standard logic tradition. After an exposé of the special features of Peirce's doctrine of propositions, cognitive semiotic issues like diagrammatical reasoning, the integration of multimodal representations and the propositional structure of dorsal-ventral dissociation in perception are discussed.





Wednesday, 22nd June, 9:00-10:00, Aula

Esther **Pascual** esther[at]estherpascual.com Zhejiang University, China

## The conversational nature of language: From cognition and grammar to expert communication and language pathology

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Stemming from the assumption that social interaction is an essential aspect of human existence, I argue that there is a conversational basis for thought and language. Specifically, I discuss the latest research on what I call fictive interaction (Pascual 2002, 2014), that is the use of the frame of ordinary conversation as a means to structure: the conceptualization of reality (construing dance as a conversation), discourse (monologues organized as dialogues), and grammar ("why me? attitude"). I suggest that fictive interaction is a fundamental cognitive phenomenon, a ubiquitous discourse-structuring devise, a construction, possibly universal linguistic and effective an communicative strategy in both expert communication and language pathology. To support this claim, I present a cross-linguistic study involving a wide variety of unrelated languages (spoken and signed, with and without a written code) and modes of communication (oral, written, visual). The communicative data discussed ranges from literature (and literary translation), legal argumentation in highprofile criminal trials and marketing (i.e. advertisement and branding) to language pathology (i.e. conversations by adults suffering from Broca's aphasia and children with Autistic Spectrum Disorder). I hope to show that the intimate relation between language and interaction is reflected in cognition, discourse, and grammar.





Wednesday, 22nd June, 13:30-14:30, Aula

Terrence **Deacon** deacon[at]berkeley.edu University of California, Berkeley, USA

### The semiotic basis of universal grammar

Symbolic reference and grammar are inextricably intertwined. The most universal grammatical attributes that characterize human languages reflect semiotic constraints on symbol combinations that derive from the necessary dependency of symbolic reference on underlying iconic and indexical modes of reference. This dependency is often bracketed from consideration by ignoring the semiotic work required to establish a "conventional" correspondence relationship. Thus, treating word reference as mere synchronic arbitrary correlation obscures its dependency on prior semiosis. Because symbolic reference is made possible by relations between these more constrained iconic and indexical relationships, the constraints of these lower-order forms are inherited by constraints on symbolsymbol relations, such as in affixes, phrases, sentences, etc. This implies that many properties identified as language universals are intrinsic to the semiotic constraints of symbolic communication and are not imposed from an independent (e.g. genetic or cultural) source of grammatical principles. The iconic and indexical constraints underlying grammar are discovered pragmatically via successful or failed reference, contrary to the "poverty of the stimulus" claim, and irrespective of explicit correction of grammar or syntax. These basic semiotic constraints are initially learned prior to the beginning of language acquisition as infants learn to communicate gesturally, and





are subsequently transferred to communication using words. The initial discovery of these prelinguistic semiotic constraints is supported by evolved human-specific predispositions to direct and track the attentional orientation of others, such as in pointing and gaze following. Impairments affecting these predispositions and the ability to acquire working knowledge of these basic semiotic constraints may be a factor in certain disturbances of early language acquisition, such as in autism.

Five major semiotic constraints contributing to universal grammar are:

1. Recursive structure (only symbols can provide non-destructive [i.e. opaque]

recursion across logical types; e.g. phrasal levels)

2. Predication structure (symbols must be bound to indices in order to refer; this binding is itself an indexical function; the index can be an extralinguistic sign)

3. Transitivity and embedding constraints (indexicality depends on immediate

correlation and/or contiguity, and is transitive; this makes coexpression and adjacency the default and constrains long-distance dependency relations)

4. Quantification (symbolized indexical operations require respecification with respect to their individuation of reference since indices are intrinsically singular whereas symbols are intrinsically general).

5. Iconism and long-distance indexical dependencies (the coexpression-contiguity constraint on indexical binding can be extended by feature-agreement between an index and the most proximate agreeing object, as in gender or numerosity marking).





This paper builds on arguments made in Deacon (2003 & 2012) providing examples of how these semiotic constraints are initially discovered in infancy and incorporated into language acquisition, and how they can account for many of the most ubiquitous and ineluctable grammatical features of language.

#### References

Deacon, T. (2003) Universal grammar and semiotic constraints. In M. Christiansen and S. Kirby (eds.) *Language Evolution*. Oxford University Press. pp. 111-139.

Deacon, T. (2012) Beyond The Symbolic Species. In T. Schilhab, F. Stjernfeldt, and T. Deacon (eds.) *The Symbolic Species Evolved*, Springer, pp. 9-38.









# [theme sessions]









[theme session 1] Monday, 10:45-12:45, room 4

Francesco **Bellucci**, bellucci.francesco[at]gmail.com (convener) Tallinn University of Technology, Estonia Marta **Caravà**, marta.carava[at]gmail.com University of Bologna, Italy Claudia **Cristalli**, c.m.l.cristalli[at]gmail.com University College London, United Kingdom

### Peircean Cognitive Semiotics (Theme Session)

Peirce declared inference to be "the essential function of the cognitive mind" and at the same time the "paramount semiotic relation" (MS 787, CP 2.444), for any reasoning consists in interpreting signs (MS 283, 637, 654). Not only is reasoning a sign *formaliter*, or in its essence and form; it is also a sign *materialiter*, or in its existence and expression. *Formaliter*, all thinking is iconic and consists in the transformation of symbols into other symbols by means of icons (MS 293, MS 339, 1906). This was, at bottom, Kant's doctrine: in order to be made object of thinking, a concept must be constructed or schematized *either* in pure imagination *or* on paper, where the "either...or" operates as parity principle and qualifies Kant as an extended mind scientist ante litteram. Peirce went further than Kant, and claimed that since all thinking is in signs (formaliter), then the royal way to a cognitive semiotics is to conceive the mind as consisting in its external manifestations (materialiter) (MS 292, MS 637). Not only is the science of thinking best considered as a study of signs (MS L 75); it is also best conducted as a study of *external* signs.

The theme session here proposed will discuss the relevance of Peirce's semiotic ideas for contemporary cognitive semiotics. Caravà argues that both first- and second-generation cognitive science entertain a too narrow conception of representation, and that Peirce's own broader semiotic notion can contribute to overcome the limitations of both approaches. Cristalli investigates the relationships between Peirce's researches in logic





and his interests in statistics and experimental psychology, and argues that cognitive semiotics is the theoretical framework within which psychology (perception) and logic (inference) can be reconciled. Bellucci discusses some recent applications of the Extended Mind hypothesis to the study of logical and mathematical languages, and examines the merit and the demerits of this approach from a Peircean point of view. The aim of the session is to provide arguments and analyses in support of the thesis that Peirce's semiotics is the most appropriate theoretical framework for the study of cognitive processes.

Monday, 10:45-11:15, room 4

Marta **Caravà**, marta.carava[at]gmail.com University of Bologna, Italy

#### A Semiotic Turn in Cognitive Science?

Classical cognitivist accounts of thinking claim that internal symbol manipulation and computation are necessary (if not sufficient) conditions for cognitive behavior. Thus, according to these theories, a good explanation of human cognition can be provided if and only if a primary epistemic role is given to mental representations, which play the role of mediators between sensations (inputs from the world) and actions (outputs directed towards the world), both considered as non-cognitive events. Therefore, if what can be called "mind" is identified with thinking, and in general with cognitive processes, and if these ones are supposed to be internal (i.e. they ought to be located in our heads), the mind can be defined as the whole of internal representational processes which mirror the external world by means of the unconscious use of symbols.

Reacting to this internalist and "intellectualistic" picture of cognition and mind, second generation cognitive scientists try to provide alternative explanations, which, to some extent, could be defined as anti-intellectualist





and externalist, inasmuch as they claim that "externalities" (i.e. artifacts, actions, bodily movements, etc.) are enabling conditions to produce cognition. Nevertheless, if on the one hand new paradigms which fall under the label "4 E cognition" seem to propose a unitary reaction to the cognitivists' internalist faith -giving birth to a sort of "pragmatic turn" in cognitive science- on the other hand scholars who support Extended, Enactive, Embodied, Embedded and Distributed theories of cognition do not seem to reach an agreement on the issue of representation. Moreover, it seems to me that the problem of representation within the theoretical frame of the "New Science of Mind" does not concern only a superficial disagreement on its epistemic necessity or epistemic power, but it seems to have deeper roots. As a matter of fact, the notion of representation all these theories deal with still seems to fit the narrow description which first generation cognitivists give of it.

Thus, the aim of this talk is to speculate on another and broader way to think of representation, conceiving it in semiotic terms, namely as an element of a formal triadic relation which can actively produce cognitions, and whose embodiment is not *a priori* determined. The discussion will be lead by the analysis and the reinterpretation of some pivotal notions of Peircean semiotics, such as those of *interpretant* and *semiosis*, in order to produce an integration among the cognitive theories examined.

#### References

- ATÃ, Pedro, QUEIROZ, João (2014), Icon and Abduction: Situatedness in Peircean Cognitive Semiotics, in MAGNANI, L. (a cura di), Model-Based Reasoning in Science and Technology. Theoretical and Cognitive Issues, Springer, Heidelberg/Berlin, pp. 301-314.
- AYDIN, C. (2015), "The artifactual mind: overcoming the 'inside–outside' dualism in the extended mind thesis and recognizing the technological dimension of cognition", in Phenomenology and the Cognitive Sciences, n. 14(1), pp. 73-94.
- BURKE, T. (2014), [J. R. Shook, T. Solymosi, Eds.,] "Extended Mind and Representation", in Pragmatist Neurophilosophy. American





Philosophy and the Brain, New York/London, Bloomsbury Publishing, pp. 177-202.

- BURKE, T. (2008), "(Anti)Realist Implications of a Pragmatist Dual-Process Active-Externalist Theory of Experience", in Philosophia Scientiae, n. 12(1), pp. 187-211.
- CLARK, A. (2008), Supersizing the Mind. Embodiment, Action and Cognitive Extension, New York, Oxford University Press.
- CLARK, A. (1997), Being there: Putting Brain, Body and World Together Again, Cambridge (MA), MIT Press; Italian translation Dare Corpo alla Mente, Milano, McGraw-Hill, 1999.
- CLARK, A., CHALMERS, D. (1998), "The Extended Mind", in Analysis n. 58 (1), pp. 7 - 19.
- DADDESIO, T. (1995), On Minds and Symbols. The Relevance of Cognitive Science for Semiotics, Berlin/New York, Mouton de Gruyter.
- ENGEL, A.K., MAYE, A., KURTHEN, M., KÖNING. P. (2013), "Where's the action? The pragmatic turn in cognitive science", in Trends in Cognitive Science n. 17(5), pp. 202-209.
- GALLAGHER, S. (2014), "Pragmatic interventions into enactive and extended conceptions of cognition", in Philosophical Issues, n. 24.
- GALLAGHER, S. (2009), "Philosophical antecedents of situated cognition", in [Robbins, P., Aydede, M., Eds.] Cambridge Handbook of Situated Cognition, Cambridge, Cambridge University Press, pp. 35-51.
- HOUSER, N. (2011), [R. M. Calcaterra, Ed.,] "Action and representation in Peirce's Pragmatism", in New perspectives on Pragmatism and Analytic Philosophy, Amsterdam-New York, Rodopi,pp. 61-70.
- HURLEY, S. (2010), [R. Menary, Ed.,] "The varieties of externalism", in The Extended Mind, Cambridge (MA), MIT Press, pp. 100-153.
- HUTCHINS, Edwin (1995), Cognition in the wild, MIT Press, Cambridge (MA).
- PEIRCE, C.S. Writings of Charles S. Peirce: A Chronological Edition, Indiana University Press, Bloomington-Indianapolis.
- PEIRCE, C. S. (1931-1958), Collected Papers of Charles S. Peirce, [voll. I-VI, Eds. C. Hartshorne, P. Weiss; voll. VII-VIII, ed. W. Burks,] Cambridge (MA), Harvard University Press.





- PEIRCE, C. S. (1967), Charles Sanders Peirce's manuscripts; ROBIN Richard, Annotated catalogue of Charles Sanders Peirce, Amherst, University of Massachussetts Press.
- SHORT, T. L. (2004), [C. Misak, Ed.,] "The development of Peirce's Theory of Signs", in The Cambridge Companion to Peirce, Cambridge University Press, Cambridge (MA), pp. 214-240.
- SKAGESTAD, Peter (2004), Peirce's Semeiotic Model of the Mind, in MISAK,C. (a cura di), The Cambridge Companion to Peirce, Cambridge University Press, Cambridge (MA), pp. 241-256.
- STEINER, P. (2013), "Pragmatism(s) and Cognitive Science: Introductory Remarks", in Intellectica, n. 60, pp. 7-48.
- STEINER, P. (2008), "Sciences cognitives, tournant pragmatique et horizons pragmatistes", in Tracés. Revue de Sciences Humaines, n. 15, pp. 85-104.
- TIERCELIN, C. (1995), [L. Haaparanta, S. Heinämaa, Ed.] "The relevance of Peirce's Semiotic for Contemporary Issues in Cognitive Science", in Acta Philosophica Fennica. Mind and cognition: philosophical perspectives on cognitive sciences and artificial intelligence, vol. 58, pp. 37-73.
- WILSON, R. (2010), "Meaning making and the mind of the externalist", in [Ed. Menary, R.,] The extended mind, Cambridge (MA), The MIT Press, pp. 167-188.

Monday, 11:15-11:45, room 4

Claudia **Cristalli**, c.m.l.cristalli[at]gmail.com University College London, United Kingdom

### Logic materialiter. The relevance of psychophysics in Peirce's account of reasoning

It is almost a commonplace in Peirce's scholarship the thesis that Peirce was





no psychological thinker, and that he held logic to be the "art of reasoning" (1877: "The Fixation of Belief" EP 1, p. 109), i.e., something that must be learned and practiced rather than derived from introspection. However, if reasoning is a critical task that is performed *in the world*, how can a purely formal set of tools be of any help in developing it?

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Indeed, Peirce did not provide only a formal account of his logic. More than any other thinker of his time, he realized that statistics and the theory of errors could lead to an objective treatment of perception, and of how we attribute relevance to stimuli. This fact has been acknowledged by Ian Hacking (1988: "Telepathy", *Isis*), who however considers Peirce's reflections on statistics and probability as something separate from his doctrine of pragmatism (2009: "On Not Being a Pragmatist", Misak ed., 32-49). My contribution will show that Peirce's pragmatism and semiotics more broadly owe a lot to his reflections in statistics, which were in turn triggered by his activity at the US Geodetic and Coast Survey and his less known interests in psychology and in psychophysical research (Peirce 1883: "On the flexure of Pendulum Supports", 1885: "On Small Differences in Sensation", both in *Writings*, v. 4: 515-528, v. 5: 122-135).

I argue that Peirce provides the key for a possible distinction between an empirical and historical account of logical inference on one side and a psychologistic one on the other side. While a psychologistic approach has to be rejected, building a connection between the empirical and the logical study of inferences is necessary albeit difficult task: "philosophical sciences and psychology would have each to be built upon the other", Peirce claims. "They must collectively form an arch – or, rather, a Saturn's ring, for an arch has the ground to rest upon." (CN III, p. 128-9). The logic of inference that Peirce develops must therefore be understood in the light of his struggle for "putting logic [...] upon the undeniable footing of science" (1902: "Parts of Carnegie Application", in *New Elem. of Math.*, v. 4: 14). Insofar psychological research is, in Peirce's opinion, an inquiry about human experience, the missing piece of the puzzle is what shall cover the distance from perception to judgment and to scientific inference. I propose that cognitive semiotics can offer the theoretical framework for this enterprise and benefit from its





results.

Monday, 11:45-12:15, room 4

Francesco **Bellucci**, bellucci.francesco[at]gmail.com Tallinn University of Technology, Estonia

### **Diagrams as Cognitive Technologies**

Building on the Extended Mind hypothesis (Clark & Chalmers 1998), a theoretical approach has recently been proposed which considers formal languages (among which *diagrammatic* formal languages) as cognitive technologies (Clark 2006; Dutilh Novaes 2012; De Cruz & De Smedt 2013). This perspective offers interesting insights on diagrams as inference technologies combining both illustrative and operative roles. It is argued that certain purely perceptual and/or syntactical properties of diagrams play a fundamental role for the cognitive process, and that different properties may have significantly dissimilar cognitive impact. The question thus becomes interesting whether and how different systems of diagrams differently participate in cognitive processes. In what different ways and according to what principles notations and diagrams can be instruments of inference? What are formal languages good for? The common answer is that diagrams can be evaluated according to three basic parameters: expressivity (diagrams are isomorphic representations of their objects), iconicity (diagrams are iconic or natural representations of their objects), and *calculation* (diagrams allow calculation being performed concerning their objects).

According to Charles S. Peirce, none of these parameters is primary in itself. For Peirce, a diagram is first and foremost an instrument of logical *analysis*. If we are interested in formal languages "not only as (mathematical) *objects* as such, but rather in the broader picture of how formal languages are *used* and the impact they have on practices" (Dutilh





Novaes 2012, p. 52), then we can no longer ignore Peirce's own basic parameter for the study of diagrammatic reasoning, as well as the use he made of specific kinds of diagrams of his invention. For Peirce, the best analysis of the actions of the cognitive mind is through a diagrammatic syntax (MSS 485, 669, L 376), and the system of *Existential Graphs* (EGs) was, according to him, the most perfect system of logical representation for analytic purposes: "the system of Existential Graphs is designed to afford a sort of geometrical παρασκευή,—or diagram,—for logical analysis, i.e. for illustrating and facilitating the same" (MS 300, p. 34, 1908). The cognitive impact of a system of diagrams is to be evaluated on the basis of their analytic power. Algebra is more analytic than natural language, but the Graphs are more analytic than algebra (and, for that matter, of any equivalently expressive system of logic representation hitherto known). The merits of EGs do no consist in their allowing *multiple readings* (Shin 2002), nor in their functioning as instruments of *calculus* (Shimojima 1996). EGs are neither a lingua characteristica nor a calculus ratiocinator (as Frege thought his Begriffsschrift would be). Their chief merit consists in their enabling us to analyze the movement of the mind in thought: "the system of existential graphs is a rough and generalized diagram of the Mind" (MS 498, 1906)

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#### References

Clark, A. 2006. Material Symbols. Philosophical Psychology 19, 291–307.

- Clark, A., & Chalmers, D. 1998. The Extended Mind. Analysis 58, 10–23.
- De Cruz, H. & De Smedt, J. 2013. Mathematical Symbols as Epistemic Actions. *Synthese* **190**, 3-19.
- Dutilh Novaes, C. 2012. Formal Languages in Logic. A Philosophical and Cognitive Analysis. Cambridge: Cambridge UP.
- Peirce, C. S. 1867. Manuscripts in the Houghton Library of Harvard University, as identified by Richard Robin, *Annotated Catalogue of the Papers of Charles S. Peirce*, Amherst: University of Massachusetts Press, 1967.





Shin, S.-J. 2002. The Iconic Logic of Peirce's Graphs. Cambridge, MA: MIT Press.

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Shimojima, A. 1996. *On the Efficacy of Representation*. Dissertation, Indiana University.

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[theme session 2] Monday, 14:00-16:30, room 4

Rafał **Augustyn**, augustyn.rafal[at]gmail.com (convener) Agnieszka **Mierzwińska-Hajnos**, agahaj[at]interia.pl (convener) Joanna **Jabłońska-Hood**, hood.asia[at]gmail.com Ewelina **Prażmo**, ewelinaprazmo[at]gmail.com Maria Curie-Sklodowska University in Lublin, Poland Agnieszka **Libura**, agnieszka.libura[at]uni.wroc.pl University of Wroclaw, Poland

### Blending multimodal inputs (Theme session)

It is widely recognised that using simultaneously various sensory stimuli facilitates cognitive processing of information. Such multimodal processing has a largely positive impact on human cognitive system: it raises our attention, boosts our memory capacity and often engages us emotionally. Thus, in this theme session we undertake to examine the way how multiple sensory inputs participate in the process of meaning construction (semiosis) and how they influence it. In particular, we aim at looking into different forms of multimodal inputs (verbal, semiotic, visual, image schematic, etc.) that are dynamically integrated together to produce a conceptual entity that is both semiotically and semantically complex and which may have various physical representation (e.g. written text, verbal humour, cartoon, poster, talk).

A methodological tool developed in cognitive science that can be used for studying this phenomenon is Conceptual Blending Theory, both in the form proposed by its founding fathers, Gilles Fauconnier and Mark Turner (2002) and as its extensions elaborated by other cognitive linguists (cf. Brandt and Brandt 2005, Oakley and Coulson 2008, Brandt 2013, also Pérez Sorbino 2014).Whether classic or revised, CBT discusses, first and foremost, the mechanisms of conceptual integration understood here as a basic and simultaneously very dynamic mental operation which allows us to




account for meanings of transient nature expressed in the form of the socalled multimodal blends by virtue of tracing and juxtaposing elements of input spaces. It also facilitates the understanding of processes which accompany the conceptualisers whenever they attempt to decode such blends.

In view of the above-mentioned considerations a few pertinent questions should be posed during our theme session:

- a) How do inputs belonging to different perceptual domains interact with one another?
- b) It is possible to assess the contribution of individual inputs to the actual meaning of the multimodal blend?
- c) To what extent does multimodal blending influence the process of meaning construal?

We claim that the proposed theme session will cast a new light on the phenomenon of multimodal conceptual integration not only from the perspective of cognitive studies upon language, but also with reference to other branches of science which deal with the aspects of human cognition.

### References

- Brandt, L. 2013. The Communicative Mind. A Linguistic Exploration of Conceptual Integration and Meaning Construction. Newcastle u. Tyne: Cambridge Scholars Publishing.
- Brandt, L. & P. A. Brandt. 2005. "Making sense of a blend. A cognitivesemiotic approach to metaphor". In Ruiz de Mendoza Ibanez, F. J. (ed.) Annual Review of Cognitive Linguistics 3. Amsterdam/Philadelphia: John Benjamins. 216-249.
- Fauconnier, G. & M. Turner. 2002. *The Way We Think: Conceptual Blending and the Mind's Hidden Complexities*. New York: Basic Books.
- Oakley, T. & S. Coulson.2008. "Connecting the dots: Mental spaces and metaphoric language in discourse". In Oakley, T. & A. Hougaard (eds.), *Mental Spaces in Discourse and Interaction*, 27–50. Amsterdam, Philadelphia: John Benjamins.





Pérez-Sobrino, P. 2014. "Multimodal cognitive operations in classical music". *Vigo International Journal of Applied Linguistics* 11, 137-168.

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Monday, 14:00-14:30, room 4

Ewelina **Prażmo**, ewelinaprazmo[at]gmail.com Maria Curie-Sklodowska University in Lublin, Poland

# Meaningful Forms. Cognitive Analysis of the Semantic Contribution of a Font Type to a Text

In the light of the increasing application of conceptual integration theory in the study of dynamic meaning construction, we attempt to examine its multimodal dimension. Conceptual integration theory (also known as conceptual blending theory) is useful in explaining the emergent meanings and associations. The process occurs at the morphological, lexical and syntactic levels as well as across them (e.g. the meaning construction of a lexical item integrated with a certain grammatical aspect). It can use the resources of one, as well as several different languages (e.g. linguistic hybridity). However, conceptual integration may also explain meaning construction in multimodal contexts. It can bring together language, music, image, gesture and sound. In the present paper we account for the extra meanings added to the message due to the use of a certain font type. In order to do so, we apply Fauconnier and Turner's conceptual integration theory (cf. Fauconnier and Turner 2002) as well as Forceville's notion of the multimodal metaphor (cf. Forceville 2008) to the study of multimodal meaning construction. We claim that the font may strengthen the message, activate associations or even add extra semantic value to the text. Specifically, we examine the popular use of the Helvetica font in marketing, advertising and the Internet as well as other fonts used





on social networking sites (e.g. Twitter, Facebook). The present paper is maintained in the cognitive linguistics framework, making use of Ronald Langacker's cognitive grammar paradigm and its terminology (cf. Langacker 2008). We also espouse the cognitive semiotics perspective by studying the linguistic sign in its entirety; the form and the meaning. Conceptual integration process in represented by two input spaces functioning at two distinct sign systems. In our study the two different modes of perception are language and its graphical representation i.e. the font.

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Monday, 14:30-15:00, room 4

Agnieszka Libura, agnieszka.libura[at]uni.wroc.pl University of Wroclaw, Poland

### Blending Refugees Problem. An Analysis of Humorous Conceptual Integration

The aim of this paper is to investigate the complex, multimodal inputs in blending processes underlying Polish cartoons, memes and demotivators that relate to the problem of refugees and migrants who are arriving in Europe. First, the paper focuses on the inputs in the form of a complex scenarios, such as fairy tales and cultural customs. Second, the recursive blends are analyzed whose input is an output of another conceptual integration. The study shows how the factual, emotional, axiological and cultural information provided by various multimodal inputs contributes to the process of the humorous incongruity resolution which is, in the case of humor, the core of the meaning construction process.





Monday, 15:00-15:30, room 4

Joanna **Jabłońska-Hood**, hood.asia[at]gmail.com Maria Curie-Sklodowska University in Lublin, Poland

# Multimodality and its Impact on the Notion of Linguistic Disparity that Creates Humour

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Humour may be accounted for via conceptual integration theory (CIT for short) created by Fauconnier and Turner. The vast research into both comedy and CIT would suggest that blending may provide a toolkit with which to explain the intricacies of humour origin and interpretation. However, what is needed at present is more experimentation into the nature of inputs which are blended, thus providing us with the incongruous and funny contents. This would certainly benefit contemporary humour studies, throwing more light on the nature of the comic, i.e. we could precisely pinpoint the kind of opposition that results in laughter. This presentation is going to provide a starting point in such research, analysing the notion of linguistic disparity within humour and specifically the impact that multimodality might bear on the incompatibility of input mental spaces as well as the meaning of humour. The initial hypothesis is that multimodality will enrich humour; to the extent that it will strengthen the comic effects in particular, but also, subsequently, the laughter of humour receiver.





Monday, 15:30-16:00, room 4

Agnieszka **Mierzwińska-Hajnos,** agahaj[at]interia.pl Maria Curie-Sklodowska University in Lublin, Poland

# Words, Images and Beyond: On a Multimodal Character of Conceptual Blends Appearing in the 2015 Polish Political Campaign Posters

The proposed presentation discusses a multimodal character of selected political campaign posters which accompanied the 2015 parliamentary election in Poland. Since a pivotal task of a political poster is to familiarize the electorate with a particular candidate, and thus encourage a potential voter to support a given party, the proponents of such posters reach for both visual and verbal means as well as recall other aspects, e.g. cultural background, social status, or political bias to achieve the so-called 'ideological mobilization' (Sontag 1999). Thus, to become an eye-catching and, first and foremost, persuasive medium, political campaign posters are often expressed in the form of conceptual blends constructed on the basis of frequently disparate inputs spaces (Fauconnier and Turner 1998, 2002). In order to arrive at a successful decoding of such blends and account for their multimodal character, a revised six-space model of conceptual integration as delineated by Brandt and Brandt (2005) will be applied in the proposed analysis.

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Monday, 16:00-16:30, room 4

Rafał **Augustyn,** augustyn.rafal[at]gmail.com Maria Curie-Sklodowska University in Lublin, Poland

# Multimodality in Science Communication: How to Create a Successful Blend?

In recent years we have been witnessing unprecedented rise of different and creative forms of presentation aimed at popularising knowledge pertaining to virtually every science field and discipline. Owing to modern social media (YouTube, Vlogs, dedicated websites) both researchers and lay science popularisers use different channels available and create multimodal presentations (using mainly visual and aural stimuli, but sometimes stimulating also other senses) on strictly scientific or science-related topics to attract attention of different target groups of receivers. Since this science communication movement, sometimes even falling under the category of edutainment, enjoys considerable popularity there are even special events organised for this purpose (e.g. TED conferences, FameLab competition, etc.). As the aim of such presentations is to attract the attention of the audience, and the presenters usually have a very limited time to tackle frequently a complex scientific issue, it requires great planning skills as to both the content and the form of the presentation.

With this is mind, the aim of this paper is, based on a selected examples of FameLab competition entries, to account for the interplay of different inputs in the process of meaning construal as intended by the presenters. In particular, we will focus on the conceptual stage of meaning construal, prior to the verbal realisation of the message. To this end we will use Fauconnier and Turner's





(2002) standard model of Conceptual Blending, as well as its later modifications (cf. Oakley & Coulson 2008 and Brandt 2013) which, in our view, can give further insight into how inputs from various modalities are fused together to produce a semantically rich but simultaneously succinct blend that can be subsequently successfully unpacked by the audience.

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# [individual papers]









[blending] Wednesday, 10:30-11:00, room 4 Tim **Adamson,** timothy.adamson[at]hawkeyecollege.edu Hawkeye Community College, USA

### Conflation and the Essence of Thinking

In this talk I lay out some of the philosophical implications of metaphor/conceptual blending theories. I argue that these theories, although different in some respects, point to a single model of thinking that should be developed as a challenge to traditional models and assumptions. Ever since Plato, with few exceptions, reason has been characterized in terms of collecting and dividing, naming, defining, separating, and organizing. In other words—putting everything in its proper place, among its proper kind, and in the proper order. These metaphors are so deeply entrenched that much of philosophy can be viewed as debates over the precise nature, origin, and method of such ordering, rather than a questioning of the metaphor itself.

Conceptual metaphor theory and conceptual blending theory challenge this Platonic model, first, by exposing it as one metaphor among others, and second by suggesting an alternative account of reasoning. But what is this alternative, and how does it stand against the model that Plato inaugurated? I suggest that the alternative has not been sufficiently laid out and that it is best described as *conflation*. The essence of metaphorical cognition/blending is a the conflation of things, understanding one as another, *thinking one as another*. Thinking operates not only by dividing and separating (Plato was not entirely wrong) but also by conflating things, confusing them in ways that produce meaning. Conflation is the cognitive operation that underlays the insights of conceptual metaphor theory and conceptual blending theory.

Conflation can be found at all levels of experience and meaning. As Merleau-Ponty showed, perception involves a conflation of body flesh and world. The hand reveals texture because it has a texture that can receive other textures. Metaphor reveals the conflation at the heart of meaning, as





abstract domains are worked out, played out, in terms of more concrete, often bodily events. Conceptual blending theory tries to capture this conflation through the notion of blending, but it quickly tries to interpret it in terms of discreet operations, elements, and rules. Such an account obscures the conflation at work. Ritual, too, depends on conflation. It is metaphor in the flesh, or metaphor returning to its carnal roots. In ritual we think about sin and salvation, suffering and liberation, social division and harmony, by moving, feeling, and acting in specific ways. Action is conflated with thinking; thinking happens in action. Thinking happens as action.

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I summarize (briefly) these forms of conflation and outline the basic nature of conflation as a model of thinking at the root of cognitive linguistics in its various forms.

[embodiment&situatedness] Tuesday, 14:30-15:00, Aula Daniella **Aguiar**, daniella.aguiar[at]gmail.com Federal University of Uberlandia, Brazil Pedro **Atã**, ata.pedro.1[at]gmail.com Joao **Queiroz**, queirozj[at]gmail.com Federal University of Juiz de Fora, Brazil

# Niche explorers: a situated account of creativity in dance and literature

Artistic creativity has often been associated with mysterious or vaguely formulated concepts such as "talent", "intuition", "inspiration" or "geniality". A common view is that creativity possesses an unaccountable element of subjectivity and cannot be understood. Differently, psychological approaches to creativity have investigated personality traits, cognitive abilities, emotional dispositions and the relation between "creative individuals" and social institutions. Those approaches are consistent with internalist paradigms in cognitive science that regard cognition as the processing of internal, discrete and intentional units of





information and in which the role of context and external tools is secondary. In opposition to such paradigms, Situated and Embodied Cognitive Science has questioned the legitimacy of skin and skull to serve as criteria for the demarcation of the boundaries between mind and the world. This approach stresses that the capacities of mind are shaped by non-biological tools for thinking and that decisive stages of cognitive processing can happen externally to the brain.

We approach creativity not as an "ability" of individual minds, but as opportunities for niche construction through the exploitation of cognitive artifacts (Clark, 2006). In our description, artistic cognitive niches represent established ways to exploit available cognitive artifacts through high order semiotic dynamics, such as in the notions of poetic function of language (Jakobson & Pomorska, 1988), or artworks as dichotomous artifacts (Pepperell, 2015). Artistic cognitive niches embed opportunities for cultural evolution, in a process of niche construction which involves the transformation of "problem spaces" (Simon, 1999).

We exemplify our perspective with well-known cases in poetry and theatrical dance. In dance, for instance, external artifacts constrain the dancers' and choreographers' actions in different levels. Techniques, presentation spaces, composition methods, softwares, dance shoes and many other resources, function as boundaries for creating choreographic pieces. Our approach is supported by examples in dance history. In each of them, the introduction of artifacts changed not only how to make dance, but also the very concept of dance, opening opportunities for the exploration of new niches.

#### References

Clark, A. (2006). Language, embodiment, and the cognitive niche. Trends in Cognitive Sciences, v. 10, 8 p. 370-374.

Jakobson, R. & Pomorska, K. (1988). Dialogues. MIT Press.

Simon, H. (1999). Problem solving. In R. A. Wilson and F. C. Keil (Eds.), The MIT Encyclopedia of the Cognitive Sciences. The MIT Press, p. 674.





Pepperell, R. (2015). Artworks as dichotomous objects: implications for the scientific study of aesthetic experience. Frontiers in Human Neuroscience, 9.

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[communication] Tuesday, 11:30-12:00, Aula Jens **Allwood**, jens[at]ling.gu.se Elisabeth **Ahlsén**, eliza[at]ling.gu.se University of Gothenburg, Sweden

# Dimensions of context. Classifying approaches to the context of Communication

This paper analyzes the concept of context. We suggest two ways of classifying approaches to the context of communication:

# (i) Classifying approaches based on a number of relevant contextual dimensions and context foci

Communication always involves at least three possible main focal dimensions for a context to be the context of: (i) production of information (by at least one communicator), (ii) interpretation of information (by at least one other communicator) and (iii) interaction between the communicators. Given the three suggested focal aspects of communication, we can distinguish at least the following further possible context foci in both Human-Human communication and Human-Computer interaction: (i) The social activity, (ii) The participants in the activity we are interested in, (iii) The users of a computer supported system, (iv) The system, (v) The message(s), (vi) A particular contribution to communication, (vii) A particular linguistic expression, (viii) A particular gesture.

(ii) Classifying approaches based on the dimensions of Peirce's





#### semiotics

We take as our point of departure the semiotic analysis of a sign proposed by Peirce, in combination with the characterization of the aspects of a sign system (syntax, semantics and pragmatics), suggested by Morris. Using the three elements distinguished by Peirce (representamen, object and interpretant), we can distinguish three approaches to context and and possible combinations of them. We use the dependence of the constitution of a sign on a sign user (interpreter) to explore the general context dimensions of a sign.

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We can now distinguish three types of context:

- 1. The context of the representamen syntactic context
- 2. The context of the object semantic context
- 3. The context of the interpretant pragmatic context
- 4. Combinations of syntactic, semantic and pragmatic context

For example, the interpretant is the interpretation given by the user of a representamen. This interpretant links the representamen with the object it represents and with the interpreter, i.e. the users of a sign and a sign system are included and create the context of the interpretant and also the context of the usage of the interpretant. This is the pragmatic notion of context, which involves the study of a sign system in use, where contextual factors can include syntactic, semantic context and factors mentioned in the first approach

Building on these two ways of classifying approaches to the context of communication, we present our own proposal for how to analyze the main relevant contextual dimensions influencing human interaction and communication





[coneptualization] Tuesday, 15:30-16:00, room 101 Mihailo **Antović,** mihailo.antovic[at]filfak.ni.ac.rs University of Niš, Serbia

### From Expectation to Concepts: Toward Multilevel Grounding in Music Semiotics

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This paper proposes a theory of "multi-level grounded" musical semantics. Its central thesis is that musical meanings are neither indeterministic, appearing and disappearing in real time in endless circles of vague association, nor strongly dependent on a single and stable ontology, such as prebuilt information inherent to the musical form. Rather, the proposal is that linguistic descriptions of music are grounded in a hierarchical system of six contextual constraints, or "grounding boxes", which motivate crossdomain correspondences between the musical material and extramusical referents by providing "important contextual assumptions [...which] influence the way that meaning construction proceeds" (Coulson and Oakley, 2005: 1517). To motivate the six proposed grounding levels, I provide a qualitative analysis based on the random sample of free-form descriptions of six programmatic musical pieces from my group's recent experimental study (Antović, Stamenković & Figar, in press). While some musical scholars claim that any inherent musical meaning must be grounded in the physical resemblance between the musical structure and environmental sounds (variously labeled "imitation", "iconic musical meaning", "echoing", or "musical onomatopoeia"), our data reveal only a negligible number, of additionally rather diversified, onomatopoeic musical descriptions. Rather than pursuing this line of thinking, I look for the basis of the semantics of music in the well psychologically corroborated notion of disappointment or satisfaction of structural musical expectancies. There, on level one, the first glimpse of meaning emerges from direct physiological reactions, as when a disappointed expectancy accelerates the heart beat, or a segment of music is described as "tense". On level two, more explicitly cross-modal image-schematic structure begins to be constructed, e.g. a





"forceful" chord, "hopping" staccato, or "the flutter of wings". Level three builds on such embodied expectancies and image-schematic structure and provides the first glimpse of "connotation", ascribing emotional qualities to the music, e.g. "resolution interspersed with despair", while on level-four, the meaning becomes "conceptual", relating the music to rich imagery, e.g. "a medieval battle". On level five, conceptual meaning interacts with an "elaborated cultural context", motivating blended descriptions at the intersection of two or more conceptual domains, e.g. when the "battle" is replaced by "gods coming down from Olympus". Level six hosts associations grounded in personal experience. To support the proposal, a representative set of our participants' verbal responses is analyzed, showing both the emergence of new conceptual content and the hierarchical nature of grounding. In doing so, the contribution attempts to formally capture the old paradox of musical semantics: that music is full of meaning, yet that this meaning is highly underspecified, manifested in a *potential* rather than definite form.

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#### References

Antović, M., Stamenković, D., & Figar, V. (in press). Association of meaning in program music: On inherence, denotation, and onomatopoeia. *Music Perception*, http://mp.ucpress.edu/

Coulson, S., & Oakley, T. (2005). Blending and coded meaning: Literal and figurative meaning in cognitive semantics. *Journal of Pragmatics*, *37*(10), 1510-1536.

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[multimodal] Monday, 11:45-12:15, room 201 Maíra **Avelar**, mairavelar[at]gmail.com Universidade Estadual do Sudoeste da Bahia, Brazil

# The emergence of multimodal metaphors in the political-religious discourse: a comparative analysis

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In this paper, we aim to analyze the emergence of multimodal metaphors in legislative sessions from the Brazilian House of Representatives, performed by the so-called "Deputy Pastors" that belong to the Evangelical Bench, taking into consideration three variables: verbal, prosodic - that belongs to the auditory modality –, and gestural – that belongs to the visual modality. We intend to analyze the conceptual metaphors (Lakoff & Johnson 1980) that gradually emerge in the deputy's discourses. We assume the hypothesis that that the more entrenched in our conceptual system the metaphoric expression is, the more difficult it is to recognize it as metaphoric. On the other hand, the less entrenched in our conceptual system the metaphoric expression is, the easier it is to recognize it as a metaphoric expression. To demonstrate the emergence of the metaphors in the three modalities mentioned above, as well as the relation among them, we have selected 3-minute scenes from two plenary sessions, belonging to two different deputies, broadcasted and made available by TV Câmara, the Brazilian House of Representatives TV channel. In order to perform our analyses, we chose our Multimodal Semiotic Blending model (Avelar in press), an adaptation of the Cognitive Semiotics Model proposed by Brandt (2004) that establishes architecture of spaces projected by the subjects in their interactions, which makes the cognitive processing of blends possible. We intend to perform a comparative analysis of the emergence of multimodal metaphors in the discourse of the two chosen plenary sessions, specifically observing the multimodal metaphoricity in speech and gesture compounds (Müller & Cienki, 2009), the emergence of prosody as a body-based feature (Auchlin 2013), and the pragmatic use of gesture families (Kendon 2004). Partial results confirmed our initial





hypotheses that the more conventionalized the metaphors are, the more difficult it is to recognize the metaphoric nature of the expressions. On the other hand, the less conventional the metaphors are, the easier it is to recognize the metaphoric nature of the expressions, and, consequently, more gestural and prosodic resources are used for driving the attention of the listener to what is being said or iconically depicted by the gestures. After performing all the analyses, we intend to demonstrate how the verbal, prosodic and gestural features can interact in order to generate multimodal metaphors that can be more or less conventionalized, depending on the contextual environment of their emergence.

#### References

Auchlin, A. (2013) "Prosodic Iconicity and Experiential Blending". In : S. Hancil (Ed.) *Prosody and Iconicity*. Amsterdam : John Benjamins.

Avelar, M (in press) "The emergence of multimodal metaphors in Brazilian political-electoral debates: a comparative analysis of the 2010 and 2014 second-round presidential debates In: Zlatev, J, Konderak, P & Sonesson, G (Eds). *Establishing Cognitive Semiotics*. Frankfurt am Main: Peter Lang.

Brandt, P. (2004) *Spaces, Domains, and Meaning*: Essays in Cognitive Semiotics. Brussels: Peter Lang.

Grady, J., T. Oakley & S. Coulson (1999) "Blending and Metaphor". In: *Metaphor in cognitive linguistics*, G. Steen & R. Gibbs (eds.). Philadelphia: John Benjamins, 1999.

Hougaard, A. (2008) "Compression in interaction". In: T. Oakley & A. Hougaard (eds.) *Metaphor in Discourse and Interaction*. Amsterdam/Philadelphia: John Benjamins.

Kendon, A. (2004) *Gesture*: visible action as utterance. Cambridge: Cambridge University Press.

Lakoff, G. & M. Johnson (1980) *Metaphors we live by*. Chicago, London: The University of Chicago Press.

Müller, C. & A. Cienki (2009) "Words, gestures, and beyond: Forms of multimodal metaphor in the use of spoken language". In, C. Forceville & E.





Urios-Aparisi (eds.). *Multimodal Metaphors*. Berlin, New York: Mouton de Gruyter, p. 297-328.

[conceptualization] Tuesday, 10:30-11:00, room 101 Marco **Bagli,** marbagli[at]gmail.com University of Perugia, Italy

#### Sweet, sweet love: from wild honey to semantic prototypes

Research in cognitive linguistics suggests that Sweet is the prototypical concept in the semantic domain of Taste (Bagli *forthcoming*, Bagli *in preparation*). Furthermore, when Sweet is used metaphorically it generally has a positive meaning and is one of the taste terms with the highest number of occurrences in English corpora (Bagli, *under review*). Moreover, human beings seem to have an almost universal penchant towards sweet foods (Allsop and Miller 1996). The aim of the present research is to provide a theoretical background to these linguistic results from an evolutionary perspective.

For millennia, the main sweetener accessible to primates was honey. Honey is one of the most energy-dense foods in nature (Skinner 1991), and allegedly played a crucial role in hominin diets and in human evolution (McGrew 2001, Crittenden 2011, Wrangham 2011, McLennan 2015). Although the quantity consumed by hominins is still a matter of debate, modern hunter-gatherer tribes adopt some foraging methods that could be reminiscent of those by early hominin tribes (Crittenden 2011, Marlowe et al. 2014). Particularly Boran people from Kenya, among others, developed a symbiotic relationship with a bird, the honeyguide (*indicator indicator*) that literally guides them to the honeycomb in change of some wax (Isack and Reyer 1989). The most ancient archaeological evidence of honey foraging comes from the Toghwana Dam in Zimbabwe, and dates back 10,000 years (Orians 2014). However, early hominins may have been exploiting wild beehives long before this. Chimpanzees use stick tools to





extract both honey and larvae, and Hadza people from Tanzania do the same, to the point that "one is struck by how similar the honey pursuit is for chimpanzees and humans" (Marlowe et al 2014: 126). Other archaeological findings from Egypt and Crete also show the centrality of honey in Ancient societies.

The present research links together different disciplines to account for a linguistic phenomenon observed in previous research, namely the prototypicality of the concept "sweet" in the domain of Taste. To do so, it considers the role of honey consumption in primates' evolution: from its energy input to the techniques employed to forage it. I argue that the special linguistic status of the concept "sweet" is biologically motivated, and derives from an embodied experience: the importance and the craving for honey in our diets as primates (Orians 2014).

#### References

Allsop, K. A., & Miller, J. B. (1996). Honey revisited: a reappraisal of honey in pre-industrial diets. British Journal of Nutrition, 75, 513-520.

Bagli, M. (forthcoming). Defining Taste in English informant categorization Bagli, M. (in preparation). Prototypical tastes in English.

Bagli, M. (under review). "Shaking off so good a wife and so sweet a lady": Shakespeare's use of Taste words. Journal of Literary Semantics.

Crittenden, A. N. (2011). The Importance of Honey Consumption in Human Evolution. Food and Foodways, 19(4), 257-273.

Isack, H. A., & Reyer, H. U. (1989). Honeyguides and Honey Gatherers: Interspecific Communication in a Symbiotic Relationship. Science, 243, 1343 - 1346.

Marlowe, F. W., Berbesque, J. C., Wood, B., Crittenden, A. N., Porter, C., & Mabulla, A. (2014). Honey, Hadza, hunter-gatherers, and human evolution. Journal of Human Evolution, 71, 119-128.

McGrew, W. C. (2001). The other faunivory: Primate insectivory and the early human diet. In C. B. S. a. H. T. Bunn (Ed.), Meat Eating and Human Evolution. Oxford: Oxford University Press.





McLennan, M. R. (2015). Is honey a fallback food for wild chimpanzees or just a sweet treat? American Journal of Physical Anthropology, 158(4), 685-695.

58

Orians, G. H. (2014). Snakes, Sunrises, and Shakespeare: How Evolution Shapes Our Loves and Fears: University of Chicago Press.

Skinner, M. (1991). Bee brood consumption: An alternative explanation for hypervitaminosis A in KNM-ER 1808 (Homo Erectus) from Koobi Fora, Kenya. . Journal of Human Evolution, 20, 493 - 503.

Wrangham, R. W. (2011). Honey and Fire in Human Evolution. In Sept J., Pilbeam D. (Eds.), Casting the Net Wide: Papers in Honor of Glynn Isaac and his approach to Human Origins Research. (pp. 146-167). Oxford: Oxbow Books.

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[Peircean] Monday, 16:00-16:30, room 201 Tyler **Bennett,** rogueborg[at]hotmail.com University of Tartu, Estonia

### Semiotics for conceptual metaphor and blending

Danesi and Sebeok (2000) and O'Neill and Benyon (2015) write that extant theories of conceptual metaphor and blending can benefit from a more nuanced understanding of Peircean semiotics, without however delving into the mature Peircean doctrine of the sign as developed by T.L. Short (2007) Frederik Stjernfelt (2014), et al. In addition to benefitting from the detailed Peircean taxonomies from 1903, the central principles of Juri Lotman's semiotics (Lotman 1977; Kull 2015) show how conceptual metaphor and blending depend on logical contradiction. How do we decide that source and target domains in a conceptual are actually incompatible? Lotman's writings about inter-medial tropes provide answers to these questions and show that the diagrammatic exploration of creativity in cognition has strong precursors in semiotics. The developed theory of semiotic conceptual metaphor and blending is applied to Lakoff and





Johnson's discussion of the conceptual metaphor "Time is Money" as a "metaform", as well as to a combined image and caption from Kalle Lasn's *Meme Wars* (2012) as an extended metaform, or "meta-symbol".

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#### References

Bennett, Tyler J. 2016. "The semiotic life cycle and *The Symbolic Species*". *Sign Systems Studies*. University of Tartu Press.

CP = Peirce, Charles. Collected Papers I-VIII. Hartshorn, C.; Weiss, P.; & Burks, A. (eds.) 1931-1958. Cambridge: Harvard University Press.

Danesi, Marcel and Sebeok, Danesi 2000. *The Forms of Meaning: Modeling Systems Theory and Systems Analysis*. Berlin: Mouton de Gruyter.

Fauconnier, Gilles and Turner, Mark 2002. *The Way We Think: Conceptual Blending And The Mind's Hidden Complexities*. Basic Books: New York.

Kull, Kalevi 2015. A semiotic theory of life: Lotman's principles of the universe of the mind. *Green Letters*. 19:3, 255-266

Lakoff, George and Johnson, Mark 1999. *Philosophy in the Flesh*. New York: Basic Books.

Lasn, Kalle 2012. *Meme Wars: The Creative Destruction of Neoclassical Economics.* New York: Penguin Books.

Lotman, Juri. 1977. *The Structure of the Artistic Text.* Ann Arbor: University of Michigan Press.

O'Neill, Shaleph J. and Benyon, David R. 2015. "Extending the semiotics of embodied interaction to blended spaces". *Human Technology: An Interdisciplinary Journal on Humans in ICT Environments.* Volume 11 (1): 30–56.

Stjernfelt, Frederik 2014. *Natural Propositions: The Actuality of Peirce's Dicisigns*. Boston: Docent Press.

Short, Thomas L. 2007. Peirce's Theory of Signs. Cambridge: Cambridge University Press.





[lang evo] Monday, 16:00-16:30, Aula Fabian **Bross**, fabian.bross@ling.uni-stuttgart.de University of Stuttgart, Germany

# The Origin of the Headshake

The aim of this talk is to present an explanation for why headshakes indicate negation in most cultures of the world. The theoretical underpinnings of this explanation lie in conceptions of grounded cognition, which state that our cognition relies on multi-modal representation acquired during real-world experiences (e.g., Barsalou 2008) and Hebbian learning (Hebb 1949). Equipped with these ideas, this presentation will elaborate on Darwin's (1872:273) observation that children inevitably shake their heads when sated, thereby establishing a connection between rejection and the head gesture. Later in life, the semantics of the headshake extends from rejection to negation.

As human babies are usually held in the arms of the caretaker to support the weak neck muscles, the only way to stop drinking is a headshake. When this action is repeated numerous times, an association between the bodily experience of shaking the head and refusal is established via Hebbian learning.

Most nonhuman mammals are fed when the mother is either lying on the side or standing. These animals therefore do not need to perform a headshake to stop the feeding. The special posture of human babies in contrast makes other head movements difficult.

This simple theory predicts that (a) the same connection can be established in other mammals whose mothers also hold their babies in their arms, (b) blind humans should also display this behaviour even though they cannot observe headshakes, and (c) the headshake should be a gesture acquired very early in life. Indeed, there is evidence that bonobos, who breastfeed their babies while holding them in their arms, indicate refusal by headshaking (Schneider, Call & Liebal 2010). Prediction (b) is supported by human ethology research demonstrating that deaf-and-blind born children





also refuse disliked objects by shaking their heads (Goodenough 1932; Eibl-Eibesfeldt 1973). Finally, prediction (c) is supported by the fact that the headshake is one of the earliest gestures in humans and is initially used to express refusal only (Guidetti 2005). In language acquisition, negative expressions are also initially used to refuse and only later to negate more generally (Stern & Stern 1907:39f.; Dimroth 2010). This talk will also discuss why there are regions in the world where no headshake is used arguing that the connection between negation and the headshake can be overwritten by culture.

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#### References

Barsalou, L. W. (2008): Grounded Cognition. In: Annual Review of Psychology, 59, 617--45.

Darwin, C. (1872): *The Expression of the Emotions in Man and Animals*. London: John Murray.

Dimroth, C. (2010): The Acquisition of Negation. In: Horn, L. R. (eds.): *The Expression of Negation*. Berlin & New York: Mouton de Gruyter, 39-71.

Eibl-Eibesfeldt, I. (1973): The expressive behaviour of the deaf-and-blind born. In: Von Cranach, M. & Vine, I. (eds.): *Social communication and movement*. New York: Holt, Rinehart & Winston, 163-194.

Goodenough, F. L. (1932): Expressions of the emotions in a blind-deaf child. In: *Journal of Abnormal and Social Psychology*, 27(3), 328-333.

Guidetti, M. (2005): Yes or no? How young French children combine gestures and speech to agree and refuse. In: *Journal of Child Language*, 32, 911-924.

Hebb, D. O. (1949): *The Organization of Behavior*. New York & London.

Schneider, C., Call, J. & Liebal, K. (2010): Do bonobos say NO by shaking their head? In: *Primates*, 51, 199-202.

Stern, C. & Stern, W. (1907): *Die Kindersprache. Eine psychologische und sprachtheoretische Untersuchung*. Leipzig: Johann Ambrosius Barth.





[phenomenology] Wednesday, 11:30-12:00, room 201 Gisela **Bruche-Schulz**, gibrushu[at]gmail.com Independent Scholar, Germany

# Meaning in systems of complexity On a feel, and foundational experience

The starting point of this paper is a particular set of data, created by agents who were *unaware* of doing so. Five different groups of readers read a one-page long excerpt from Saint-Exupéry's *Le Petit Prince* in five different languages. The distribution of their responses correlates, in all five languages, with the aspectual semantics of the text that reflects its force-gestaltist diagrammatic core. This diagrammatic core underlies the problem-solution structure and its *wanting-to-know* sequences (Hoey 2001, Propp 1968 [1928]). The question asked in this paper concerns the factor that motivates the particular type of directedness of non-conscious awareness. What is it that is made visible by the data, and by which route does it operate?

The readers seem to signal the activation of an impulse that motivates the giving and the withholding of a response. The non-conscious activation of the impulse to act presumably relies on core emotional affects that are "defined in neural terms" (Panksepp 2005: 32). These core emotional affects that effect, among others, a *wanting*-and-*seeking* urge, seem to be the gist of the feel that drives the energetic action of humans and other mammalians. When mediated through "signs" feelings are first instants (Peirce 1998 [1908]). They attach to the iconic core of the gestaltist relation, mediated by language, or non-language means. Feelings confirm "what happens" (Damasio 1999). How is that done? In the universe of discourse, language-mediated or not, there is always a "field of 'distinct





vision' of the interpreter [and] the truth of the true consists in his being satisfied with it (Pietarinen 2011, citing Peirce)."

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In sum, a neural underlay grounds an organism's string of energetic actions that are directed towards a goal. For attaining this goal, some discerning recognition of the objects of a seeking and a wanting is guided in this very process of recognition by the epistemic tool of the force*gestaltist* icon of (diagrammatic) relations. This force-gestaltist diagrammatic core underlies the problem-solution structure of a narrative text. It is one of the most basic epistemic tools, both grounded in, shaped by, and shaping the conceptual *gestalt* of foundational experience, invoking the feel of the conceptual *real*, and bringing forth the satisfaction of knowing it. The data presented in this paper testify to this picture by suggestive evidence.

#### References

Damasio, Antonio 1999. *The Feeling of What Happens*. New York: Harcourt Inc.

Hoey, Michael 2001. *Textual Interaction. An Introduction to Written Discourse Analysis*. Routledge: London.

Panksepp, Jaak 2005. Affective consciousness: Core emotional feelings in animals and humans. *Consciousness and Cognition* 14.1: 19-69. Peirce, Charles S. 1908. Letters to Lady Welby. *The Essential Peirce*. 2. By

the Peirce Edition Project. Bloomington: Indiana University Press 1998.

Pietarinen, Ahti-Veikko 2011. Moving pictures of thought II: Graphs,

games, and pragmaticism's proofs. Semiotica 186-1/4: 315-331.

Propp, Vladimir 1968 [1927]. Morphology of the Folktale. Austin:

University of Texas Press





[philosophy&cognition] Wednesday, 12:00-12:30, room 101 Algirdas **Budrevicius**, Algirdas.Budrevicius[at]kf.vu.lt Vilnius University, Lithuania

### On the Account of the Nature of Meaning: Approach Based on the Insights into Aristotle's and Aquinas' Theory of Being and Cognition

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The nature of meaning was claimed to be the central idea for cognitive semiotics. The meaning, however, has many definitions in different domains of science. In modern semiotics, there are several approaches to definition of meaning depending on the considered model of sign. At least four basic traditions may be singled out: Saussurean approach based on the ideas of structuralism; Peircean approach based on his Universal categories of Being; Morris' approach based on behaviorism, and Uexkuell's biosemiotic approach. Due to the diversity of approaches, the following problems should be considered: What are relations between the approaches? Could they be united, that is, could a general theory of meaning be proposed? Should it be applicable only for semiotics, or should it be suitable for other domains of science as well? What should be the common ground of the theory? A vast scope of research and the numerous attempts of many scientists are needed to solve these problems. In this contribution, one of such attempts is made—the outlines of the ontological approach to analysis of nature of meaning are proposed. It is based on the insights into Aristotle's and Aquinas' ideas on cognition. Proposed account presents a further development of author's ideas described in his recently published book Sign and Form. Models of Sign as Homomorphism Based on Semiotic Insights into Aristotle's and Aquinas' Theory of Being and Cognition. The ontological approach is not new for semiotics: Peirce defined sign as one of his universal categories of Being (*Thirdness*); centuries ago before Peirce, Poinsot defined sign as a Relational Being in his Tractatus de Signis. The ontological approach provides the most common ground for the theory of meaning. In this contribution, Being is viewed in terms of





Aristotle's hylomorphism and his theory of cognition. Meaning is viewed as a complex phenomenon and it is placed in the framework of Being. It will be shown that proposed approach allows constructing a system of models of meaning (direct and indirect meaning; symbolic meaning; metaphorical meaning; discriminating meaning and sense). The approach also allows creating the most basic and natural classification of signs (starting from the natural division of all signs into *material* and *formal*). It is supposed further that due to its most general (ontological) ground, the proposed approach has a potential to unite other approaches to definition of meaning. The arguments to ground this statement will be provided.

[experimental] Tuesday, 14:00-14:30, room 4 Hongjun **Chen**, chenhj@dlut.edu.cn Qiuyue **Lei**, heidi0903@163.com Dalian University of Technology, China

# Contextual Effects on Metaphor Processing of Chinese Four-Character Idioms: An ERP Study

Metaphor is not only a language phenomenon, but also a way of thinking. As a kind of metaphoric linguistic expression, the Chinese four-character idioms have several features such as conventionality, inflexibility, figuration, etc. which stipulate the meanings of idioms. However, the ultimate comprehension of metaphor relies on the contexts where metaphor occurs. But so far few studies have addressed the effects of contexts in the processing of metaphor.

ERPs have been widely used in the researches of cognitive linguistics as it has high temporal resolution and is noninvasive to the human body. The linguistic stimuli used in this research are Chinese four-character idioms which can be interpreted both literally and metaphorically with high familiarity and semantic transparency. In the experimental design, each idiom is put in three kinds of contexts including literal-bias context,





metaphorical-bias context and unrelated context. Through the analysis on N400 evoked in the processing of idioms in different contexts, the present study aims to explore the contextual effects on metaphor processing and to investigate the hemispheric differences and the degree of activation when processing the literal and metaphorical meanings.

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The ERP results of the experiment show that processing idioms in literalbias contexts evokes larger grand average N400 amplitude when it is compared to that in metaphorical-bias contexts. It proves that the metaphorical meanings of Chinese four-character idioms with high familiarity and semantic transparency are accessed firstly.

As for the differences of the activated regions, the results of the experiment show that the right anterior part of the brain is more activated when processing idioms in literal-bias contexts while both the left and right anterior parts of the brain are involved when processing idioms in metaphorical-bias contexts. The result also reflects that the further the semantic distance is, the more active the right hemisphere is.

In a word, the present study shows that for Chinese four-character idioms with high familiarity and semantic transparency, their metaphorical meanings are salient and activated automatically upon encounter. They are understood more quickly, smoothly and with smaller effort in metaphoricalbias contexts than in literal-bias contexts. Therefore, the metaphorical-bias contexts facilitate the understanding of the metaphorical meanings of these idioms. The literal-bias contexts inhibit the understanding of their literal meanings. With more effort, the nonsalient literal meanings would be activated with the help of the literal-bias contexts.

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[multimodal] Monday, 10:45-11:15, room 201 Elżbieta **Chrzanowska-Kluczewska**, elzbieta.chrzanowska-kluczewska[at]uj.edu.pl Jagiellonian University in Krakow, Poland

# Verbal and Pictorial Narrativity – a Case of Intermediality

The presentation intends to focus on those aspects of the visual arts that bear a *storytelling potential*, on analogy to verbal texts. My interest lies mainly in the field of artistic semiotics, that is in those texts produced in the verbal and visual media that are marked with aesthetic qualities. The attention will go mainly to *figural painting* due to its potential to show events as evolving in time. Thus, I intend to consider the manner in which *narrativization* as a widely recognized cognitive propensity of the human mind to impose structure upon reality is applicable to pictorial representations and how it takes part in the construction of *visual possible worlds/text worlds*.

The degree of storification/emplotment (White 1987), or in cognitive parlance the imposition of the SOURCE-PATH-GOAL pattern on scenarios (Lakoff 1987, Johnson 1987), related also to the phenomenon of *tellability* (significance and newsworthiness of the story matter, cf. Labov 1972, Bruner 1991), postulated originally for verbal texts and extrapolated onto visual narratives, will differ according to the genre of representation and the narration unit it exemplifies. Such units, on analogy to the units suggested for verbal texts, run incrementally from 1) narrative images (single scenes, with the often quoted Paleolithic "hunting incident" from Lascaux as one of the earliest pieces of painted narrative, cf. Bandi et al. 1961). They epitomize what in linguistics is known as *implied scenarios* (Langacker 1987) and in literary theory as minimal or micro-narration (Wolf 2005, Filar 2013). Next come 2) narrative sequences (e.g. hagiographical paintings and Passion scenes in the tradition of Western and Orthodox religious iconography; painted and sculpted medieval retables; in contemporary European art for instance J. Duda-Gracz's Passion series





"Częstochowa Golgotha" or Robert Devriendt's (2015-16) synecdochically fragmented sequences of miniature oil paintings that invite the viewer to fill in the lacunae in narration in the manner close to reconstructing filmic sequences. Narration culminates in 3) full-blown *worlds* (present in rich pictorial *cycles*, e. g. M. Chagall's oeuvre, cf. Chrzanowska-Kluczewska forthcoming).

Narrativity, almost automatically, participates in the (re)construction of a possible world/text world (Eco 1979/1994). Such world supports an artwork that strives to render temporality and causality in its own unique medium, in addition to presenting a set of individuals and their configurations. It can be claimed that visual worlds come into being at level 2) of narrative sequences. The most controversial (from the narrative point of view) level 1, on analogy to non-epic poetry, is supported by scenes rather than worlds proper. In turn, series in the style of Duda-Gracz produce hybrid worlds, in which religious and real-life elements co-exist. The concept of a text-world, associated primarily with verbal texts, can thus find its extension to encompass fictional or hybrid worlds of the visual arts. Hence, a broadly (semiotically) conceived *text-world* may become an *integrational category* uniting various artistic media. The discussion on the narratively-induced world-creating potential of texts realized in various artistic media and the manner in which they are interpreted in perceptually and culturally individualized contexts in the process of concretization/actualization should bring together phenomenological, cognitive and semiotic studies on verbal and non-verbal art criticism (cf. Ingarden 1937/1973, Sonesson 1997, Crowther 2009).

An additional methodological issue is whether the "natural narratology" postulated by M. Fludernik (1996) for verbal fictional texts can be extrapolated onto pictorial figural texts. Specifically, an important cognitively-oriented query is whether the interpreters faced with pictorial narrativity turn to so-called *naturalization scripts* (Culler 1975, Fludernik 1996) that have direct recourse to human experiential (real world) patterns, related to, among others, the interpreters' embodiment, emotionality and dependence on the environment. *Naturalization scripts* are the "reading"





strategies particularly useful in solving textual inconsistencies and in construing more complete world stories.

#### References

Bandi, H.-G. et al. 1961. The Art of the Stone Age. New York: Crown Publishers.

Bruner, J. 1991. The narrative construction of reality. *Critical Inquiry* 18: 1-21.

Chrzanowska-Kluczewska, E. (forthcoming 2016). Światy możliwe w tekście literackim i "tekście" malarskim oraz ich niedookreślenie. Przyczynek semiotyczny do semantyki światów możliwych [Possible worlds in a literary and a pictorial "text" and their underdetermination. A semiotic contribution to possible-worlds semantics]. In: *Światy możliwe*, ed. M. Stanisz. Rzeszów: Wydawnictwo UR.

Crowther, P. 2009. *Phenomenology of the Visual Arts (even the frame).* Stanford, Ca: Stanford UP.

Culler, J. 1975. *Structuralist Poetics: Structuralism, Linguistics and the Study of Literature*. London: Routledge.

Devriendt, R. 2015-2016. *Making Connections*. Bruges: Groeningmusem and Krakow: the MOCAK Museum of Contemporary Art.

Eco, U. 1979/1994. Lector in fabula. Warszawa: PIW.

Filar, D. 2013. *Narracyjne aspekty językowego obrazu świata* [Narrative aspects of the linguistic worldview]. Lublin: Wydawnictwo UMCS.

Fludernik, M. 1996. *Towards a 'Natural' Narratology*. London: Routledge.

Ingarden, R. 1931/1973. *The Literary Work of Art*. Evanston, II.: Northwestern University Press.

Johnson, M. 1987. *The Body in the Mind: The Bodily Basis of Meaning, Imagination, and Reason*. Chicago, IL: University of Chicago Press.

Labov, W. 1972. *Language in the Inner City.* University Park: University of Pennsylvania Press.

Lakoff, G. 1987. *Women, Fire and Dangerous Things: What Categories Reveal about the Mind.* Chicago, IL: University of Chicago Press.





Langacker, R. 1987. Foundations of Cognitive Grammar, Vol. I: Theoretical Prerequisites. Stanford, CA: Stanford University Press.

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Sonesson, G. 1997. Mute narratives: new issues in the study of pictorial texts. In: Lagerroth, U.-B. *et al.* (eds.), *Interart Poetics. Essays on the Interrelations of the Arts and Media*. Amsterdam: Rodopi.

White, H. 1987. *The Content of the Form: Narrative Discourse and Historical Representation*. Baltimore: John Hopkins University Press.

Wolf, W. 2005. Pictorial narrativity. In: Herman, D. *et al.* (eds.), *Routledge Encyclopedia of Narrative Theory*. London, New York: Routledge. 431-435.

[iconicity] Tuesday, 11:30-12:00, room 201 Peter **Coppin**, pcoppin[at]faculty.ocadu.ca OCAD University and The University of Toronto, Canada

# "Artifact evolution" of the axiomatic method from a "primordial soup of pictures" (with implications for "visual" language design)

Although 19<sup>th</sup> century mathematicians have largely rejected picture proof systems (Mumma, 2010), the diagrammatic reasoning community has argued for 25 years that pictures are a "valid form of reasoning" that should gain legitimacy in mathematics and computer programming language design because they afford advantages such as reducing "inferential load" (Barwise & Etchemendy, 1991) and offering "free rides" (Shimojima, 1996; Shimojima & Katagiri, 2008). Nonetheless, picture proof systems have not gained mainstream success in either field. This suggests that some property of pictures may not afford (may impede) some aspect of communication required for effective proofs.

To explore the possibility that pictures may *not* afford certain types of reasoning, I will discuss the "artifact evolution" (cf. Simon, 1993; Kirsh, 2010) of the axiomatic method from a "primordial soup" of pictures to its current, typically sentential written form. By reviewing how the axiomatic method of Euclid's *Elements* emerged from ancient land surveying practices





that were more pictorial, I will argue that iconic properties of pictorial representations were suitable for conveying concrete structures (such as landforms during surveying) because of their ability to recruit lower level perceptual processing capabilities (Mandler, 2006) developed to perceiveact in a concrete physical world composed of occluded surfaces and edges, and therefore pictorial properties most effectively afford communicating concrete structures (Coppin, 2014, 2015, in press).

Although pictures can be found in the most ancient cave paintings, writing systems emerged later than pictures, often from pictographs. The axiomatic method emerged within sentential writing systems even later, reaching its current form at the time of Euclid.. In the presentation, I will present a perceptual-cognitive semiotic model that describes how symbolic properties of graphic representations convey abstract concepts with more specificity relative to pictorial properties (Coppin, 2014, 2015, in press). Then I will recruit this model to argue that pictures were too conceptually ambiguous to convey increasingly abstract/conceptual mathematical concepts that emerged when mathematics was formalized during the 19<sup>th</sup> century. As pressure for more conceptual specificity of symbolic sentential representations caused sentential writing systems to emerge as a "host" for the axiomatic method.

I will conclude by comparing the above account to Mumma's (2010) defense of Euclid's picture proofs, and demonstrate that Mumma's "co-exact" properties are akin to symbolicity (Coppin, 2014), whereas his "exact" properties are akin to iconicity. This final comparison will (i) demonstrate the accuracy of Mumma's argument, (ii) convert his terminology into cognitive semiotic terms, and (iii) use his (valid) argument to demonstrate why pictures have been unsuccessful in mathematics – or programming languages – throughout human history.

#### References

Avigad, J., Dean, E., & Mumma, J. (2009, December). A formal system for Euclid's elements. In *Review of symbolic logic, 2*(4). doi:10.1017/S1755020309990098





Barwise, J., & Etchemendy, J. (1991, February). Visual information and valid reasoning. In *Visualization in teaching and learning mathematics* (pp. 9–24). Mathematical Association of America.

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Coppin, P. W. (2014). *Perceptual-cognitive properties of pictures, diagrams, and sentences: Toward a science of visual information design.* (Doctoral dissertation). University of Toronto, Canada.

Coppin, P.W. (2015). What is Lost in Translation from Visual Graphics to Text for Accessibility. In D. C. Noelle, R. Dale, A. S.Warlaumont, J. Yoshimi, T. Matlock, C. D. Jennings, P. P. Maglio (Eds.), *Proceedings of the 37th Annual Cognitive Science Society* (pp. 447–452). Austin, TX: Cognitive Science Society.

Coppin, P.W., Li, A., Carnevale, M. (in press). *Iconic Properties are Lost when Translating Visual Graphics to Text for Accessibility*. In J. Zlatev, P. Konderak, G. Sonesson (Eds.), Establishing Cognitive Semiotics. Frankfurt am Main: Peter Lang.

Kirsh, D. (2010). Explaining artifact evolution. In L. Malafouris & Renfrew, C. (Eds.) *The cognitive life of things: recasting the boundaries of the mind* (pp. 121–144). McDonald Institute for Archaeological Research, Cambridge, UK: University of Cambridge.

Mandler, J. M. (2006). Categorization, development of. In *Encyclopedia of Cognitive Science*. doi:10.1002/0470018860.s00516

Mumma, J. (2006). *Intuition formalized: Ancient and modern methods of proof in elementary geometry*. (Doctoral dissertation). Carnegie Mellon University, Pittsburgh, PA.

Mumma, J. (2010). Proofs, pictures, and Euclid. In *Synthese*, 175(2), 255–287. doi:10.1007/s11229-009-9509-9

Shimojima, A. (1996). *On the efficacy of representation*. (Doctoral dissertation). Indiana University, Bloomington, IN.

Shimojima, A. & Katagiri, Y. (2008). An Eye-Tracking Study of Exploitations of Spatial Constraints in Diagrammatic Reasoning. In G. Stapleton, Howse,

J., & Lee, J. (Eds.), Diagrammatic Representation and Inference: 5th

International Conference, Diagrams 2008, Herrsching, Germany,




September 19–21, 2008. Proceedings (pp. 74–88). doi:10.1007/978-3-540-87730-1\_10 Simon, H. A. (1996). The Sciences of the Artificial (3rd ed.). Cambridge, MA: MIT Press.

Tuesday, 15:00-15:30, room 201 Cesar **Diaz**, cesara.diazr[at]utadeo.edu.co Universidad de Bogota Jorge Tadeo Lozano, Colombia

# An agentive account of the "commode story" in Quentin Tarantino's *Reservoir Dogs*

There's a broad semiotic literature pertaining the formal structure of complex narratives. However, although there are already several cognitive approaches to complex or "unnatural" narratives, and they provide at the same time an overview of *basic* narrative comprehension and *complex* narrative comprehension, there's still no literature that accounts for the way that cognition handles different and overlapping levels of "reality" when we process and understand (or don't understand) embedded narratives of the type known as *mise en abîme*.

Formal accounts alone cannot explain this type of complex narrative comprehension, and given some basic features of the processes involved, can even clash with cognitive theories in some respects. For instance, because of cognitive processing constraints and other factors such as the structure of memory, narrative comprehension happens online and tends to economy, which seems to clash with the potentially "infinite" recursiveness of these narratives.

On the other hand, cognition tends to coherence, and certain instances of *mise en abîme* tend to incoherence. Such is the case of the segment of Quentin Tarantino's film *Reservoir Dogs* that we intend to analyze: a flashback sequence with a series of story-within-a-story structures, and a climatic scene where Mr. Blonde, the protagonist, is telling outloud a story





in the spatial and temporal setting of the events depicted by the story itself, and to some minor characters that take part, but shouldn't know the story in the first place.

I intend to explain Tarantino's version of mise en abîme with the cognitive framework of Niño's *gaentive semiotics* (Niño 2015), because it solves some of the inconsistencies posed by the Aarhus version of Fauconnier and Turner's conceptual blending theory (Brandt 2013): it gives a more precise explanation of the role of a sense of reality in meaning-making, it accounts for the way that purpose limits the extent of meaning-making; and finally, it is not only a theory of cognition, but it also allows to account for the features of semiotic items themselves in order to guide meaning construction and attribution. But beyond that, I intend to explain Reservoir Dogs itself (or at least, the segment analyzed) as a fictionalized "agentive" account of narrative production and comprehension, because of its construction of characters as *fictive narrational* (narrative+rational) *agents*; and because of its explanation of narration as enaction and "presentification".

[iconicity] Tuesday, 11:00-11:30, room 201 Lars **Elleström**, lars.ellestrom[at]Inu.se Linnæus University, Sweden

## Cross-modal iconicity: The Bridge between Image and Metaphor

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The capabilities to recognize what images represent and to understand complex metaphors are vital for humans. Both rely on our fundamental mental resource to perceive similarities and differences within the same but also across different sensory areas and different cognitive domains. Much successful research in several disciplines has been dedicated to in-depth investigations of these and related areas. Yet there are few attempts to form a broad account of the essential interrelations among various ways of connecting perceptual and cognitive entities to each other through





resemblance. The semiotic notion of iconicity is well suited for such a task. Iconicity is representation based on similarity, and cross-modal iconicity, which is an extremely widespread phenomenon, should be understood as iconicity that crosses the borders of different kinds of material, spatiotemporal, and sensorial modes, and, furthermore, the border between sensory structures and cognitive configurations. For instance, a visual entity may resemble and thus iconically represent something that is auditory or abstractly cognitive. The aim of this paper is to suggest a general theoretical framework for conceptualizing cross-modal iconicity and relating different kinds of mono-modal and cross-modal iconicity to each other in terms of degrees of iconicity. More specifically, the aim is to present a conceptual model that makes it possible to bridge the alleged gap between image and metaphor by way of outlining cross-modal iconicity. It is argued that perception and conception of images and metaphors should be understood as the two extremes in a continuum of iconic representation where cross-modal iconicity bridges the apparent gap between monomodal, sensory-based iconicity and cognitive iconicity. The argumentation is based on both theoretical and empirical research from disciplines such as semiotics, psychology, cognitive science, and neurology.

[intersubjectivity] Monday, 12:15-12:45, Aula Barbara **Fultner**, fultner[at]denison.edu Denison University, USA & Goethe University Frankfurt, Germany

## The Role of the Imagination in Semiosis

Most accounts of semantics tend to be too rationalistic or cognitivist and to focus on problems of normativity rather than creativity. Phenomenology offers a corrective because of its emphasis on embodiment and the role it accords to the imagination. I argue that linguistic competence and semiosis require both normativity *and* creativity and that semiosis is *imaginative*. I base my argument on Kant's schematism, Gadamer's hermeneutics, and





Merleau-Ponty's account of imagination. The turn to phenomenology is indispensable for providing a unified account of the role of the imagination in semiosis and intersubjectivity.

a) For Kant, the schematism is performed by the imagination and *mediates* between perception and conception; "seeing-as is the act of schematization" (Tierney 1994). According to Tierney, "The schematism structures meaning by mediating between the concrete level of perception (understood in the wide sense to include not merely sensory perception, but situational perception) and the abstract level of conception." Just as Lennon (2010) argues that imagination mediates between perception and conception, I argue that it plays a role in semiosis and in mediating between interlocutors. Specifically, the imagination's act of "seeing-as" plays a key role because reaching mutual understanding requires interlocutors to have a sense of another's perspective. They must be able to see things otherwise than from their own subjective point of view. Imagination is hence important for the development of *intersubjectivity*.

b) Gadamer distinguishes between an individualising and conventionalising tendency in language. He rejects the assumption that meaning is purely cognitive, rational, or denotative, distinct from its conative or connotative aspects. For him, a semantics that explains meaning purely in terms of substitutability and correspondence relations is limited. Whatever equivalence relations there are among expressions, they are "not unchanging mappings; rather they arise and atrophy, as the spirit of the times is reflected from one decade to the next in semantic change" (Gadamer 1999). Language is a living thing—a thing that *we live*; it is a practice.

c) Language should be conceived as not only a *practice*, but an *embodied* practice. I therefore draw on Merleau-Ponty's embodied account of the imagination to flesh out i) how perspective-taking in dialogue involves acts of imagination (but is distinct from contemporary simulation theory) and ii) how the Gadamerian tension between individualization and conventionalization in semiosis is rooted in the "to and fro movement between acquired and creative modes of embodiment" (Steeves 2001).





#### References

Gadamer, Hans-Georg. 1999. "Semantik und Hermeneutik," in *Gesammelte Werke*, vol. 2. Tübingen: Mohr Siebeck.

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Lennon, Kathleen. 2010. "Re-Enchanting the World: The Role of Imagination in Perception." *Philosophy: The Journal Of The Royal Institute Of Philosophy* 85, no. 333: 375-389.

Merleau-Ponty, Maurice. *Phénoménologie de la perception*. Paris: Gallimard, 1945.

Merleau-Ponty, Maurice. Le Visible et l'invisible.

Steeves, James B. 2001. "The Virtual Body: Merleau-Ponty's Early Philosophy of Imagination." *Philosophy Today*: 370-380.

Tierney, Nathan. Imagination and Ethical Ideals. Albany: SUNY Press, 1994.

[semiotics&science] Tuesday, 10:30-11:00, room 301 Piotr **Giza,** pgiza[at]bacon.umcs.lublin.pl Maria Curie-Sklodowska University in Lublin, Poland

# Sign Use and Cognition in Automated Scientific Discovery: Are Computers Only Special Kinds of Signs?

The paper aims to analyze Machine Discovery field from cognitive and semiotic perspective. James Fetzer criticizes the paradigm, prevailing in Cognitive Science, that cognition is computation across representations. He argues that if cognition is taken to be a purposive, meaningful, algorithmic problem solving activity, then computers are incapable of cognition. Instead, they appear to be signs of a special kind, that can facilitate computation He proposes the conception of minds as semiotic systems as an alternative paradigm for understanding mental phenomena, one that seems to overcome the difficulties of computationalism.

Now, I argue, that with computer systems dealing with scientific discovery, the matter is not so simple as that. The alleged superiority of humans using





signs to stand for something other over computers being merely "physical symbol systems" or "automatic formal systems" is only easy to establish in everyday life, but becomes far from obvious when scientific discovery is at stake. In science, contrary to everyday life, the meaning of symbols is, apart from very low-level experimental investigations, defined implicitly by the way the symbols are used in explanatory theories or experimental laws relevant to the field.

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Moreover, recent attempts to apply genetic programming to automatic generation of cognitive theories seem to show, that computer systems are capable of very efficient problem solving activity which is neither purposive nor meaningful, nor algorithmic. This, I think, undermines Fetzer's argument that computer systems are incapable of cognition *because* computation across representations is bound to be a purposive, meaningful, algorithmic problem solving activity.

#### References:

Bridewell, W., Langley, P. (2010): Two Kinds of Knowledge in Scientific Discovery, *Topics in Cognitive Science*, 2, pp. 36-52.

Fetzer, J. (1997): Thinking and Computing: Computers as Special Kinds of Signs, *Minds and Machines*, 7, pp. 345-364.

Giza, P. (2002): Automated Discovery Systems and Scientific Realism, *Minds and Machines*, 22, pp. 105-117.

Lane, P., Sozou, P., Addis, M., and Gobet, F. (2014): Evolving process-based models from psychological data using genetic programming, in: R. Kibble (ed.), *Proceedings of the 50th Anniversary Convention of the AISB*. Thagard, P. (2012): The Cognitive Science of Science, Cambridge, The MIT Press.

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[communication] Tuesday, 10:30-11:00, Aula Roman **Godlewski**, rogodlewski[at]wp.pl Independent Researcher, Poland

# Quoting as Pretending a Sign in Light of a General Theory of Communication

The Author's intuition claims:

I. Quotation goes on both in speech and in writing.

II. Quotation requires that the quoted material is presented in extenso.

III. Translative quotations are equally good as quotations that preserve the language of the original.

Thus the task is to search for a theory that fulfils all these claims. The Author has realized that in this aim it is necessary to broaden the common paradigm of linguistic research, and to analyze carefully what an act of communication is. The aim of the presentation is to sketch some new ideas in this domain.

An act of communication includes:

- The sender's intention to evoke a given content in a given recipient's mind with a given activity in given circumstances,

- The sender's significant activity,

- The significant circumstances,

- Knowing the significant details (activity and circumstances) by the recipient,

- The process of interpreting this knowledge by the recipient,

- Evocation of the intended content in the recipient's mind (understanding) upon the interpretation.

The concept of reference must be meant broadly. Every act of moving the recipient's attention from one object to another is an act of **reference**.

In communication you employ significant objects. They are parts of the sender's activity or of the significant surroundings. Some of them refer to other significant objects or to generalities, and the Author calls them **signs**. An object may refer to another by:





pointing to it, being its effigy, being its associative, being its symbol or being a hint.

The object may be:

- A sample of the generality,

- An associative: a sample of a generality that the recipient would probably associate with the given one,

- A symbol of the given generality.

As a **symbol** the Author means an object which content is established by a custom or convention. Having objects and generalities indicated you can point to other objects and generalities by them.

The crucial observation is that reference may exist only in an act of communication, and that is a whole whose all the parts are necessary and lack of one of them makes that there is no communication, and no signs. This means that quotation of a sign employs not the sign but merely the shape of it.

Quotation is an act of employing in extenso a sample of the same kind as the object used as the sign in a communicational act in order to refer to the content of the sign.

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[representation] Tuesday, 14:00-14:30, room 201 James D. **Grayot**, james.grayot[at]gmail.com Erasmus University Rotterdam, The Netherlands

# Mind-shaping and social cognition: implications for debates about mental representation

There are two paradigms for interpreting folk-psychological practices. Proponents of the 'mind-reading' approach argue that the successful recognition and attribution of others' intentional states is underwritten by a process of mental representation—often (but not always) this involves some form of meta-representation (cf. Leslie & Frith 1987; Gopnik & Astington 1988; Sterelny 1998). By contrast, proponents of 'mind-shaping'





(Zawidzki 2013; see also McGeer (2015)) argue that feats of strategic coordination and interpersonal understanding depend not upon the explicit attribution of propositional attitudes via meta-representations, but upon processes of regulative enculturation that utilize distributed and readily available cognitive technologies.

In short, the key difference between mind-reading and mindshaping hypotheses is that where mind-reading tries to explain how one individual can 'know' the intentional state of another by relying on their own cognitive resources, mind-shaping suggests that social-cognition is an active process. Moreover, it suggests that many socio-cognitive practices evolved *prior* to the ability of humans to meta-represent. In this way, the mind-shaping approach does not fall prey to the same epistemic problems that have plagued neo-Cartesian accounts of mind-reading found throughout the 'theory of mind' literature (cf. Davies & Stone 1995; Carruthers & Smith 1996).

Nevertheless, many questions abound concerning which paradigm better explains the foundations of folk-psychological practice. For instance, assuming that mind-shaping hypotheses are correct about the evolution of social-cognition, it would seem that meta-representations are not necessary to explain how people successfully coordinate and derive meaning from their actions. According to Zawidzi (2013) mind-reading hypotheses are (mostly) superfluous given that complex and recursive reasoning is a rare occurrence in daily life—very few actions require the attribution of propositional attitudes. But this conclusion supposes that early humans did in rely on more direct forms of social-cognition, and further, that complex and recursive reasoning doesn't play an important role in strategic reasoning today.

In what follows, I argue that the mind-shaping approach is limited as an explanatory theory of social-cognition: this is because (1) it does not discriminate what is uniquely false about different theories of mental representation in the mind-reading literature; (2) It identifies only prototypical forms of social-cognition that did not depend on did not rely on meta-representations; and (3) It doesn't rule out that meta-





representational abilities emerged for other purposes, thereby enabling abstract and counter-factual reasoning we utilize today. To motivate each of these points I draw upon interdisciplinary studies of strategic reasoning (i.e. from experimental economics, developmental psychology, and cognitive neuroscience) to identify where mind-shaping hypotheses outperform mind-reading ones; as such, the paper does not undermine the mind-shaping approach but refines its scope of explanation.

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### References

Carruthers, Peter, and Peter K. Smith, eds. *Theories of theories of mind*. Cambridge: Cambridge University Press, 1996.

Davies, Martin, and Tony Stone. "Folk psychology: The theory of mind debate." (1995).

Gopnik, Alison, and Janet W. Astington. "Children's understanding of representational change and its relation to the understanding of false belief and the appearance-reality distinction." *Child development* (1988): 26-37.

Leslie, Alan M., and Uta Frith. "Metarepresentation and autism: How not to lose one's marbles." *Cognition* 27.3 (1987): 291-294.

McGeer, Victoria. "Mind-making practices: the social infrastructure of self-knowing agency and responsibility." *Philosophical Explorations* 18.2 (2015): 259-281.

Sterelny, Kim. "Intentional agency and the metarepresentation hypothesis." *Mind & language* 13.1 (1998): 11-28.

Zawidzki, Tadeusz Wieslaw. *Mindshaping: A new framework for understanding human social cognition*. MIT Press, 2013.

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[communication] Tuesday, 12:00-12:30, Aula Małgorzata **Haładewicz-Grzelak**, haladewicz[at]gmail.com Politechnika Opolska, Poland

# Modalities of the sacrosphere in a semiotactic study of wayside shrines

The presentation tackles the topic of intercultural visual communication in the sacrosphere. I argue that to a large extent, signs and cultural phenomena in general undergo processes which can be captured by analytical procedures devised for studying sound changes and sound occurrence restrictions. I propose to name this perspective, couched within a larger meta-paradigm of linguistic semiotics (e.g. Wąsik 2014), 'semiotactics'. The term, first presented during the PLM conference in 2009, is modelled on the perspective called 'phonotactics': a branch of phonology investigating the restrictions on and the possibilities of phoneme combinations in languages (cf. e.g. Dziubalska-Kołaczyk– Zielińska 2011). In this sense, semiotactics denotes a branch of semiology investigating cooccurrence restrictions amongst signs and, in a larger sense, co-occurrences amongst postulated sign constituents (see e.g. Haładewicz-Grzelak 2012, 2014).

The study draws on digital documentation of wayside shrines and religious markers on churches collected by the author in various European countries and in Turkey (2009-2015). Treating the collected visual material as religious discourse, the analysis traces the structuring, markedness, co-occurrence restrictions and implicational preferences of semiotic distribution of some religious markers. In the first part of the talk I will present a proposed structuring of the sacrosphere into three modalities. Then I will analyze permutations of the base form, textuality, underspecification and propose linguistic interpretations in terms of binary and privative primes.

In the adopted perspective, wayside shrines in Poland are analytically interpreted as a recessive sign (the existing ones are not eliminated, although new ones are hardly ever erected), while the same marker in e.g.





Greece is preferentially a productive sign, additionally possessing [+locus] [active] feature. I also consider several alternative analytical procedures. The first, still within the binarity perspective, consists of proposing a feature [vacuus], which would result in the compilation [-active][-vacuus] [-mobile] in Poland and e.g. Slovakia; in Broumovsko region: [-active][+vacuus] [mobile]; in Greece: [+active][-vacuus][+mobilus]. In terms of recently popular privative terminology (instead of binarity), we can postulate e.g. *locativity* (L) as a privative feature, which will be missing in for example, the Greek sacrosphere. The latter analytical procedure also involves proposing the feature [operandi]. In the privative analysis we would thus obtain the following representations: Poland (L, O), Greece (A, O), Broumovsko (L). The third proposed procedure sets off not from activities but from processes.

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#### References

Dziubalska-Kołaczyk, K. – D. Zielińska. 2011. "Universal phonotactic and morphonotactic preferences in

second language acquisition". [In:] Dziubalska- Kołaczyk, K., M. Wrembel and M. Kul (eds.). *Achievements and perspectives in SLA of speech: New Sounds 2010*. Frankfurt am Main: Peter Lang Verlag, 53-64. URL:

http://wa.amu.edu.pl/kdk/sites/default/files/04\_Dziubalska\_Kolaczyk.pdf Haładewicz-Grzelak, M. 2012. "Dynamic modeling of visual texts: a relational model". *Semiotica 190.* 211-251.

Haładewicz-Grzelak, M. 2014. "The segmentation of phenomenological space in Licheń as an example of double binds". *Semiotica (200-June).* 200: 275 – 312.

Waugh, L. "Marked and unmarked: A choice between unequals in semiotic structure". *Semiotica* 38-3/4 (1982), 299-318.

Wąsik, Z. 2014. *Lectures on the epistemology of semiotics*. Wrocław: Wydawnictwo WSF we Wrocławiu.





[semiotics] Wednesday, 11:30-12:00, Aula Claudio Julio **Rodríguez Higuera,** higuera[at]ut.ee University of Tartu, Estonia

# Top-down Complementarity in the Study of Biosemiosis

While the conception of a naturalized semiotics encompasses the bulk of possibilities of semiotics, the process of naturalizing its core concepts is, it will be argued, a bottom-up a proposition. This seems to work as the heuristics of biosemiotics, understanding the application of sign relations to simple organisms and tying these models to higher levels of cognition across the spectrum of living beings. However, the connection between different possible levels is not easy to argue for except in the most general manner, that is, by establishing that sign action occurs across said levels and is perpetuated by biological processes.

If the enterprise of a naturalized semiotics is to concretize this point, it needs not only a bottom-up model, but also a top-down complementarity, meaning that it necessitates the study of higher levels of cognition in order to streamline its models across other levels. The theoretical issues at stake, however, make both approaches hard to bring together. This paper will talk about the conflicts between both approaches and speculate on possible solutions from the assumed bottom-up perspective common in the Tartu-Copenhagen school of biosemiotics and the complementarity offered by the program of cognitive semiotics.

[conceptualization] Tuesday, 11:30-12:00, room 101 Lin **Jinfeng,** linjinfeng1990[at]163.com Saint-Petersburg State University, Russian Federation

# Comparison of concepts [HUMAN] [BODY] [SOUL] [SPIRIT] in Russian and Chinese language picture of the world





The study of concepts is one of leading research in modern linguistics and semiotics. This concept makes it possible to consider regularity of origin of sign, language, consciousness and culture from new position. In cultural linguistics concept summarize the relationship between language, consciousness and culture. As a part of culture, concept reflects feature of natural culture.

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Keywords: Concept, Human, Body, Soul, Spirit

In Russian language picture of the world the person includes body, soul and spirit. The body is a physical, sensory, perceptible and external part. Soul is totality of our inner feelings, experiences, emotions and thoughts (the two main qualities: thinking and feeling - mind and emotions). Spirit inner man, expressed in terms of higher emotions and higher mental abilities (manifestation of the spirit - conscience is something that connects people with God).

In Chinese language picture of the world subjective and objective are not separated, or presented in a less traditional form. In Chinese culture the concept of "soul" not only is spiritual substance, which is a part of the world of man, his life, along with the subject. Chinese well-known poet and philosopher Laozi fix following representations about spirit of people: shen(spirit of people)-spirit, gui(devil)-soul, spirit is associated with light and good, is man, is top; soul is evil and darkness, is woman, is bottom. Between light and darkness, top and bottom set virtuous relationship De(virtue).

Compare the Russian language picture of the world with the Chinese language picture of the world, concepts [HUMAN], [BODY], [SOUL], [SPIRIT] exist in two language picture of the world. In traditional Chinese philosophy concept "heaven-human" and triad "heaven-earth-human" are fundamental ontological and cosmological structure. They reflect the view that human is an important integral part of the single body, heart in the body is the organ of all mental activity, heart thinks the world as a comprehensive body. So we know, human and body in China always in the spotlight. In Russian soul is given by God, the soul is the life force of man and living being, it is the life-giving beginning to control the body, so soul





and spirit are always fundamental component. This is a great difference about concept [HUMAN], [BODY], [SOUL], [SPIRIT] in two different language picture of the world.

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[language&vincinities] Monday, 14:00-14:30, room 101 Niklas **Johansson**, niklas.johansson[at]ling.lu.se Lund University, Sweden

# Sound symbolic implications for deictic words as a cognitively fundamental word class

Diessel (2014) suggested that demonstratives constitute a universal and perhaps fundamental class of words alongside nouns and verbs, as there is no evidence that demonstratives evolved from content words. Deictic pointing is one of the most basic communicative devices in all cultures and deictic words are some of the most frequently used words in general, and unlike other closed class function words among the first words used by children (Diessel 2006). Basic description words (small/round/flat), basic nouns (mother/father) etc., crucial for describing the world in early childhood, are often affected by sound symbolism. Hence, heavy influence of sound symbolism could act as an indicator of the fundamental nature of concepts (Imai & Kita 2014). And thus, the sound symbolic behavior of deictic words could demonstrate their potential role as one of the cornerstones of human language.

Johansson (2014) selected 56 semantic oppositional concepts occurring in most languages. The phonetic values of the lexemes for each concept from 75 sampled languages were quantified according to different phonetic parameters. Using cluster analyses based exclusively on phonological composition, the deictic concepts were all found to be very salient and divided into three distinct groups; EGO (speaker-related), THIS-THAT-YOU-HERE (hearer-related) and THERE (other/away-related). Johansson & Carling (2015) compared spatial demonstratives from 30 contemporary and





historical Indo-European languages with a reconstructed Proto-Indo-European deictic system (Beekes 1995). Although all of the languages used different systems than the Proto-Indo-European, 70 % of the forms correctly mapped higher-frequency sounds to proximal concepts and lowerfrequency sounds to distal concepts. Thus, sound symbolism was reconstructed repeatedly. Johansson & Zlatev (2013) investigated possible motivations for sound symbolism in spatial demonstratives within 101 sampled languages. Six different predictions of phonemes mapped onto the proximal-distal dimension were formulated, based on (a) semiotic ground (iconic, indexical or combined), (b) speaker-centeredness, hearercenteredness or both and (c) applicability to vowels, consonants or both. The results showed significant motivated ratios for the prediction based on vowel-frequency, which incorporated iconic factors, indexical factors, speaker and hearer.

The findings indicate that deictic words behave comparably to other fundamental concepts by using similar sound-meaning mappings, while also differing as they have no fixed denotations. Nouns and verbs may be the two most clearly universal word classes, but deictic words give them their essential internal and external relationships. This grounding, evident through sound symbolism, suggests that deictic words are a cognitively fundamental group of words in the cultural evolution of language.

#### References

- Beekes, R. S. P. (2011). *Comparative Indo-European linguistics: an introduction. 2., rev. ed.* Amsterdam: John Benjamins Pub. Co.
- Diessel, H. (2006). Demonstratives, joint attention, and the emergence of grammar. *Cognitive Linguistics*, 17, 463-89.
- Diessel, H. (2014). Demonstratives, frames of reference, and semantic universals of space. *Language and Linguistics Compass*, 8/3, 116-132.
- Imai, M. & Kita, S. (2014). The sound symbolism bootstrapping hypothesis for language acquisition and language evolution. *Philosophical Transactions of the Royal Society B: Biological Sciences*, 369(1651).





- Johansson, N. & Zlatev, J. (2013). Motivations for Sound Symbolism in Spatial Deixis: A Typological Study of 101 languages. *The Public Journal* of Semiotics [Online], Vol 5, No 1. Available at: http://pjos.org/index.php/pjos/issue/view/1385
- Johansson, N. (2014). *Tracking Linguistic Primitives: The Phonosemantic Realization of Fundamental Oppositional Pairs*. MA Thesis. Lund University.
- Johansson, N. & Carling, G. (2015). The De-Iconization and Rebuilding of Iconicity in Spatial Deixis: A Indo-European Case Study. *Acta Linguistica Hafniensia: International Journal of Linguistics*, 47:1, 4-32.

[language&vincinities] Monday, 15:00-15:30, room 101 Skirmantas **Junevicius**, s.junevicius@ambergrid.lt Eugenija **Junevicienne**, eugenija.juneviciene@gmail.com Independent Scholars, Lithuania

## **Categorization and Meaning-Making**

The paper presents general picture of meaning in its making. The picture rests on an idea of categorization-based cognition.

"To Cognize is to Categorize" (Harnad 2005). The beginning of categorization concur with the emergence of life - every organism makes something in this world to be of certain value, leaving everything else to be worthless; that's the essence of categorization; living organisms appear to act as institutions of categorization and, what's more, as various methods of categorization.

The criteria used for making this world divided into the initial categories are obscure, if not without logic, but results produced thereof constitute basis for the next criteria to be not baseless. They also constitute axioms for all the subsequent logic-building and premises for all the subsequent meaning-making.





To look at that, Pavlovian experiments (unsurpassed in experimental semiotics) might be used. They show how the unwelt of an animal could be expanded to include newly-formed additional areas of symbolic reality and, on top of that, they suggest ideas for bridging the theoretical gap between signs of animal communication and human language.

Let's assume the following:

1. Pavlovian-type signs of the stimulus-response reality have semantic value.

2. The aforesaid value could not be defined adequately in terms of grammatically modified words (neither noun "food", nor the verb "to eat", nor even the abstract adjective "good" can match the meaning expressed by the sound-induced somatic salivation; no word can match a category derived from the repertoire of animal's somatic reactions).

3. The same goes about initial pregrammatical words – their meaning is not expressible in the words of modern vocabulary; they have to be seen in the categories of the preverbal human experience besides.

The paper focuses on the last assumption and comes to the following conclusion: our words make us to live in the world that consists of things ("things in itself"); the words of our distant predecessors made them to live in the world that consisted of agent-like ("theonimic") phenomena.

To prove this case, Homeric language, Aristotelian categories (not compatible with the modern mentality!), other reflections of ancient mind have been analyzed.

Based on that, short vocabulary of the early humans have been elaborated.

One example: "M(a) / T(a)" – markers of the basic categories "good / bad", "vitally important / deadly dangerous", "my own / the Other", not the early forms of strictly personal pronouns "me / thou".

The next issue is language-based meaning-making.

### References

Harnad S. (2005). To Cognize is to Categorize: Cognition is Categorization in Lefebvre, C. and Cohen, H., Eds. *Handbook of Categorization*. Elsevier.





[experimental] Tuesday, 14:30-15:00, room 4 Andrzej **Kapusta**, andrzej.kapusta[at]poczta.umcs.lublin.pl Jolanta **Kociuba**, jolanta.kociuba[at]poczta.umcs.lublin.pl Maria Curie-Sklodowska University in Lublin, Poland

# Decision making in mental illness

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The aim of the presentation is to answer the question to what extent the depressive experience results in difficulties in patients' decision making and generally to explore the specific properties of depressive experience.

We intend to systematize on the basis of available literature (both selected philosophical and phenomenological concepts, theoretical models and the interpretation of empirical research in the field of psychopathology) the features of patients' depressive experience (eg. self-disorders, disembodiment, deformation of common sense, irrational beliefs, the problems of reasoning, lack of insight) and their effectiveness in social functioning, abilities to cope with everyday life and to follow the social rules.

Particular focus of our interest is in the depresive patients' ways of decisionmaking in comparison to other forms of mental disorders.

We especially investigate disorders of agency/subjectivity and the problems of free will in depresive patients, their insight, reflexivity, depressive deformations of time and disembodiment.

Examined experiences will be localized on the axis: reflexive/habitual action; decision making/ implementation; cognitive/emotional components of decision-making; planning/realization; agency/authorship; real/imaginary.

The proposed methodological and theoretical approach refers to the phenomenological method of analysis, and is a part of the narrative/qualitative research tradition (Merleau-Ponty, H. Dreyfus, S. Gallagher, Varela, C. Fuchs, G. Stanghellini, A. Kępiński).

Empirical research (a qualitative research): co-author





[intersubjectivity] Monday, 11:15-11:45, Aula Henryk **Kardela**, henkar[at]klio.umcs.lublin.pl Maria Curie-Skłodowska University in Lublin, Poland

## Liberating the signifier from the signified: A Cognitive Grammar perspective on Ernst Cassirer's conception of language as a system of symbolic forms.

Following Ernst Cassirer's claim about the same "intuitions and the same processes underlying the development of both language and myth." (Langer 1946:ix), the paper addresses the question of how, according to Cassirer, language takes us, as Langer puts it "from the mythmaking phase of human mentality to the phase of logical thought and the conception of facts" (ibid.), i.e. to a phase when scientific judgments can-via language-be formulated. This "odyssey of the mind" (Langer's formulation)-from myth to language - could not be possible were it not for the fact that, as Cassirer holds, quoting Humboldt, "man puts language between himself and the nature which inwardly and outwardly acts upon him [so that he] surrounds himself with a world of words in order to assimilate and elaborate the world of objects [...]" (Cassirer 1955. Vol. 2: 23). Yet, "the elaboration of the world of objects," Cassirer maintains, can only takes place when the content, i.e. the signified, is not only bound up with the signifier, but when "at the same time they remain distinct from one another" (ibid.). And it is only when "they remain distinct", when the signifier can be ambiguously used, irrespective of the expressive content and irrespective of the here and now that the true symbol-based "scientific judgement (via language) can be formulated." Language, Cassirer says (1955. Vol. 1: 197)

makes a virtue of necessity, that is of the ambiguity inevitable in the linguistic sign. For this very ambiguity will not permit the sign to remain a mere individual sign; it compels the spirit to take the decisive step from the concrete function of "designation" to the universal and universally valid function of "signification." In this function language casts off, as it were, the sensuous covering in which it has hitherto appeared: mimetic or analogical





expression gives way to purely symbolic expression which, precisely in and by virtue of its otherness, becomes the vehicle of a new a deeper spiritual content.

What underlies the Cassirean "liberation" of the signified from the signifier, what changes "mimetic and analogical expression [...] to purely symbolic expression," is, in our view, *intersubjectification*, i.e. the cognitive process which makes it possible for "[a plurality of subjects] to share [..] experiential content (e.g., feelings, perceptions, thoughts, and linguistic meanings" (cf. Zlatev et al. 2008: 1).

Generally speaking, intersubjectification can be viewed from two perspectives: (i) from a *representational diachronic- and/or language acquisition-related perspective on language development* or (ii) from a *synchronic-representational* perspective, involving the speaker-hearer discursive exchange. It is the latter perspective that this presentation focuses on. Specifically, adopting as a point of departure for our analysis Chris Sinha's (2007: 1281) modified version of Karl Bühler's Organon Model and Bühler's distinctions between *signals* and *symbol systems* (adopted by Sinha as well), we claim that the Cassirean "liberation of the signifier from the signified" involves (i) an intersubjectification-based *agreement* between the speaker and hearer on *what constitutes the referential situation* and (ii) the degree to which the symbol "coordinates the "joint attention" of the speaker and hearer, directed toward the symbolically represented referential situation" (cf. Sinha (2007:1282—cf. Figure 49.2; dotted lines symbolize "joint attention")

The best testing ground for the aforementioned intersubjectification-based *agreement* between the speaker and hearer and for the role of the symbol as a "coordinator" of the "speaker-hearer joint attention" (cf. Sinha's modified version of the Organon Model) are finite complements which are embedded in main clauses with verbs of *saying*, *thinking*, *seeing* or *feeling* as in *George saw/knew/said that his opponent was closing in*. In cognitive linguistics, sentences of this sort have been analyzed, among others, by Verhagen (2005:78). The paper offers a discussion of such structures, recasting Verhagen's analysis in terms of what





Langacker (2007: 183) calls the *apprehension of other minds*, i.e. the *conceptual integration*-based "mind-reading" process which takes place in the *Current Discourse Space*—CDS (cf. Langacker 2008).

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#### References

- Bühler, Karl. 1934/2011. Introduction. In *Theory of Language. The Representational Function of Language*. Amsterdam: John Benjamins.
- Cassirer, Ernst. 1955. *The Philosophy of Symbolic Forms*. Trans. by Ralph Manheim. Vol. 1. *Language*. New Haven: Yale University Press.
- Cassirer, Ernst. 1955. *The Philosophy of Symbolic Forms*. Trans. by Ralph Manheim. Vol. 2. *Mythical Thought*. New Haven: Yale University Press.
- Langacker, Ronald. 2007. Constructing the meaning of personal pronouns. In: G. Radden, K-M Koepcke, T. Berg, P. Siemund (eds.) Aspects of Meaning Construction. Amsterdam: Benjamins, 171-187.
- Langacker, Ronald. 2008. *Cognitive Grammar. A Basic Introduction*. Oxford: Oxford University Press.
- Langer, Susanne. 1946. Preface. Ernst Cassirer. *Language and Myth*. New York: Dover Publications.
- Sinha, Chris. 2007. Cognitive linguistics, psychology, and cognitive science. In D. Geeraerts and H. Cuyckens (eds.) *The Oxford Handbook of Cognitive Linguistics*, Oxford: Oxford University Press, pp. 1266-1294.
- Verhagen, Arie. 2005. Constructions of Intersubjectivity. Discourse, Syntax and Cognition. Oxford: Oxford University Press.
- Zlatev, Jordan, Timothy Racine, Chris Sinha, Esa Itkonen (eds.) *The Shared Mind. Perspectives on Intersubjectivity.* Amsterdam: Benjamins.

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[semiotics&science] Tuesday, 11:00-11:30, room 301 Piotr **Konderak,** kondorp[at]bacon.umcs.lublin.pl Maria Curie-Sklodowska University in Lublin, Poland

# Metacognition, metasemiosis and consciousness

## I. Semiotic creatures and metasemiotics

To explain meaning-making activity (as a main topic discussed within cognitive semiotics) one has to reflect on abilities of a cognitive-semiotic creature. I treat a creature as a semiotic one if:

something (i.e. a sign) can stand for something else (i.e its object) for that creature - and the sign may influence behaviour of that being; in addition:
such a creature is able to reflect on signs, i.e. it displays metasemiotic capabilities (Petrilli 2014: xviii).

## II. Metasemiotics and metacognition

I will argue that metasemiotic activity is a special instance of metacognition (cf. Fetzer 2001). Metacognition is understood here as a cognitive process controlling and monitoring any aspect of cognition. Metasemiosis - in turn - requires a kind of awareness, namely: a semiotic system must be aware that it uses signs as signs - i.e. the system needs to have some meta-knowledge embracing the usage of signs as well as the system needs some metaprocesses that control the interpretation of signs.

## III. Metasemiotic activity

First, I would like to justify the claim that any metasemiotic creature which is able to reason about itself and its own semiotic activity, needs a model of itself, i.e it has:

- beliefs about itself (i.e. beliefs with the self-term such as I as an argument) and
- sense of embodiment and situatedness in the world (Shapiro, Rapaport et all. 2007: 21).

I would like to present and analyse the following, selected aspects of metasemiotic activity, namely:





- ability for re-interpretation of signs (implying dynamicity of meaning and being a consequence of fallibilism)

- ability to detect contradictions emerging during the processes of interpretation

- ability to relate meanings emerging in different semiotic systems (implying the ability to translate across two or more semiotic systems); such translation is a result of metasemiotic processes.

Finally, I will argue that above considerations can be supported by analysis of Damasian (2000) notion of (extended) consciousness which I treat as a neural ground for metacognition (and therefore metasemiotics).

### References

Damasio, A. 2000. The Feeling of what Happens. Mariner Books. Fetzer, James H. 2001. *Computers and Cognition: Why Minds Are Not Machines*. Dordrecht: Kluwer Academic Publishers.

Petrilli, S. 2014. *Sign Studies and Semioethics: Communication, Translation and Values*. de Gruyter.

Shapiro, Stuart; Rapaport, W. Kandefer M.; Johnson F.J.; Goldfain A. 2007. Metacognition in SNePS, *AI Magazine* 28 (1): 17-29.

[conceptualization] Tuesday, 14:00-14:30, room 101 Iryna **Kotova,** iryna.kotova[at]gmail.com V.N. Karazin Kharkiv National University, Ukraine

## Heroes and Antiheroes in American Film Discourse and Narrative

The HERO and ANTIHERO concepts can be implemented in various discourses. Among them, American film discourse is of special interest due to the global cultural effect of the American film industry (Ritzer & Stillman 2003: 37).

Film discourse is distinguished by a combined use of different semiotic resources that, if applied efficiently, form a meaningful and





coherent narrative (Wildfeuer 2014: 21, 167). Its multimodality has an effect on the choice of linguistic means through which concepts are implemented in film discourse. Specifically, the HERO and ANTIHERO concepts take the form of artistic characters (of fiction) that can be viewed as fundamental elements in story development (Abbott 2008: 130). This study analyses verbal representations of the HERO and ANTIHERO concepts in feature films representing what is called the American monomyth, a narrative pattern rooted in Campbell's (2008) theory. This pattern is essentially an archetypal plot formula that reveals the evolution of the hero with a special emphasis on the idea of redemption rather than initiation (Lawrence & Jewett 2002: 5-6). A corresponding plot formula can be worked out for the antihero.

The poetics of film narrative can be regarded from a mental perspective. For this purpose, this study utilises the cognitive semiotic approach that links "semiotic relations established internally, between semantic contents by purely mental connectors, and those established externally, between expressed signs, or between signs and acts they command" (Brandt 2003: 29). From this standpoint, films are designed to cue spectators to perform certain operations facilitating their comprehension of the story (Bordwell 2008: 93). Bordwell's narration model presupposes that film representations are processed perceptually and then elaborated on the basis of schemas that are grounded in realworld knowledge (ibid.). This study suggests that linguistic means used for characterisation of heroes and antiheroes can be viewed as cues (expressed signs) helping spectators realise individual characteristics related to the corresponding concepts (their semantic contents). Different features of the characters are brought into focus at varying points of the story development. This means that the salience of individual characteristics of the HERO and ANTIHERO concepts revealed through these characters varies as the story unfolds. This way, narrative in film discourse can be considered as an essential characterisation tool through which various conceptual characteristics are activated.





#### References

Abbott, H. Porter (2008). *The Cambridge Introduction to Narrative* (2<sup>nd</sup> ed.) Cambridge: Cambridge University Press.

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Bordwell, D. (2008). *Poetics of Cinema*. New York, NY; Abingdon: Routledge. Brandt, P.Aa. (2003). Toward a Cognitive Semiotics. *Recherches en Communication*, *19* (Sémiotique cognitive – Cognitive Semiotics), 21-34. Campbell, J. (2008). *The Hero with a Thousand Faces* (3<sup>rd</sup> ed.) Novato, CA: New World Library.

Lawrence, J.S., & Jewett, R. (2002). *The Myth of the American Superhero*. Grand Rapids, Cambridge: Wm. B. Eerdmans Publishing.

Ritzer, G., & Stillman, G. (2003). Assessing McDonaldization,

Americanization and Globalization. In U. Beck, N. Sznaider, & R. Winter (Eds.), *Global America?: The Cultural Consequences of Globalization* (pp. 30-48). Liverpool: Liverpool University Press.

Wildfeuer, J. (2014). *Film Discourse Interpretation: Towards a New Paradigm for Multimodal Film Analysis.* New York, NY: Routledge.

[phenomenology] Wednesday, 12:00-12:30, room 201 Hubert **Kowalewski**, hubert.kowalewski[at]umcs.pl Maria Curie-Skłodowska University in Lublin, Poland

## The "Maxwellian style" of research in cognitive semiotics

Cognitive semiotics is more or less directly involved in the discussion on the nature of subjective experiences. One way of relating the study of signs to the broader discussion on subjectivity and consciousness is offered by phenomenologically oriented cognitive semiotics (e.g. Thompson 2007, Sonesson 2012, Zahavi 2012). The project instantiates what I refer to as the "Augustinian style" of research, which consists in combining findings from different, originally unrelated, fields of study into a coherent system with the hope that such a theoretical complex will offer new insights.





This presentation sketches an alternative approach to the study of subjective experience, which has already secured its position in the philosophy of mind, but its consequences for cognitive semiotics have not been investigated so far. The style of research, which I call "Maxwellian," attempts to develop the science of consciousness entirely within the paradigm of natural sciences, i.e. with little or no import from Husserlian phenomenology. The most vocative call for this kind of "science of consciousness" comes from Daniel Dennett (1995) and David Chalmers (1997, 2010), who also outlines its metaphysical and methodological postulates, but similar ideas appear in other corners of analytical philosophy (e.g. Tye 2000, Strawson 2006, Nagel 2012). The "Maxwellian" philosophers of mind opt for strongly non-reductive explanations of conscious experience, like property (non-reductive) representationalism (Tye), dualism (Chalmers), or panpsychism (Strawson). In this view, purely neurological flavors of cognitive semiotics are, at best, incomplete. Yet "the Maxwellian phenomenology" is still founded on general metaphysical assumptions and methodology of natural sciences.

Arguably, in "Maxwellian phenonemology" providing a scientific account of a semiotic phenomenon amounts to providing a model of this phenomenon which allows for making testable predictions about empirical data, i.e. semiotic expressions in various modalities (linguistic, visual, gestural, etc.). This presentation provides a proof of concept for a Maxwellian analysis of two research problems in cognitive semiotics: salience in metonymies and indexical signs, and properties of similarity in iconicity.

#### References

Chalmers, David J. 1997. *The Conscious Mind: In Search of a Fundamental Theory*. New York: Oxford University Press.

———. 2010. The Character of Consciousness. New York: Oxford University Press.

Dennett, Daniel C. 1992. Consciousness Explained. Boston: Back Bay Books.





Nagel, Thomas. 2012. *Mind and Cosmos: Why the Materialist Neo-Darwinian Conception of Nature Is Almost Certainly False*. New York: Oxford University Press.

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- Sonesson, Göran. 2012. "The Foundation of Cognitive Semiotics in the Phenomenology of Signs and Meanings." *Intellectica* 2 (58): 207– 39.
- Strawson, Galen. 2006. Consciousness and Its Place in Nature: Does Physicalism Entail Panpsychism? Exeter-Charlottesville: Imprint Academic.
- Thompson, Evan. 2007. *Mind in Life: Biology, Phenomenology, and the Sciences of Mind*. Cambridge-London: Harvard University Press.

Tye, Michael. 2000. *Consciousness, Color, and Content*. Cambridge: MIT Press.

Zahavi, Dan, ed. 2012. *The Oxford Handbook of Contemporary Phenomenology*. Oxford: Oxford University Press.

[experimental] Tuesday, 10:30-11:00, room 4 Magdalena **Krzosek,** magdalenakrzosek@gmail.com University of Rzeszów, Poland

# Timbre characterization as the basis of inquiry on multisensory experience

We may observe that in everyday life most people intuitively assume that each sensory reaction is assigned to a specific stimulus. The nature of sensual modalities is rarely questioned either by the subjects themselves or in the process of formal education. The perception of sound is to some extent the most intuitive sensual experience of all. Although hearing ability is crucial for the acquisition of the spoken language (Sacks, 1989) and the spatial orientation of the body, little do we usually explicitly know about its nature. We tend to take it for granted and, unless undergoing musical or acoustic education, use it without reflecting back on it. One may observe





this clearly while analyzing the limited scope of adjectives that characterize sound.

Furthermore, the majority of the adjectives characterizing sound are deeply rooted in the experience of a different modality rather than hearing (e.g. *soft* as categorization of the perceived sound is secondary to *soft* as haptic experience). We may observe that the number of adjectives belonging natively to the domain of sound/hearing is very small in comparison to the adjectives associated with the remaining senses.

The presentation gives a brief summary of the study on timbre perception and human ability to communicate acoustic experience through the means of language. The author intents to investigate innate human dispositions to categorize certain stimuli and the ability to build explicit sensual consciousness. The research method was established on the basis of the *timbre solfege* introduced by Miśkiewicz (1992) but varies in application and the choice of tasks. The author believes that the same phenomena is experienced regardless of the used language. This, though, is the subject for further research as the presented experiments concern Polish language speakers only.

The study itself is two – dimensional. It brings up two main categories of questions:

- (1) How do we differentiate sensory information? How do we decide that it belongs to one sense but not to the other? What does talking about sound teach us about the overall sensual human experience?
- (2) Is there any common ground of subjective experience of the timbre of sound? Can it be communicated to others or put in general terms (objectivity)? Are there sounds that every and each of us can refer to as *soft, warm* or *bright*?

The author will address the aforementioned questions and present the results of the study up to now with the focus on the (1) dimension.





#### References

Abbado A. (1988). Perceptual Correspondences of Abstract Animation and Synthetic Sound, *Leonardo. Supplemental Issue*, Vol. 1, *Electronic Art*, pp. 3-5

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Gibson J.J. (1966). *The Senses Considered as Perceptual System*, Boston: Houghton Mifflin

Kutruff H. (2007). *Acoustics: an Introduction*, Milton Park: Taylor & Francis Lindsay P.H., Norman D.A. (1977). *Human Information Processing*, Academic Press

Merleau-Ponty M. (2002). *Phenomenology of Perception*, London: Routledge & K.Paul

Miśkiewicz A. (2002). Wysokość, głośność, barwa – badanie wymiarów wrażeniowych dźwięków muzycznych [Pitch, volume, timbre – inquiry on perceptual dimensions of musical sounds], Warsaw: Fryderyk Chopin Academy of Music

Miśkiewicz A. (1992). Timbre Solfege: A Course in Technical Learning for Sound Engineers, *Journal of Audio Engineering Society*, Vol. 40, Issue 7-8, pp. 621-625

Sacks O. (2000). Seeing Voices, New York: Vintage Books

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[semiotics&science] Tuesday, 12:00-12:30, room 301 Kalevi **Kull,** kalevi.kull[at]ut.ee University of Tartu, Estonia

## Learning, phenomenal present, and semiosis

Learning can be defined as establishing of a sign relation. Computational and semiotic descriptions of learning diverge. The *computational concept of learning* can be defined as a complex of logical gates that change or modify a certain classification using certain criteria.

*The semiotic concept of learning* describes learning as a process that starts with an incompatibility (confusion, logical conflict, problem-situation)





to be solved, followed by habituation (learning in a narrow sense). Criteria for learning are not required, as the conflict itself is its cause. Thus the semiotic concept is more general than the computational concept.

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We describe a problem-situation faced by an interpreter as a situation of logical conflict, or more generally, of incompatibility. This is a situation in which there are options to choose from.

According to the computational approach, the selection of behavioural paths is described via sequential operations, such as IF x THEN y ELSE z. Here neither y and z nor x and non-x are true options, for they can be handled sequentially and thus cannot build a logical conflict.

Options require simultaneity. Only in case possibilities are temporally indistinguishable, can they be seen as options for a living system. This requires specious present (Varela 1999; Kull 2015).

Thus, semiotic learning or establishing of a new sign relation is possible only within a specious or phenomenal present. A habituated relation (also a code) can work without the phenomenal present, i.e., computationally. This is also where a semiotic relation can occur without life (e.g., in artefacts).

In addition to concluding that meaning-making assumes the phenomenal present, we suggest the hypothesis that meaning-making and present are co-extensive. In other words, semiosis itself creates the subjective present.

#### References

Kull, Kalevi 2015. Semiosis stems from logical incompatibility in organic nature: Why biophysics does not see meaning, while biosemiotics does. *Progress in Biophysics and Molecular Biology* 119(3): 616–621. Varela, Francisco J. 1999. The specious present: A neurophenomenology of time consciousness. In: Petitot, Jean; Varela, Francisco J. ; Pachoud, Bernard; Roy, Jean-Michel (eds.), *Naturalizing Phenomenology: Issues in Contemporary Phenomenology and Cognitive Science*. Stanford: Stanford University Press, 266–314.





[cultural influences] Monday, 11:15-11:45, room 101 Jean **Lassegue**, jean.lassegue@ehess.fr Institut Marcel Mauss, EHESS, France

## Are objective sciences really off-culture productions?

If one asks a mathematician what kind of role the biographical dimension plays in the advancement of exact sciences, the most spontaneous and common answer would usually be to oppose contingent, biographical facts to the necessity and impersonality of demonstrative science. The underlying assumption is that individuals manage to grasp an already existing knowledge that, by virtue of faculties endowed to particularly gifted minds, gets gradually unveiled through history. This assumption rests upon an implicit divide between contingency and necessity which devaluates the biographical dimension of knowledge by relying on categories as ill-defined as that of 'genius'. To a larger extent, it also entails a global devaluation of intersubjective practices and transforms highly cultural phenomena such as traditions and schools of thoughts into mere contingent ones the role of which can be left aside.

I would like to focus on how to avoid the pitfall in which one is likely to be trapped in when confronted to the sham alternative between contingent biographical elements versus necessary impersonal knowledge. I will first reconsider the 'platonistic' epistemology usually taken for granted in the exact and natural sciences which assumes that objectivity is only reached when all traces of human construction are left aside. Secondly, by giving Ernst Cassirer's notion of a "symbolic form" a socio-semiotic and technical meaning, I would like to show that such a renewed notion of a symbolic form is instrumental when one wants to describe semiotic processes that anticipates further developments by being able to adapt its very structure to new circumstances as it is the case in the exact sciences. The challenge here would be to expand Cassirer's point of view by showing that *writing* 





should be viewed as a symbolic form and that it is a precondition for this very specific kind of discourse know as "science" to evolve and expand. Therefore, culture is neither a passive background from which the exact sciences would miraculously emerge by cutting the ties they have with it, nor do the exact sciences only "participate" in culture by using some of its available tools: they actually *produce* culture in a very specific mode that cannot be severed from other semiotic productions.

[cultural influences] Monday, 10:45-11:15, room 101 Hee Sook **Lee-Niinioja**, leeheesook@hotmail.com Independent Scholar, Finland

# Multiple Cognitive Signs of the Shaman Drums as Sami's Worldview, Identity, and Cultural Heritage

Sami religion tells that the world is inhabited by spirits which possess magical powers, protecting creatures in nature. And all life has dualism on the spiritual and physical levels; in the spiritual world, dead ancestors continue their life. This animistic, polytheistic view influenced Sami traditions towards harmony with nature and the need for the shaman.

As a traditional healer, the shaman keeps the multiple codes and expresses meanings verbally, musically, artistically, and in dance. He knows their community culture and acts to be understood by audience with trust. To communicate with the spirits on behalf of the community, the shaman's mediation is illustrated by his objects and symbols: a drum is one of these communications.

Two types of the drum are based on their physical construction, but their common symbolic signs reveal the Sami cosmology in three levels: the upper for gods; the middle of humans; the lower of the underworld. Despite difficulties of reading their meanings, caused by the Church's eradicating the majority of drums (18 C), constant emergences of god, human, and





animal signs on surviving 71 drums suggest their central roles in Sami tradition.

This questions how the appearance, location, and relationship of godshumans-animals on the drums took place: Are they connected each other or isolated? If connected, which shape and form? What is to do with the shaman's cognitive mind, Sami identity, and culture? As the shaman drum is a key to the Sami cosmology, symbolic signs on his drum were a cognitive map for ego-soul travels between the three worlds, collectively observed and publicly interpreted to his audience.

My paper discusses these questions by assessing representative drums chosen from the 71, in order to seek, understand, and interpret the meanings of these three signs. It challenges to cognitive semiotics, which defines as "characterized as an emerging interdisciplinary matrix of disciplines and methods, focused on the multifaceted phenomenon of meaning".

The finding shows that they are fairly distributed on the drum, but connected in variations. Consequently, Sami shamans seem to hold flexible cosmology in shifting seasons of nature, explaining their identity and cultural heritage in particular.

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[embodiment&situatedness] Tuesday, 15:30-16:00, Aula Kseniya **Leontyeva,** ksenja\_leontieva@mail.ru Tambov State University named after G. R. Derzhavin, Russian Federation

# Enactivism, cognitive semiotics and translation studies: to the benefits of cooperation

The purport of this paper is to show that enactivism, one of the stateof-the-art paradigms within the field of Cognitive Sciences, has a significant potential for mutual coordination of three major approaches, i.e. cognitive, sociological, and cultural (Chesterman 2009), defining the current state of Translation Studies. Its central concepts, i.e. autopoesis, autonomy, sense-





making, value, embodiment, embeddedness, emergence, experience, adaptivity, agency, and interaction (Di Paolo, Rohde, De Jaegher 2014; Cuffari, Di Paolo, De Jaegher 2015), could provide a truly *integrated* and *empirically* grounded *semiotic* framework that enables *multifocal*, yet ontologically *unified* study of translation as an autopoetic (and, thus, autonomous) social (syb)system (Tulenev 2010). This system reproduces its self-identity (mediation) by means of translation process, taken in the *unity* of its three dimensions, i.e. translation act, translation event, and translation practice (Toury 2012, Chesterman 2015).

The process itself is performed by the translator's «living-lived body» (Froese 2011), that constitutes an autonomous operationally closed cognitive system (Di Paolo, Rohde, De Jaegher 2014). Due to such closure, in actuality it is the translator's and not the author's individual experience and self-identity (and intention) that is at stake in translation act, the text functioning merely as an instruction manual («trigger-causality»; Tulenev 2010) for the translator's sense-making (evaluation) of the world enacted in his interpretive engagement with the text. At this point my argument will be based on the concepts of narrative experientiality (Caracciolo 2011, 2012), participatory sense-making and emergence (Di Paolo, Rohde, De Jaegher 2010). At the same time, since autonomous system are interactionally open (Di Paolo, Rohde, De Jaegher 2010), the translator's cognitive activity (translation act) extends into higher-order social and cultural value landscapes, wherein his body is embedded and wherein translation events take place and translation practices emerge and evolve. I will discuss the ongoing tension between individual and social value patterns and norms, shaping translation process as a means of social interaction and a kind of «languaging» and semiosis.

Finally, I will examine the enactivist view on cognition as constant adaptation to precarious conditions, by means of active coordination of the interaction flow, this interaction being transformational, not merely informational (Di Paolo, Rohde, De Jaegher 2010), and discuss from this perspective the issue of the translator's visibility, manipulation, and intervention. In this respect, enactivist perspective contributes to the





gradual transformation of Translation Studies into anthropocentric "Translator's Studies" (Chesterman 2009).

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#### References

- Caracciolo, M. (2011). The Reader's Virtual Body: Narrative Space and Its Reconstruction. *StoryWorlds: A Journal of Narrative Studies*, 3, 117–138.
- Caracciolo, M. (2012a). Narrative, Meaning, Interpretation: An Enactivist Approach. *Phenomenology and the Cognitive Sciences*, 11 (3), 367– 384.
- Chesterman, A. (2009). The Name and Nature of Translator Studies. *Hermes* – Journal of Language and Communication Studies, 42, 13–22.
- Chesterman, A. (2015). Models of what processes? In M. Ehrensberger-Dow, B. Englund Dimitrova, S. Hubscher-Davidson (Eds.), *Describing Cognitive Processes in Translation: Acts and events*. Amsterdam: John Benjamins, 7–20.
- Cuffari, E., Di Paolo, E., De Jaegher, H. (2015). From participatory sensemaking to language: There and back again. *Phenomenology and the Cognitive Sciences*, 14 (4), 1089-1125.
- Di Paolo, E., Rohde, M., De Jaegher, H. (2010). Horizons for the Enactive Mind: Values, Social Interaction, and Play. In J. Stewart, O. Gapenne, E.A. Di Paolo (Eds.), *Enaction: Towards a New Paradigm for Cognitive Science*. Cambridge: MIT Press, 33-87.
- Froese, T. (2011). Breathing new life into cognitive science. Avant: Trends in Interdisciplinary Studies, 2 (1), 113–129.
- Toury, G. (2012). *Descriptive Translation Studies and Beyond*. Revised ed. Amsterdam: John Benjamins.
- Tulenev, S. (2010). Is Translation an Autopoietic System? MonTl, 2, 345-371.

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[lang evo] Monday, 14:00-14:30, Aula Hannah Little, hannah[at]ai.vub.ac.be Bart de Boer, bart[at]ai.vub.ac.be Vrije Universiteit Brussel, Belgium

# Did the pressure for discrimination trigger the emergence of combinatorial structure?

Language has combinatorial structure, where meaningless building blocks combine to make meaningful elements. Hockett (1960) hypothesised that combinatorial structure came as the result of pressures for discrimination. Once the limit on the number of distinct signals that can be discriminated is reached, then recombination of those signals needs to happen. In this contribution, we aim to experimentally test whether, as a meaning set expands, signals will be reanalysed from holistic and possibly iconic wholes, to display combinatorial structure.

We carried out an experiment where participants created continuous signals using an infrared controller, Leap Motion, which manipulates the pitch of signals (see Little, Eryılmaz and de Boer, 2015, for details). The meaning space started as a set of 5 shapes that expanded by 5 with each of the 3 phases in the experiment. The meaning space had no internal structure, i.e. no two meanings had any shared features (shape, colour or texture). In each phase, participants created a signal for each meaning. They then heard their signals back and had to select the meaning from an array. Success in recognising their own signals did not significantly correlate with the size of meaning space. However, we found that signals for meanings introduced later were significantly less predictable, given the rest of the signal repertoire, than those in earlier phases ( $X^2(1) = 4$ , p < 0.05), indicating that pressures for discrimination had some effect on how systematic the signal repertoire was as a whole.

We also did a post hoc playback experiment to see if iconicity reduced as the signal space expanded, possibly indicating adoption of combinatorial structure. 185 naive participants on the Internet listened to 1 of 24 sets of





signals; each produced by one of the original participants, and were asked to match signals with their meanings. If naive listeners can pair signals with their intended meanings, then those signals can be said to be iconic. There was no interaction between how early in the experiment participants produced signals, and how iconic those signals proved to be in the playback experiment. Also, iconicity was not a predictor for how well participants recognised their own signals.

We didn't find much evidence for the emergence of combinatorial structure in our experiment, possibly because humans can differentiate between a lot of holistic meanings. However, qualitative analysis and post-experimental questionnaires shed light on why we were unable to find supporting evidence for Hockett's hypothesis.

#### References

Hockett, C. F. (1960). The origin of speech. *Scientific American*, 203, 88–111.

Little, H., Eryılmaz, K., & de Boer, B. (2015). A new artificial sign-space proxy for investigating the emergence of structure and categories in speech. In: *The proceedings of the 18th international congress of phonetic sciences*. University of Glasgow: Glasgow. Paper number 31.

[lang evo] Monday, 14:30-15:00, Aula Giuseppe **Maiorano,** g.maiora[at]libero.it Tuscia University, Viterbo, Italy

## Water, air, earth and fire: detecting the origins of human oral language from the imitation of environmental sounds

In order to understand better linguistic and cognitive features of modern humans, we need to get rid of biases and misunderstandings, such as the principle of *arbitrariness* of linguistic signs, the frequent *misuse* and *mixing* of terms like communication, language,





onomatopoeia, iconicity, sound-symbolism, the *confusion* between origin and evolution of speech, but also to underline inaccuracy and limits of language and thought since their beginnings, particularly their usual resort to metaphor, polysemy, redetermination, redundancy.

A long-lasting process from simple *motivated* starts (imitation of sounds) resulted in modern *conventional* products (refined literary works), in which the archaic inner iconic characters still constrain modern speaking and thinking.

I argue that a primitive linguistic *iconic embryo-stage* predated any mature *proto-language* and exploited a large archive of meaningful sounds, mapped onto respective objects, animals, actions, atmospheric events, available in the environment and day-life of paleolithic Homo Sapiens. This stage was followed by slow *abstraction* processes, which evolved similarly to other later human achievements (writing, banking, onomastics) and eventually erased a great deal of spoken language iconicity.

Glottochronology, lexicostatistics, genetic linguistics, traditional dating methods and new probabilistic models of sound-change have reached deep time limits up to 10,000 years ago, but it seems they cannot go any further. In the same time, *multilateral comparison* was able to detect a number of vocabulary units - *global etymologies* - which belonged to the first human oral language and, as a matter of fact, match partially the proposed archaic iconic linguistic units of the present research work. However, it can be maintained that a comparative analysis of environmental sounds, caused by atmospheric phenomena, human activities, animal calls and cries, can recover speech roots from early times.

Basic sounds and related linguistic units refer to vital human activities: hunting, water and food gathering, tool manufacturing, cooking. Social interactions and musical instruments are also to be taken into account. They all fostered *naming processes*, where clear relationships existed between real tool/action sounds and their respective names.





A simple grouping of sounds is established according to Empedocles' theory of '*Four Elements*': Water, Air, Earth, Fire. Here its aim is only to establish a first reference grid, that goes back to the incipient human need of explaining the world structure in its basic components.

A fundamental resource, *water*, left clues in the vocabularies of many languages. The corresponding '*water-sounds*' /kwa/, or /kwakwa/ in reduplicated form, and /kwo/, or /kwokwo/, from cooking activities (see Lat. coquo 'I cook') are perceived even today. They were employed to mark a peculiar feature of water and liquids: a constant *flat horizontal surface*, a property useful to develop concepts such as 'equality', 'equivalence', 'quality'. The erosion of the velar component originated the '*wh-*' pronouns, meaning generally '*the same one as*'. Water-sounds became also useful to express regular basic geometrical and mathematical entities (see Eng. 'square' and 'four', from PIE \*kwetwer- 'four').

Examples of motivated 'air-sound' terms, based on fricative and sibilant consonants, are Lat. fistula 'reed, pipe', Lat. fiscus 'money-basket', Ita. fischio 'whistle'; interestingly, Eng. fish refers iconically to a 'whistling reed', employed as a 'fishing rod'.

More examples are given in relationship with earthly solid materials, like *rock* and *wood* and Homo Sapiens' primitive *construction technology*.

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[semiotics&science] 11:30-12:00, room 301 Michael **May**, may[at]ind.ku.dk University of Copenhagen, Denmark

## Construal of perspective in graph comprehension: A cognitive semiotics of scientific literacy and objectivity

The history of scientific objectivity has been described as a heterogeneous and overlapping development of different "epistemic virtues" such as "true-





to-nature" depictions and "mechanical objectivity" of scientific instrumentation (Daston & Galison 2010), but on a "micro" level of representational practices we should be concerned with the detailed analysis of the role of language and cognition in scientific discourse and practices. A semiotics of science was stipulated by Charles Morris – to some extend following C. S. Peirce – but never realized as an empirical investigation of specific sciences. A cognitive semiotics of science has been proposed (May 2016) to scrutinize different phenomena in the construction and communication of meaning in science, including the semiotic functions of instrumentation and the role of representational forms such as graphs, diagrams and notational systems.

In Cognitive Grammar (Langacker 1999; Verhagen 2007) perspective is a construal operation on meaning across language, perception and reasoning. In cognitive science and educational research problems in graph comprehension have been documented since the 1980-ies, but although these problems are rooted in language and cognition across multiple forms of representation, they have not been considered systematically as a domain of semiotic research. Construal of perspective is not only a key issue in the construction of scientific objectivity, but also plays a role in "didactic transformations" of scientific content through analogies and simplifications. Examples from mechanical physics (kinematic graphs) and physical chemistry (reaction kinetics) will be used to exemplify how "didactic transpositions" involving changes in perspective such as *imagined* first-person perspectives, may lead to misconceptions.

The role of construal operations has not only been underestimated in educational research, but also in the philosophy of science. In recent approaches such as "scientific perspectivism" (Giere 2010) and the analysis of embedded "thing knowledge" of scientific instruments (Baird 2004) we see an emergence of "quasi-semiotic" theories of scientific practice, but without a semiotic analysis of representational forms and levels of meaning construction.





#### References

Baird, D. (2004): *Thing Knowledge*. University of California Press
Daston, L. & Galison, P. (2010): *Objectivity*. MIT Press
Giere, R. (2010): *Scientific Perspectivism*. University of Chicago Press
Langacker, R. (1999): *Foundations of Cognitive Grammar*, Vol. 1. Stanford
University Press
May, M., Skriver, K., Dandanell, G. (2016): Towards a Cognitive Semiotics of Science: The Case of Physical Chemistry, in: *Establishing Cognitive Semiotics*. Konderak, P., Sonesson, G. & Zlatev, J. (Eds). Peter Lang, to appear 2016.
Verhagen, A. (2007): *Constructions of Intersubjectivity*. Oxford University

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[blending] Wednesday, 11:30-12:00, room 4 Douglas **Niño**, edison.nino[at]utadeo.edu.co Universidad Jorge Tadeo Lozano, Colombia

### **Executive Function, Pretense Play and Conceptual Blending**

In their Conceptual Integration Theory (CIT), Fauconnier and Turner (Fauconnier & Turner, 2002; Fauconnier, 2009; Turner, 2014) make three claims: First, that conceptual blending is operative in our understanding of counterfactuals, analogies, metaphors, etc., as well as in our (belief of) object perception. This entails that some blends bear a "reality sense" and others an "irreality" sense, although -they claim- there is no cognitive difference between them (2002: 230). Second, they claim that advanced conceptual blending is what differentiates us from other animals, for children are certainly capable of complex blendings. Third, they claim that CIT is a theory that helps us explain human imagination and creativity.

These general claims, however, do not capture the differences in child development, from relative 'simple' tasks to more 'complex' ones. For instance, ¿why, if conceptual integration networks (CIN) consist in "the





same principles and processes" (Fauconnier, 2009), only children around twelve are able to fluidly manage counterfactual reasoning (Rafetseder, Schwitalla & Perner, 2013), whereas three- or four-year old children can perfectly understand other blends like the story of *Harold and the Purple Crayon* (Johnson, 1995), which also requires counterfactuals and advanced blends?

I claim that a careful analysis of the *executive function development* may be quite fruitful when tracking some differences in blending achievement. For instance, it seems that there is a correlation between executive function development and 'pretense actions', particularly, the pretense play, when children act 'as if', for instance, when a child takes a banana and puts it on her ear 'as if' it were a phone (cf. Leslie, 1987; Carlson, White, Davis-Unger, 2013). Moreover, these 'pretense actions' appear in children at around 18month old (Friedman & Leslie, 2007; Meinhardt, Kühn-Popp, Sommer & Sodian, 2013). Now, if we assume that pretending is an enactive expression of the cognitive blending, the study of executive function can plausibly show us different complexity 'stages' of the CIN, at the moments templates appear for their more abstract and complex realization (as in counterfactual reasoning or algebra operations). In this presentation I will pursue this idea, by reviewing the relevant literature about executive function development (including the cognitive differences between believing, planning, or desiring), pretense play and other forms of pretense (and fictivity), and will draw some consequences for the CIT in its aspiration to explain human imagination and creativity.

#### References

Carlson, Stephanie M.; White, Rachel E. & Davis-Unger, Angela C. 2013. "Development Evidence for a Relation between Executive Function and Pretense Representation in Preschool Children". *Cognitive Development*, **29:** 1-16.

Fauconnier, Gilles. 2009. "Generalized Integration Networks" (pp. 174-160). In: V. Evans & S. Pourcel (Eds.). *New Directions in Cognitive Linguistics*. Amsterdam: John Benjamins.





Fauconnier, Gilles & Turner, Mark. 2002. *The Way We Think: Conceptual Blending and the Mind's Hidden Complexities*. New York: Basic Books. Friedman, Ori & Leslie, Alan. 2007. "The Conceptual Underpinnings of Pretense: Pretending is not 'Behaving-As-If'". *Cognition*, **105**: 103-124. Johnson, Crocket. 1955 [1983]. *Harold and the Purple Crayon*. New York: Harper & Row.

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Leslie, Alan. 1987. "Pretense and Representation: The Origins of 'Theory of Mind'". *Psychological Review*, **94** (4): 412-426.

Meinhardt, Jörg; Kühn-Popp, Nina; Sommer, Monika & Sodian, Beate. 2012. "Distinct Neural Correlates Underlying Pretense and False Belief Reasoning: Evidence from ERPs". *NeuroImage*, **63**: 623-631.

Rafetseder E., Schwitalla M. & Perner J. 2013. "Counterfactual reasoning: From childhood to adulthood". *Journal of Experimental Child Psychology*, **114** (3): 389-404.

Turner, Mark. 2014. *The Origin of Ideas. Blending, Creativity, and the Human Spark*. Oxford: Oxford University Press.

[lang evo] Monday, 15:30-16:00, Aula

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## Universität Heidelberg, Germany

### Investigating the emergence of overspecification in an Iterated Learning setup

Natural languages differ in their degree of overspecification, the extent to which overt semantic markers are required even when irrelevant in the





given context. But how and why does systematic and obligatory overspecification emerge in the first place? Recent research has emphasized the importance of context in the emergence of different types of language systems (Winters et al., 2015). The present paper investigates the hypothesis that overspecification can be cognitively beneficial in particular communicative situations.

For the present study, 205 volunteers were recruited online and took part in an Iterated Learning experiment (Kirby et al., 2008). In two blocks of 32 randomized trials, they were first trained on an artificial language and then asked to use that language to point out objects to an alien. The output of participant n was used as input for participant n+1 for 5 generations. The initial language consisted of four different words denoting four objects (e.g. meeb 'ball') as well as two markers denoting colors (pu 'blue', li 'vellow'). In the initial language, these markers were only used when an object had to be distinguished from the same type of object in a different color (e.g. yellow ball and blue ball). Across conditions, this distinction was relevant in 16 of the 32 trials. In the **distractor condition**, the other half of trials consisted of pictures showing two items, but different types (e.g. ball and pen). In a **control condition**, by contrast, pictures showing only one single item were displayed in the remaining 16 trials. We predicted that the semantic markers would tend to become obligatory even when not required by the immediate communicative context in the distractor condition, but not in the control condition.

Overspecification increased in both types of trials but, as predicted, proved more pervasive in the distractor condition. Here, the color marker became fully obligatory in the 5<sup>th</sup> generation in 17 out of 18 chains, while it was used significantly less in the 5<sup>th</sup> generation of the control trials (two-sample t(34)=-4.06,  $p_{two-tailed}$ <.001, r=.57).

Importantly, the development to be observed is conditioned by contextual factors. In the distractor condition, overspecification reduces the speaker's cognitive effort of disambiguating between same-type and different-type contexts. While this communicative pressure is highly artificial, other situations where semantic distinctions (e.g. number) are relevant in limited





contexts are easily conceivable. Therefore, the present study lends further support to the hypothesis that contextual factors can significantly influence grammatical structures.

#### References

- Kirby, Simon, Hannah Cornish & Kenny Smith. 2008. Cumulative Cultural Evolution in the Laboratory: An Experimental Approach to the Origins of Structure in Human Language. Proceedings of the National Academy of Sciences of the United States of America 105(31). 10681– 10686.
- Winters, James, Simon Kirby & Kenny Smith. 2015. Languages adapt to their contextual niche. *Language and Cognition* 7(3). 415–449.

[blending] Wednesday, 11:00-11:30, room 4 Todd **Oakley**, todd.oakley[at]case.edu Case Western Reserve University, USA

### Conceptual Blending and the Amalgamated Mind: A "Pivot" Toward Philosophy of Distributed Cognition

Conceptual blending has emerged as an influential framework for the study of meaning construction, especially among practitioners in cognitive linguistics and semiotics. Part of the appeal is its systematic treatment of diverse semiotic phenomena according to processes and principles that achieve internal consistency, such that one builds a plausible account of how words, images, sounds, words and images, words and imagines is specific places conspire to generate scenes and scenarios that constitute thinking, speaking, and action (cf. Fauconnier & Turner 2002 Coulson & Oakley 2000; Oakley 2012). These are broad, perhaps exuberant claims, but the point of this talk is not to defend CBT as a particular theory, for which there are ample arguments for and against. My intent is to "pivot" away from specific applications toward the philosophy of mind.





If one surveys the range of phenomena that count as "blending," especially cases in which the non-neural body, artifacts and social institutions comprise the proper object of analysis (cf. Hutchins 2005; Oakley 2009) one sees ample reason to believe that the framework embraces distributed cognition, the notion that the most interesting questions about cognition and meaning lie at the intersection of brain, body, and world. Even so, there are many in the blending community who take a firmly "embedded" view of cognition, whereby all the interesting work occurs intra-cranially, even as they laud the fact that the principles of blending highlight its external vehicles as a proper scope of analysis.

Given that there are at least 4 different varieties of distributed cognition (Wheeler 2013; Rowlands 2010), each of which embrace potentially incommensurate claims about the nature of mindedness, it is time for a sustained interrogation of distributed cognition and conceptual blending. My aim is to show that familiar notions of embodiment and embedded cognition are insufficient, but that it is possible to specify an explicit philosophical position that does justice to range of phenomena captured by blending if we adopt a philosophical position of Rowlands' (2010) *amalgamated* mind: minds are both embodied and extended. While most philosophy of mind arguments rely on simple case studies (e.g., seeing a "tomato") this presentation grounds discussion in a fully-complex of the actor and director, Clint Eastwood, engaging in a fictive exchange with an absent Barack Obama, during the keynote address at the 2012 Republican National Convention.

#### References

Coulson, S & Oakley, T. (2000). Blending basics. *Cognitive Linguistics* 11. 3/4 (2000): 175-196. Fauconnier, G. & Turner, M. (2002). *The way we think: Conceptual blending and the mind's hidden complexities*. New York: Basic Books. Hutchins, E. 2005. Material anchors for conceptual blends. *Journal of Pragmatics* 37.10: 1555-1577.





Oakley, T. (2012). Conceptual integration. ." In J.O. Östman & J.Verschueren, eds. Handbook of Pragmatics:Volume 6, 1-25. Amsterdam: John Benjamins Publishing.

Oakley, T. (2009) From attention to meaning: Explorations in semiotics, linguistics, and rhetoric.

Bern: Lang Verlag: *European Semiotics: Language, Cognition, & Culture* (volume 8).

Rowlands, M. 2010. The new science of the mind: From extended mind to embodied

phenomenology. Cambridge, MA: MIT Press.

Wheeler, M. 2011. Distributed cognition in the analytic and continental traditions.

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[philosophy&cognition] Wednesday, 11:00-11:30, room 101 Dymitry **Okropiridze,** dimitry.okropiridze@zegk.uni-heidelberg.de Ruprecht-Karls-Universität Heidelberg, Germany

### Cognition as a Hyper-Cartesian Phenomenon and a Hypo-Hegelian Fact. A Cognitive Semiotics Model beyond Dualism and Dialectics.

Whenever we philosophize about mind, body, and society or psychologize cognitive, neural, and social processes, an entanglement of confounded ontological assumptions about the world, its agents, and their respective interactions takes place.

This epistemic abyss has deeply troubled the entire history of philosophy and accompanied the development of the empirical sciences. It has also challenged semioticians as students of general meaning making to become bridge builders and connect the cliffs of matter and ideas, the concrete and the uncertain, indivisible elements and irreducible complexity.

Far sweeping considerations have helped to connect and position the differing logics of molecules and metaphors if only on an evolutionary scale





with constant reference to semiotic thresholds as structural boundaries.<sup>1</sup> They have not, however, explained the simultaneously antithetical and reciprocal tendency of materialist and discursive ontologies. On the one hand, even the most elaborate dyadic system (following the Saussurean camp and Poststructuralist theory), emphasizing the constantly deferred signified cannot resolve a lingering duality between material substances and discursive interpretations; on the other, the reality of material objects cannot be extracted from their socially mediated process, even if integrated in a triadic sign model (following Peirce).

This paper takes its point of departure from the epistemic position, in which cognition is coinstantaneously dualist and dialectic and therefore – philosophically speaking – a hyper-Cartesian phenomenon and a hypo-Hegelian fact. In other words, cognition has a dualist and a dialectic mode of functioning, which are constantly present.

I will argue that only a general model of the very *entanglement* of dualist and dialectic ontologies can explain the reciprocity of mutually exclusive dynamics in the evolution of sign systems and shed new light on semiotic thresholds as evolutionary boundaries of revolutionary emergence.

For this reason, three axiomatic processualities, which are common to all systems of signification – "Constraints", "Re-Iterations", and "Ascriptions" – will be introduced and exemplified using examples from all major semiotic levels as elaborated by Jordan Zlatev.<sup>2</sup> The central advantage of the hereby presented "CRIA" model lies in the non-static nature of the processualities, which can be studied from neural constraints to socio-historical reiterations up to linguistic ascriptions.

<sup>&</sup>lt;sup>1</sup> Cf.

Stjernfelt, Frederik. *Diagrammatology. An Investigation on the Borderlines of Phenomenology, Ontology, and Semiotics.* Dordrecht: Springer, 2009;

Zlatev, Jordan. "Semiotic Hierarchy: Life, Consciousness, Signs and Language." Edited by Peer F. Bundgaard. *Cognitive Semiotics* (De Gruyter) 4 (Spring 2009): 169-200.

<sup>&</sup>lt;sup>2</sup> Cf. e.g. Jordan Zlatev's plenary lecture at the Tartu Semiotics Summer School, 2015: <u>http://www.uttv.ee/naita?id=22394</u> [09.01.2016].





[Peircean] Monday, 15:00-15:30, room 201 Alin **Olteanu**, alin.olteanu@roehampton.ac.uk University of Roehampton, United Kingdom

### Towards a (bio-)semiotics of sexuality

I approach human sexuality from a semiotic position, using the biosemiotic notion of body, to discuss Peirce's evolutionary perspective on altruism. In the light of recent research in biosemiotics, semiotics brings the understanding of sexual activity as a semiotic competence of the body. As such, sexual desire and activity are not understood as merely biological impulses, as it has been regarded in classic Darwinism and psychoanalysis. From a semiotic perspective, sexual activity is a case of semiosis, an act of interpretation. I employ Peirce's theory of evolution to account for sexual activity as agapic semiosis. As such, sexual activity is understood as involving our entire being, as the most intimate manifestation of love or the most horrid form of violence.

Modern dualist philosophy did not develop the philosophical potentiality of sexuality. In this perspective, sexual desire has been understood as merely the result of egoistic biological impulses. The rationalist emphasis on mind as source of knowledge suggests that sexual activity, as a bodily activity, is unimportant. Empiricism as well can fail to see how such a rich sensorial activity as sexual activity can contribute to our conceptualization of the world. As a result, modern philosophy generated various ethical positions that either regard sex as negative or trivial, or justify it as merely impulsive (in the case of psychoanalysis). As semiotics accounts that human relations are primarily sensorial, it explains that sex can be the most insightful way of knowing another person, as well as the most harmful form of violence. Sexual activity is seen as semiosis, and, as such, as one of the highest expressions of agapic evolution. I explain that, using Peirce's terminology, sex is a metaphor and an argument.

In this perspective, sexual activity is neither stigmatized as morally wrong or justified as an impulse, necessary for reproduction. Peirce's theory of





evolution claims that the principle of altruistic love (agape) brings together chance and necessity, transcending them. Therefore, using Peirce's taxonomy of signs and theory of evolution, sexual activity is understood as agapism, expressing chance, necessity and altruistic love altogether. Sexual abuse is understood as anancastic, an unsaturated phenomenon of signification which cannot transcend chance and necessity.

I conclude by discussing the consequences that the semiotic approach to sexuality has on attitudes towards sexual desire and activity and the new directions that it brings for sexual education.

[philosophy&cognition] Wednesday, 10:30-11:00, room 101 Joel **Parthemore**, joel.parthemore[at]his.se University of Skövde, Sweden

### Consciousness, conceptual agency, and the "unbinding" problem

Much discussion in consciousness studies focuses on how "inputs" from the various sensory modalities combine with "internal" brain processes to give rise to unified consciousness: the so-called *binding problem*.

For a number of phenomenologists and enactive philosophers, such an approach raises a number of concerns. First, it preoccupies itself with an "outdated" input/output-based model of cognition which may be useful for certain narrow applications but should, in the main, be rejected in favour of an intrinsically *interactive* model whose causal flow is not linear ("sense-motivate-plan-act") but circular. Second, in line with the first concern, it assumes a problematic distinction between "internal" experience and "external" reality, where these researchers prefer to see an underlying continuity between agent and environment. Finally, by implicitly endorsing a reductive approach to consciousness – whereby, at least in principle, consciousness is fully reducible to simpler physical processes – it focuses on the "bottom up" where these researchers would rather see a complex interplay between "bottom up" and "top down". In particular, they would





like to distinguish between the *coming together* of consciousness in terms of its underlying mechanics, and the seemingly unavoidable reality that, phenomenologically speaking, all of us (including, arguably, those who are suffering from various mental health disorders) subjectively *experience* a consciousness that is, from the onset, *unified*. What *begins* as unified experience then gets progressively broken down into more and more fine-grained conceptual categories of e.g. sensory modalities, motor actions, "inputs", "outputs", thoughts, etc. This "unbinding" problem is arguably just as important to understanding subjective experience – phenomenology – as the binding problem is to understanding the underlying mechanics.

The arguments of (in their different ways) Jerry Fodor or Colwyn Trevarthen aside, we do not – on most accounts – start life as conceptual agents, even as we are predisposed to understand the world in certain ways and not in others. Likewise, logically at some point in our species' past, we did not have the conceptual agency that we do today. One can either make the move that certain conceptualists do and claim that experience *just is* experience to the extent that it is conceptually structured; in which case there is a point, both as individuals and as species, where we lack experience. Or one can make the move that I prefer, that experience (with its seemingly inviolable unity) comes first – even as, for the mature conceptual agent, experience is an inextricable mix of the conceptual and the non-conceptual.

[Peircean] Monday, 14:30-15:00, room 201 Aleksandra **Pasławska**, olapaslawska@op.pl Maria Curie-Sklodowska University in Lublin, Poland

## Visual semiotics: decoding pictorial signs in contemporary advertising

In recent years, along with the rapid development of mass media, omnipresent advertisements have become deeply entrenched in our society. The growing popularity of visual advertising research has paved the





way for new insightful approaches. In today's studies, a great emphasis is laid upon signs and symbolic patterns as crucial elements of visual ads. In order to successfully conceive of the meaning, then, the semiotic analysis of pictorial signs is in order. Although semiotics has been of substantial use to researchers dealing with advertising in general (see Beasley and Danesi 2002; Bignell 2002; Džanić 2013), no research has been done, it seems, to examine the semiotic nature of animal imagery in contemporary car advertisements using Charles S. Peirce's theory of signs. For Peirce, a sign "addresses somebody, that is, creates in the mind of that person an equivalent sign, or perhaps a more developed sign" (Peirce 1931-58: 2.228). In our presentation, we apply Peirce's triadic model of sign as a starting point for the process of understanding and conceptualization of the meaning in selected visual ads.

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#### References

Beasley, Ron, Marcel Danesi. 2002. Persuasive Signs: The Semiotics of Advertising. Berlin: Walter de Gruyter.

Bignell, Jonathan. 2002. Media Semiotics: An Introduction. Manchester: Manchester University Press.

Džanić, Mirza. 2013. The semiotics of contemporary advertising messages: Decoding visuals. In: Jazikoslovlje. 14. 2-3. 475 – 486.

Peirce, Charles Sanders. 1931–1958. The Collected Papers of Charles Sanders Peirce. In: Charles Hartshorne, Paul Weiss, Arthur W. Burks (eds.). Cambridge, MA: Harvard University Press.

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[phenomenology] Wednesday, 11:00-11:30, room 201 Jamin **Pelkey**, jpelkey[at]ryerson.ca Stéphanie **Walsh Matthews**, swalsh[at]arts.ryerson.ca Ryerson University, Canada

### **Xtreme Posture: Semiosic Primitives and the Primacy of Movement**

The use of X in corporate brand marks is now ubiquitous—from Google X and the X-Factor to X-Games, XBox and Xtreme sports; but little attention is given in the literature to the socio-cognitive meanings or motivations behind this widespread practice. This study focuses on a specific X-mark type, an iconic legisign in which a face is added above the upper crux of the rhematic symbol to anthropomorphize X as a representation of "spreadeagle" posture. Using multiple methodologies and a mix of semiotic theories to analyze a set of 200 exemplars, we argue that the X mark in advertising is derivative of a gestalt embodied template based in proprioceptive memory, rather than being a mere iconic symbol rooted in habits of literacy. Our findings provide further evidence for identifying the phenomenology of movement (Sheets-Johnstone 2011) as constitutive of primitive semiotic resources such as opposition, markedness and reversals between contraries.

Following a brief overview of operational definitions and data collection procedures, we summarize comparative content analyses of 200 X-posture brand marks and corporate logos, including textual analyses of associated corporate descriptors, visual semiotic analyses applying cultural symmetry theory (Mardsen & Thomas 2013, Washburn & Crowe 1988) and phenomenological analyses using semantic differential applications. A typology of X-posed brand marks is identified, and logos are found to cluster under four thematic types: 1) health and illness, 2) wealth and gambling, 3) championship and training, 4) individuality and isolation – all involving extreme or risky experiences that are prone to reverse suddenly. This suggests that the projected X-posture in advertising commands attention





by triggering body memories of performance peak or impending crisis rooted in proprioception.

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These findings reciprocate with cognitive semiotic perspectives. Through mimesis, repetition and memory, our immediate, felt experiences of bodily movement, including tensional expansions and linear projections (Sheets-Johnstone 2011), can be identified as instances of primary modeling or semiosic primitives (Sebeok & Danesi 2000, Eco 2000). These are forged forward towards a capacity for third-order modeling, through the filter of secondary structures, including upright posture. The human experience is bipedal and orthogonal, involving distinctive structures of transversalisation, segmentation, oppositional relation, and substitutional forms that shape our relation to, and perception of, the world (Van Lier 2010). A better understanding of the semiotic potency afforded by upright posture will require closer attention to these relations, including the inverse correlations, complex coordinations and relative specializations of the upper and lower limbs in motion.

#### References

- Eco, Umberto. 2000. *Kant and the Platypus: Essays on Language and Cognition*. New York: Harcourt.
- Marsden, Jamie & Briony Thomas. 2013. Brand Values: Exploring the Associations of Symmetry within Financial Brand Marks. *Design Management Journal* 8(1). 62–71.

Sebeok, Thomas A. and Marcel Danesi. 2000. *The Forms of Meaning.* Berlin: Mouton de Gruyter.

Sheets-Johnstone, Maxine. 2011. *The Primacy of Movement*, 2nd ed. Amsterdam: John Benjamins.

Van Lier, Henri. 2010. Anthropogénie. Paris: Les Impressions Nouvelles.

Washburn, Dorothy K., and Donald W. Crowe. 1988. *Symmetries of Culture: Theory and Practice of Plane Pattern Analysis*. Seattle: University of Washington Press.





[phenomenology] Wednesday, 10:30-11:00, room 201 Carlos Andres **Perez**, pericles12[at]gmail.com Universidad Jorge Tadeo Lozano, Colombia

### Horizon: a key phenomenological concept for cognitive linguistics

Cognitive linguistics shares with static approaches to language its commitment with finding and identifying the linguistic structures (the linguistics forms) that lie beneath ordinary language use, be it presented as intersubjective normative structures (Zlatev, 2010), or as subjective mental ones (such as image schemas (Johnson, 1985) or closed-class forms (Talmy, 2003), for example). On the other hand, cognitive linguistics shares with recent approaches stemming from enactivism (Cuffari et al, 2014; Di Paolo and DeJaegher, 2015) and dynamical systems (Fusaroli and Raczaszek-Leonardi, 2014) its concern with the intersubjective and situated nature of language, the understanding of which demands new theoretical and methodological tools, and new descriptive categories such as *participatory* sense making or synergy, to name a few. For example, Conceptual Blending Theory, as presented in its semiotic version by L. Brand, (2013) takes into account the situated nature of meaning construction (base space), while relying on static forms in the configuration of emergent meaning space (relevance space).

In my presentation I will try to capture and elaborate this tension within a phenomenological framework, following and developing the husserlian notion of *horizon*. First, I will give a phenomenological characterization of the notion of horizon, highlighting its intimate relationship with the notions of *lived body* and *time consciousness*. Then, I will point out the centrality of the notion of horizon for cognitive linguistics, working on three different levels: 1. *Inner horizon* as understood in the analyses of perceptual experience. 2. *Outer horizon*, as a key concept for understanding the notions of frame and domain, both central in the theoretical landscape of cognitive linguistics. 3. *Intersubjective horizon*, following a *generative* 





characterization of the intersubjective world (Steinbock, 1995), in order to understand the enactive approach to language.

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To make my point clear, I will end my presentation discussing two recent theoretical proposals (Bundgaard et al, 2006; Fusaroli and Raczaszek-Leonardi, 2014) based on this phenomenological framework.

#### References

Brandt, L. (2012) *The Communicative Mind: A Linguistic Exploration of Conceptual Integration and Meaning Construction*. Cambridge Scholar Publishing. Cambridge.

Bundgaard, P., S. Østergaard, and F. Stjernfelt. (2006) Waterproof fire stations? Conceptual schemata and cognitive operations involved in compound constructions. *Semiotica*, 161:363-393.

Cuffari, E. Di Paolo, E., De Jaegher, H. (2014). From participatory sensemaking to language: There and back again. In: *Phenomenology and the Cognitive Sciences*, doi 10.1007/s11097-014-9404-9.

Di Paolo, E. and De Jaegher, H. (2015). Toward an embodied science of intersubjectivity: widening the scope of social understanding research. In: *Front. Psychol.* 6:234. doi: 10.3389/fpsyg.2015.00234

Johnson, M. (1985). *The body in the mind*. University of Chicago, Chicago. Steinbock, A. (1995) *Home and beyond*. *Generative phenomenology beyond Husserl*. Northwestern University Press, Evanston.

Talmy, L. (2000) *Toward a cognitive semantics*. MIT Press, Cambridge.

Zlatev, J. (2010). Phenomenology and cognitive linguistics. In:Shaun Gallagher and DanSchmicking (eds).Handbook on Phenomenology and CognitiveScience, 415-446.Dordrecht: Springer.Science, 415-446.





[experimental] Tuesday, 15:00-15:30, room 4 Johanna Stege **Philipsen**, johannesp@sdu.dk University of Southern Denmark, Denmark Brandon **Mells**, mells@ucla.edu University of California, Los Angeles, USA

## Cooperating hands: Gesture as an interactional semiotic resource in collective ideation

Cooperating on problem solving and finding new innovative solutions are crucially important parts of many aspects of human culture, commercial activities and societal development today. In studying these issues, great attention has been given to the role of spoken and written language. Less emphasis however, has been given other kinds of embodied and external aspects of communication in collaboration, such as gesture, prosody and material representations, as well as how these different semiotic resources are drawn upon and influence sense making in joint problem solving.

Gestures are most often researched as to how they function as either 1) a speaker resource for speech production, word search, and reasoning or 2) an addressee resource for making sense of speaker produced talk in interaction. Here we propose a view of gesture that adds to this research how gesture in face to face interaction has a temporal resolution and a functionality that reaches beyond the intelligibility and production of the single word or utterance with which it was produced, and thus become a resource for tying, manipulating and exploring parts of ongoing sense making. This proposes a view of gesture as a shared interactional semiotic resource, rather than an individual resource for production and understanding.

Drawing on micro-analysis of natural data from a client meeting in a digital marketing company, we show how both speaker and addressee reuse parts of prior gestures to add to, reiterate and transform a rich, enacted proposition produced in face to face interaction, thereby co-creating a new perspective on a shared task.





[semiotics] Wednesday, 11:00-11:30, Aula Rosie **Picton**, r.picton@space-doctors.com Space Doctors, United Kingdom

### Semio-Ethnography: The Hybrid Solution for IHG

Case Study: How cultural insight, commercial semiotic analysis and ethnography combined powerfully to guide hotel room design for the International Hotel Group.

**Background:** IHG were interested in how to encode the promise of a good night's sleep in the physical design of a hotel room. They knew that to explicitly promise this was bound to be an unsuccessful strategy, so were instead concerned to imply the promise of sleep in other ways.

A semiotic analysis of how the concept of 'sleep' is coded in popular culture, brand communications and design in both China and the US led to specific guidelines for the new hotel room design. These insights were fused with ethnographic insights into behaviours around sleep and the hotel environment, and were implemented by working closely with the client to ensure they were realised.

The new design is currently being rolled out in the US and is proving a significant success. This case study will help us explore the potential for semio-ethnography to influence the meanings that people intuit from their physical surroundings.

#### Methodology

Semiotic analysis of how sleep is coded in culture, combined with ethnographic research using semiotic-driven research frameworks to understand what consumers say vs. what they do in the hotel-based context of 'a good nights sleep'.

#### Purpose of this presentation

Showcase the value of 'hybrid' or intensely collaborative research methodologies, and how such collaboration is able to provide richer inspiration and stronger rationale for marketing and design team decision-making and ultimately implementation.





[cultural influences] Monday, 12:15-12:45, room 101 Piero **Polidoro**, piero.polidoro[at]gmail.com LUMSA University, Rome, Italy

## Left-right orientation in images: aesthetic preference and cognitive processes

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Art historian Heinrich Wölfflin was among the firsts to remark that it is not possible to mirror an image without altering its visual effect (in Semiotics we would say: "without altering its plastic meaning"). He was later followed by other scholars and artists, such as Wassily Kandinsky (1926) and Rudolf Arnheim (1954).

More specifically, we should distinguish between at least two different questions. First: visual elements are perceived as having different "weights" or importance if they are in the left part or in the right part of an image. Second: visual vectors produce different effects depending on their being leftward or rightward. According to Arnheim there is a tendency that leads us to prefer rightward pictorial movements and to feel leftward ones as "unnatural".

This is a very interesting theme for Cognitive semiotics, because it lies at the intersection between perception and aesthetic effects and, perhaps, between bottom-up and top-down processes.

In the last decades these phenomena have been studied above all in Psychology of perception and Neurosciences. Some of these studies (Levy 1976; Beaumont 1985; Mead and McLaughlin 1992) try to explain (or at least correlate) these phenomena with brain lateralization: they would be caused by functional differences between right and left cerebral hemispheres (concerning for instance visuo-spatial tasks, cognitive attention, face recognition, handedness).

A second group of explanations is based on cultural factors, i.e. reading and writing habits (Nachson, Argaman and Luria 1999; Chokron and De Agostini 2000; Dobel, Diesenbruck and Bölte 2007). In this case left-right tendency





would not be due to an innate cerebral predisposition, but to acquired schemata that derive from cultural conventions.

Experimental results do not offer clear evidences for either hypothesis. For instance, Treiman and Allaith (2013) report data contrasting with those of a similar experiment by Chokron and De Agostini (2000); Friedrich and Elias (2016) list a series of contrasting studies in literature.

Data interpretation is complicated by the possible influence of top-down cultural mechanisms, as Freimuth and Wapner (1979) showed, modifying exposure time to the stimulus.

In recent years mixed hypotheses have often been proposed. According to Ishii *et al.* (2011), for instance, cultural habits may reinforce or reduce a natural bias towards rightward images.

In my talk I will discuss, from a semiotic point of view, some aspects of this topic, such as the importance of semantic features and cultural and historical variations in these biases.

I will also propose an hypothesis on the cultural origin of left-right tendency of visual vectors (Polidoro 2004). This hypothesis is not based on new or experimental data, but on a comparative analysis of existing literature and it should be considered a theoretical suggestion of a research direction. In addition, it is inspired by a conception (Meyer 1956; Eco 1962) according to which aesthetic effects may have (also) an inferential basis (Polidoro 2015). This hypothesis consists in relating rightward bias and its "aesthetic" effect not to a generic "reading habit", but to the expectancies deriving from this habit. These expectancies would produce inferential activity in the subject and consequent verification processes. The dynamic of inference production/verification (and its possible influence on single saccadic movements) could be at the basis of the aesthetic aspects of this bias.

#### References

Arnheim, R. (1954), Art and Visual Perception: a Psychology of the Creative Eye, University of California Press.





- Baumont, J.G. (1985), "Lateral organization and aesthetic preference: the importance of peripheral visual asymmetries", *Neuropsychologia*, 23, 103-113.
- Chokron, S., De Agostini, M. (2000), "Reading habits influence aesthetic preference", *Cognitive Brain Research*, 10, 45-49.
- Dobel, C., Diesendruck, G., Bölte, J. (2007), "How writing system and age influence spatial representation of actions", *Psychological Sciences*, 18, 6, 487-491.
- Eco, U. (1962), Opera aperta [The Open Work], Bompiani, Milano.
- Freimuth, M., Wapner, S. (1979), "The influence of lateral organization on the evaluation of paintings", in *British Journal of Psychology*, 73, 211-218.
- Friedrich, T.E., Lorin, J.E. (2016), "The write bias: the influence of native writing direction on aesthetic preference bias", *Psychology of Aesthetic, Creativity and the Arts*, 10, 128-133.
- Ishii, Y., Okubo, M., Nicholls, M.E.R., Imai, H. (2011), "Lateral biases and reading direction: a dissociation between aesthetic preference and bisection",
- Kandinsky, W. (1926), Punkt und Linie zu Fläche, Langen, München.
- Levy, J. (1976), "Lateral dominance and aesthetic preference", in *Neuropsychologia*, 14, 431-445.
- Mead, A.M., McLaughlin, J.P. (1992), "The roles of handedness and stimulus asymmetry in aesthetic preferences", in *Brain and Cognition*, 20, 300-307.
- Meyer, L.B. (1956), *Emotion and Meaning in Music*, University of Chicago Press, Chicago.
- Nachson, I., Argaman, E., Luria, A. (1999), "Effects of directional habits and handedness on aesthetic preferences for left and right profile", *Journal of Cross-cultural Psychology*, 30, 104-116.
- Polidoro, P. (2004), "Inferenze, tensioni e metafore: i meccanismi del linguaggio plastico" [Inferences, tensions and metaphors: mechanisms of plastic language"], *Versus*, 98-99, 39-66.





- Polidoro, P. (2015), "L'attività inferenziale e le aspettative nel pensiero estetico di Umberto Eco" [Inferential activity and expectancies in Umberto Eco's aesthetic thought], Zagadnienia Rodzajów Literackich, 58, 116, 63-74.
- Treiman, R., Allaith, Z. (2013), "Do reading habits influence aesthetic preferences?", *Reading and Writing: An Interdisciplinary Journal*, 26, 8, 1381-1386.

[language&vincinities] Monday, 15:30-16:00, s. 101 Joanna Raczaszek-Leonardi, joanna.leonardi[at]gmail.com Michał **Denkiewicz**, michal.denkiewicz[at]gmail.com **Polish Academy of Sciences** Julian Zubek, zubekj[at]gmail.com Agnieszka Debska, debska.agn[at]gmail.com Alicja **Radkowska**, alicjaradkowska[at]gmail.com Joanna Komorowska-Mach, jokkom[at]gmail.com Piotr Litwin, piolitwin[at]gmail.com Adrianna Kucińska, adrianna.diana.kucinska[at]gmail.com Magdalena Stepień, stepien m[at]wp.pl Krystyna Komorowska, krysia kmk[at]o2.pl University of Warsaw, Poland Riccardo Fusaroli, fusaroli[at]dac.au.dk Kristian Tylén, kristian[at]dac.au.dk Aarhus University, Denmark

## Language as a coordinative tool in wine recognition and description: influences from two time-scales

If language is viewed as a system of constraints on individual and collective behaviour, its coordinative role comes to the fore. Language can effectively change the probabilities of systemic behaviours, acting as a control on the interactive dynamics and outcomes. Such a view allows for comparing the





impact of language on individual and collective systems, opening new methods of analysis of "interpretation" in terms of assessment of the systemic degrees of freedom, system's dimensionality or variability of performance.

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In this study we experimentally investigate the impact of two types of language-based coordination on the recognition and description of complex sensory stimuli, namely red wine. Participants were asked to taste, remember and successively recognize samples of wines within a larger set in a two-by-two experimental design: 1) either individually or in pairs, and 2) with or without the support of a sommelier card - a cultural linguistic tool designed for wine description. Both effectiveness of recognition and the kinds of errors in the four conditions were analyzed. While our experimental manipulations did not impact recognition accuracy, bias-variance decomposition of error reveals non-trivial differences in how participants solved the task. Pairs generally displayed reduced bias and increased variance compared to individuals, however the variance dropped significantly when they used the sommelier card. The effect of card reducing the variance was observed only in pairs, individuals did not seem to benefit from the cultural linguistic tool. Subsequent analysis of descriptions generated with the aid of card by individuals and pairs showed that they were more consistent and discriminative in the case of pairs. The findings are discussed in terms of global properties and dynamics of collective systems when constrained by different types of cultural practices.

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[semiotics] Wednesday, 12:00-12:30, Aula Joanna **Rączaszek-Leonardi**, joanna.leonardi@gmail.com University of Warsaw, Poland Terrence **Deacon**, deacon@berkeley.edu University of California, Berkeley

## A variety of semiotic relations in the process of language acquisition

Language learning is traditionally thought of as a function of internal rules (either inborn or learned) that concern the structure of linguistic input. On such view, language is mostly isolated from its pragmatic context, treated as a separate cognitive skill, and acquired on the basis of linguistic 'data'. In our paper we draw on more functional approaches to language and on the view that language can be treated as a system of constraints on dynamics of action and cognition both on the individual and on the collective level. According to this view, it is crucial for language development that it is always immersed in rich dynamical and structured co-action.

In this paper we integrate such a view of language (based on the works by Pattee & Rączaszek-Leonardi, e.g., 2012) with an approach that can help identifying the variety of constraining relationships, based in semiotics (Deacon, e.g., 1997, 2011). By a careful microanalysis of real parent-infant interactions we show that on the way to becoming a symbolic activity, the utterances of language have to be involved in other types of semiotic relations. In order to do this, first we identify the relevant dynamics in which such utterances appear, showing that it is already meaningfully (intentionally) structured. Next, we show examples of iconic and indexical relations in which utterances of language are involved. Finally, we stipulate on necessary preconditions for the utterances to become truly symbolic.

By joining the two abovementioned approaches to language, we thus show how language becomes a control on interaction in the developmental timescale. Engagement of linguistic forms in a variety of other semiotic relations provides a rich semiotic infrastructure, on which symbolic meaning can





built. This view shows both how linguistic forms are grounded and provides mechanisms for their (partial) un-grounding to become symbolic.

[experimental] Tuesday, 12:00-12:30, room 4 Gareth **Roberts**, gareth.roberts@ling.upenn.edu Betsy **Sneller**, esnell@sas.upenn.edu University of Pennsylvania, USA

## Appropriation in an alien language: An experimental-semiotic study of sociolinguistic meaning

Any linguistic utterance carries social meaning in addition to semantic content. The variants that allow this meaning to be conveyed are transmitted through social interaction, and social factors play important roles in the cultural evolution of language. The use of communication systems to mark identity is also widespread in nature, suggesting that the cognitive underpinnings of sociolinguistic behaviour are relatively ancient. However, in spite of the clear importance of sociolinguistic behaviour to cognitive semiotics and language evolution, links between these fields and sociolinguistics are not strong, and few experimental-semiotic studies have directly investigated sociolinguistic questions. Here we present a study that does precisely this, using an artificial language game to test a hypothesis derived from sociolinguistic fieldwork.

The study is based on interviews conducted in 2012-2013 with white residents of a low-income neighbourhood in Philadelphia with a high degree of racial segregation and tension. Several male speakers were found to exhibit TH-fronting, a feature of African-American English (but not white Philadelphian English). Surprisingly, higher rates of TH-fronting were found in speakers who expressed aggressive negative views about their African-American neighbours. A likely explanation for this is that TH-fronting among these speakers was due to an association with toughness and "street" culture rather than African-American identity.





We tested this hypothesis with an experimental-semiotic study. The basic paradigm involved groups of four participants playing a computer game, with each player assigned to one of two alien species: Wiwos and Burls, with Burls depicted as tougher than Wiwos. Before playing, participants learned a small "alien language", which differed slightly for the two species (e.g., fuzuki vs. buzuki). Then they played a series of rounds in which they were paired with each other and could chat (by typing messages in the alien language), trade resources, and fight. In one experiment we manipulated whether forms used by Burls were explicitly associated for the Wiwos with Burls or with "tougher aliens". Consistent with the hypothesis, Wiwos in the latter condition appropriated Burl forms significantly more than in the former condition. In a second (ongoing) experiment, we investigate whether introducing a distinction between "peaceful" and "hard" Wiwos, with the latter having traits in common with "Burls", leads to greater appropriation of Burl forms by the latter, as a means of distinguishing themselves from their peaceful conspecifics.

[intersubjectivity] Monday, 11:45-12:15, Aula Victor **Rosenthal**, victor.rosenthal[at]ehess.fr Institut Marcel Mauss – EHESS, France

### Semiotic institution of inner life

The very idea of inner life arises from our being on speaking terms with ourselves, from having an inner voice. I shall argue that far from being merely an anonymous vehicle of thought, inner voice represents an embodied modality of our *selfhood*, of our being in the *social world*, and as such is an essential vector of our humanity. Although inner voice may (rightfully) be viewed as instrumental to the exercise of thought (a familiar theme from Plato to Vygotsky to Merleau-Ponty), its significance far exceeds this purely cognitive instrumental dimension: it is an essential vector of semiotization of human life and it institutes full-fledged forms of





inner life that differentiate us from non-humans. Moreover, even in its outwardly silent form, it incarnates the public character of expression, when the addressee is an invisible, fictitious partner.

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In this sense, and in contradistinction to Vygotsky's theory of inner speech, self-talk is not utterly simplified, mostly reduced to a predicative form but encompasses all of forms of discourse. Neither is it merely dialogical (as hold the proponents of the bakhtinian tradition) for it also comprises narratives, self-comments and other conversational forms. Actually, epilegein as we shall call the phenomenon of inner voice (but isn't it also outer, since we hear it) is also the voice of the *subject* as a *person* and as a moral instance. For, because I talk to myself, somehow I am two-in-one, and I have to live up to the constraints of this coexistence (to the pressure of the other voice), to become accountable to myself (if I disagree with other people, I can walk away; but I cannot walk away from myself; if I do wrong, I have to live along with a wrongdoer). And I live in a social world even when alone; even in my solitude I recap normative, prescriptive, imaginary repertories of my society. Inner speech is thus instrumental to acquisition and stabilization of social, cultural and linguistic repertories of norms and instituted forms, by way of repeating, rehearsing, transforming, and fictionalizing (of which it is an essential medium).

There is a functional duality of inner speech inasmuch as it acts both as an *agent of the social world* (by the use of shared language and of its cultural repertory) and is a *vector of individuality* (autonomy of attention, intimate spokesperson). Indeed, by speaking to myself I free attention from purely immersive and participatory form of life and become able to fix my own agenda. The range of phenomena encompassing inner voice thus goes far beyond a simple modality of speech, and it will be argued that it is an essential *institution of human life*, and as such, is the main (though note the sole) *vehicle* of inner and social life.





[multimodal] Monday, 11:15-11:45, room 201 Devon **Schiller**, devonschiller[at]gmail.com Danube University, Austria

### Faces seen, heard, and felt: The intermedial haptic archive in facial measurement training

Since the 'Cognitive Revolution' of the mid-twentieth century, considerable empirical research in psychology, linguistics, and computer science is dedicated to investigating whether there are prototypical emotions specified by biology and universally recognized across cultures. The Facial Action Coding System (FACS), today's leading standard for taxonomizing the nonverbal language of the physiognomy, has supported findings for this theory of emotions as functionally discrete types. Applying FACS, a researcher measures the sign vehicles of the face by describing the surface appearance of muscular movement that is visible to an observer's classificatory gaze. This method depends upon the archiving of media documents. FACS was discovered using documentation of facial expressions in societies unexposed to mass media, developed using photograph and video transcription of expressions modeled by the researchers themselves, and is deployed using databases or stimulus sets of images that are facecoded and emotion-labeled. To problematize the media genealogies of physiognomic science, and the semiotic structures of its principally visual epistemology, I probe the FACS Training Workshop originated by psychologist Erika Rosenberg, the only Workshop endorsed by FACS principal investigator Paul Ekman. How are facial signs encoded in the documentation of Indagine, Lavater, Darwin, Lombroso, Bertillon, Tomkins, and Ekman by the media specificities of these face-readers' archival practices? To what extent has the archiving of media documents for FACS systematized the ontological commencement of a scientific paradigm for measuring face sign vehicles, as well as a nomological commandment in the media ecosystem through which their referent emotion categories are evaluated? And how does the intermediality between the symbolic





representation (Thirdness) in the *FACS Manual* and the sensuous quale (Firstness) of the Workshop participant support the composition, reference, and transformation of mediated statements about the face through an ocular, auditive, and haptic semiosis? I propose that the FACS Workshop functions as a haptic archive for the media documents of the 'physiognomics of the age,' and through the critical analysis of its media specificities present a challenge to the sustained hegemony in the Western cultural imaginary of physiognomic science as ocularocentric; connect these information-carrying images with the aesthetic images from which they are artificially divided in media histories; and call for future archives of face images to center around the perception of touch, both for better efficacy in the analogue coding and digital algorithms of facial expression analysis, as well as towards a more complex research of emotion based on sign vehicles of the face.

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[cultural influences] Monday, 11:45-12:15, room 101 Aleksei **Semenenko**, aleksei.semenenko[at]gmail.com Stockholm University, Sweden

## Semiotics of non-sense: How can something that does not exist have meaning?

Absurdity and nonsense are usually studied as literary, philosophical and/or logical categories. For example, in literary studies absurd is typically analyzed as a type of humor on the example of concrete texts and genres. In my paper, I focus on absurdity and nonsense as semiotic categories and as one of the mechanisms of meaning generation, basing my approach on the works of the semiotician and literary scholar Yuri Lotman, and especially his concepts of explosion (both as a change in the state of the system that provokes an unpredictable development and a situation when the information load of a text drastically increases) and the notions of "nontext" and "minus-device" that refer to the meaningful absence of structural





elements that influences the perception of the text (Lotman 1962, 1970, 1990, 2009, 2010).

This problem highlights the inherent informational paradox of human culture and human communication systems, in which entropy does not impede communication but on the contrary stimulates it. I examine two cases of this phenomenon: 1) the first is dealing with the so-called nonsensical signs/words that can be coined and used in any natural language; 2) the second examines the problem of "non-signs" in the artistic texts and the importance to study them in relation to non-texts and extratexts of their semiotic sphere. As an example, I analyze the mechanisms of meaning generation in several English (e.g., "Jabberwocky," John Lennon's texts) and Russian (e.g., *Eugene Onegin*, Daniil Kharms) texts that demonstrate different functions of "non-signs" in the structure of the text. On a larger scale the example of how human cultures deal with nonsense (and "non-sense") in communication has implications for the study of the evolution of human culture and language and also draws additional light to the methodological problem of the relation of the text to the sign.

[conceptualization] Tuesday, 11:00-11:30, room 101 Anastasia **Sharapkova**, warapkova[at]yahoo.com Moscow Lomonosov State University, Russian Federation

## Shifting the meaning through social interaction: a case of noble and its synonyms in Medieval literature

The concept *noble* plays a paramount role in representing the knightly world of the Middle Ages for it is an essential characteristic of courtly life. As the transformations in social life influenced the knightly discourse, the literature caused both: changes in linguistic meaning and social behavour: "just as medieval history is unexpectedly like romance, so medieval romance is unexpectedly like history" [Schmidt, 1982: 39]. The adjective 'noble' appeared in the English language in 13<sup>th</sup> century as the key landmark





in history of the country and language itself; **h**owever, during merely one century its meaning changed dramatically from "superior birth" related to gentry to "having high moral qualities". The study of the text of *Morte D'Arthur* by Thomas Malory and a number of other sources including corpora of the period shows the gradual blending of various existing meanings and the birth of the new ones due to changing social situation.

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The application of linguistic, cognitive and corpus approaches makes it possible to assume that the shift of meaning accounts for the shift in the structure of the concept of knighthood, that is well-represented in the texts of the period and supported by historical accounts.

We grouped all contexts according to the type of nouns combined with *noble*. When the adjective is used with nouns denoting people *(lords, ladies)*, it is likely to reveal its primary meaning or is used to point at a set of characteristics which were thought to be indispensable of gentle birth. When we deal with *'noble knights'*, the situation becomes more complicated for a man could only become a knight belonging to aristocracy, so his moral qualities are not that easily revealed. In this case, we analyze the nearest context and study the adjectives making up the representation of knightly world e.g. *worthy*. The adj. *noble* shifts in meaning when combined with non-human nouns (*swords, books, deeds)*, but what is more important – with abstract nouns such as, *courage*, while the concept is elaborated through extension of the *radial category* (Lakoff). Morphological derivation also sheds light on further conceptual derivation.

The analysis demonstrates that the adj. *noble* is transformed and recategorised in the medieval texts through the abstract conceptualization of nobility and knighthood being gradually complicated and brought to a highly abstract domain of knowledge.

By applying the integrated approach with cognitive taken as the leading one I hope to demonstrate how the semiosis is taking place on the crossroads of culture, society and literature.




[iconicity] Tuesday, 10:30-11:00, room 201 Shekoufeh **Mohammadi Shirmahaleh**, shekufe[at]hotmail.es Universidad Nacional Autónoma de México, Mexico

### Iconic Metaphor in Language and Literature: Identification and Interpretation

Charles S. Peirce's iconic metaphor is his least explored category of icons due to his own very short and ambiguous definition of this concept: a metaphor is an icon that represents the representative character of a representamen by representing a parallelism in something else (Peirce), i.e., something other than simple qualities or analogous relations. The nature of this "something else" is the first notion to be determined when we intend to study the Peircean metaphors.

While images and diagrams have received extensive attention from investigators and scholars, Peircean metaphors have been treated insufficiently both regarding their structural functions and in relation to their interpretation effects in different fields. As a first step, this paper presents a close study of the three main elements of all signs, i.e., Object, Representamen and Interpretant, in the iconic metaphor and their relation to the Background and the Interpreter, as a guide to a complete understanding of the semiotic process of creation and interpretation of metaphors, proposing at the same time a better substitute for "something else" in Peirce's definition of this third class of hipoicons. On the other hand, the question of reference and similitude in an iconic metaphor is also a matter that seeks special treatment it has not been given. Metaphors are abductive, self-referential, self-creative icons, able to surpass the limits of linguistics and literature, as much as their own limits.

Moreover, language, in its everyday life and usage, and literature are two excellent contexts where iconic metaphors, together with other Peircean icons, appear and invite us to a more complex interpretation. Many studies have been fulfilled about iconicity in language but once again the iconic metaphor is left aside, as Peircean images and diagrams gain a central role.





Therefore, a second step will consist of a concise and precise classification of possible cases in language and literature where iconic metaphors can be identified: in everyday language instruments, such as intonation and vocal style, in literary texts, especially in poetic metaphors and anagrams, and in rhetoric figures: ellipsis, reticence, repetition, alliteration, pause, implications and inferences, etc. This new viewpoint focused on the iconic functions of discourse components has started to be discussed as a crucial approach that can lead us to a more correct and complete interpretation of linguistic and literary messages.

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[communication] Tuesday, 11:00-11:30, Aula Göran **Sonesson**, goran.sonesson[at]semiotik.lu.se Lund University, Sweden

## Semiosis in History. The Emergence of Alter-Culture

Following up on Merlin Donald's claim that human specificity emerges in history, and not exclusively in evolutionary time, it will be suggested that the diversified means of producing semiosis created by human beings account for the spread of empathy and altruism not only beyond the kin group, but to humankind in general. This amounts to treating other cultures as different from us, but still able to enter into communication with us (as an Alter), as opposed as treating these cultures are part of nature, and thus only susceptible to be communicated about (as an Alius). Starting out from the theory of bio-cultural evolution defended by Peter J. Richerson and Robert Boyd, as well as from the multi-level selection theory of Elliott Sober and David Sloan Wilson, we try to lay bare the way in which semiotic structures play a role for transforming cultural evolution, contrary to biological evolution, into human history. We inquiry into what makes the existence of Alter-culture possible, if, as Sober and Wilson have claimed, armed with game theory, an altruistic society (an Ego-culture in our terms), is only possible in opposition to another group in relation to which group





egoism rules (that is, in our terms, an Alius-culture). We will follow Michael Tomasello in arguing for the primacy of games of cooperation, rather than competition, while adding an historical dimension, which serves to explain how such cooperation can be extended beyond the primary group (our Egoculture). However, we will insist of the importance of multiple semiotic resources for the boot-strapping of empathy and altruism, as well as on the genesis of this process in cultural encounters, as reflected in the spirit of the Enlightenment.

[embodiment&situatedness] Tuesday, 15:00-15:30, Aula Katarzyna **Stadnik**, katarzyna\_stadnik@interia.pl Maria Curie-Sklodowska University in Lublin, Poland

# The word vis-à-vis the visual image: Remembering as a shared sociocultural practice

The paper adopts a Cultural Linguistic perspective on the language-cognition relation.

Our research perspective can be subsumed under the umbrella term of the so-called sociocultural situatedness of the language user as a member of a cultural community.

This approach dovetails with the research strain of situated cognition, which assumes that the operation of the human mind should be examined relative to the context. It may be suggested that the context for the human cognitive processes can be rendered in terms of human embodiment, and the external environment, both physical and social. Furthermore, our understanding of what constitutes the context can be broadened by including the issue of the interaction between the community member and the external environment, with the latter presupposing the use of external vehicles for thought.

The paper takes a culturally-oriented view of meaning-making in human interaction. Of specific interest is the question of the transfer of





knowledge accumulated in a given community. It is assumed that the interdependency of literature and visual arts helps sustain the cultural community's memory. Increased attention is paid to how the idiosyncratic nature of human cognition affects the process of knowledge transfer. What and how is remembered by the individual seems to depended not only on the nature of the information-bearing medium, but also on the idiosyncratic nature of the individual's cognition. The problem of the interplay between the word and the visual image will be discussed relative to Zbigniew Herbert's writings.

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[experimental] Tuesday, 11:00-11:30, room 4 Marlene **Staib**, mvs[at]dac.au.dk Jonas **Nölle**, jonas.noelle[at]live.de Riccardo **Fusaroli**, fusaroli[at]gmail.com Kristian **Tylén**, kristian[at]cc.au.dk Aarhus University, Denmark

## Investigating motivations for iconicity and systematicity in emergent sign systems

Recently, there has been a blossoming discussion related to the emergence of novel sign systems and – ultimately – language. Previous studies suggest a prominent role for internal and individual cognitive biases shaping linguistic structures through processes of intergenerational transmission and learning (Kirby et al., 2008). Other approaches argue for the importance of situated social interaction (Tylén et al., 2013). In the latter, the social and material environment plays a critical role providing rich semiotic affordances that scaffold and stabilize new communicative signs and systems. Crucially, this perspective entails that different environments might motivate different linguistic structures (Christensen et al., 2016).

This paper presents novel experimental work on aspects of systematicity and iconicity in emerging communication systems





(Dingemanse et al., 2015). While iconicity is related to the relation between sign and referent, systematicity is related to shared features between related signs internally in a communication system. As such, both iconicity and systematicity scaffold previous knowledge (about referents/signs), and can therefore be treated as alternative "strategies" for bootstrapping a communication system (Roberts et al., 2015).

In an experimental setting, we independently manipulated the distributional properties of certain traits of stimuli to simulate affordances for iconicity and systematicity of different environments. Pairs of participants had to communicate about visually presented characters using only gesture (i.e. without reliance on existing conventional signs, Galantucci and Garrod, 2010). These characters each had very specific, individual traits (e.g., glasses), as well as traits that were shared by a number of referents (e.g., their gender). Preliminary findings support a nuanced perspective on iconicity and systematicity emerging in response to different semiotic affordances.

#### References

Christensen, P., Fusaroli, R., Tylén, K., 2016. Environmental constraints shaping constituent order in emerging communication systems: Structural iconicity, interactive alignment and conventionalization. Cognition 146, 67-80.

Dingemanse, M., Blasi, D.E., Lupyan, G., Christiansen, M.H. & Monaghan, P., 2015. Arbitrariness, Iconicity, and Systematicity in Language. Trends Cogn Sci 19, 603-615.

Galantucci, B. & Garrod, S., 2010. Experimental semiotics: A new approach for studying the emergence and the evolution of human communication. Interaction Studies: Social Behaviour and Communication in Biological and Artificial Systems.

Kirby, S., Cornish, H. & Smith, K., 2008. Cumulative cultural evolution in the laboratory: an experimental approach to the origins of structure in human language. Proc Natl Acad Sci U S A 105, 10681-10686.





Roberts, G., Lewandowski, J. & Galantucci, B., 2015. How communication changes when we cannot mime the world: Experimental evidence for the effect of iconicity on combinatoriality. Cognition, 141, 52-66. Tylén, K., Fusaroli, R., Bundgaard, P.F. & Østergaard, S., 2013. Making sense together: A dynamical account of linguistic meaning-making. Semiotica 2013, 39-62.

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[conceptualization] Tuesday, 14:30-15:00, room 101 Anna **Stanisz**, ania.stanisz[at]interia.pl Jagiellonian University, Poland

# Conventional and unconventional conceptualisation of love in English (David Richo)

The aim of my paper is to compare the conventional conceptualisation of love in English with the unconventional one in David Richo's psychological guidebook entitled *How To Be An Adult in Love. Letting Love In Safely and Showing It Recklessly* from the point of view of cognitive semantics, especially the theory of conceptual metaphor and metonymy (Lakoff, Johnson, *Metaphors We Live By*) and the theory of radial category (Rosch, *Cognition and Categorization*).

The first part will be devoted to the conventional conceptualisation of love in English. As a scholarly background providing the analysis of the conventional conception I am going to use Bogusław Bierwiaczonek's book entitled *A Cognitive Study of the Concept of LOVE in English*. Bierwiaczonek points to a few models of love in the European culture (the one based on sexual attraction, marital love, family love), which overlap in the understanding of the whole concept. My hypothesis is that the central member of the love category is conventionally conceptualised as a strong emotion of affection or liking, resulting from sexual or romantic attraction, where a person loving is passive. Therefore, the central sense of love is metonymically understood as an in-love state.





Another part of my paper will focus on Richo's conceptualisation of love, which is constructed by means of metaphors and metonymies as well as prototypes. Richo creates his definition of love primarily by means of metonymies, painting it as an inborn "capacity", which, though, has to be trained ("practice"), and by means of differentiation between love and other concepts commonly mistaken for it (liking, loyalty, infatuation, lust). In his definition, the prototype of love are less conventional in the conventional conceptualisation. Richo's prototype refers to an attitude of caring, deeply rooted in the ideal of universal love, that is directed at everyone, including ourselves, and manifesting itself in action. Richo's unconventional conceptualisation focuses on forming a relationship.

In conclusion, the aim of the paper will be to point to similarities and differences between the metaphors and metonymies in the two conceptualisations as well as in the category model for the two concepts of love. Because a few models of love overlap in the European culture, I assume that what is central in Richo's conception of love is what is peripheral in the conventional one.

[language&vincinities] Monday, 16:00-16:30, room 101 Vlado **Sušac,** vsusac[at]unizd.hr University of Zadar, Croatia

# Metaphor identification problem or can we extract water from the lake?

Ever since the 'cognitive turn' in the theory of metaphor, which resulted in abandoning the old rhetorical approach focused on language metaphors primarily as a matter of style, anyone dealing with corpus analysis has inevitably faced the problem of metaphor identification. The newly advocated ubiquity or omnipresence of metaphors in thought and consequently in language recognized through various kinds of conceptual mappings poses a methodological problem of the metaphor demarcation





from the rest of the language material. From diachronical perspective the metaphorical motivation can be etymologically traced back to the beginnings of human speech, especially in TIME - SPACE mappings or other embodied experience that we share as a human race, let alone other relative concepts produced by particular cultures. Purely synchronical approach to the phenomenon only partly resolves the problem with language analysis, still largely reducing the metaphoric repository for thought and inherent conceptual relations. As a paradox, even what is left in this reduced approach and recognized as metaphorical by following Metaphor Identification Procedure is not always processed metaphorically in the minds of speakers (or listeners) through cross-domain mapping from one concept to another. This tension between linguistic and cognitive perspective has been resolved by some authors (Steen, in particular) by offering intersubjective approach, where communication becomes the focus of our attention. It reconciles the traditional rhetoric with the later cognitive views by means of intentionality or awareness as a primary marker in metaphor identification, where cross-domain mappings are clearly evoked in the minds of speakers and listeners. By accepting this adapted procedure, the previously presented corpus analysis of the conceptual systems in political discourse, which included deliberate and non deliberate metaphors, will be re-examined, especially in view of dominant metaphorical mappings belonging to opposed political groups. The results will show whether the majority concepts of deliberate political metaphors significantly differ in quality and number from those that belong to a mere language habit.

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[experimental] Tuesday, 15:30-16:00, room 4 Monica **Tamariz**, monicatamariz@gmail.com Max Planck Institute for Psycholinguistics Jon **Carr**, j.w.carr@ed.ac.uk University of Edinburgh, United Kingdom

# Co-evolutionary interactions between signals and meanings: an experimental approach

This study explores the origin and evolution of an open-ended experimental semiotic system which, starting off as only one form-meaning mapping, expands both in the form space (typed descriptions) and in the meaning space (drawings) through communicative usage. We explore whether the evolution of the system is symmetrical and ask: Do form innovations affect the evolution of meanings in the same way that meaning innovations affect the evolution of forms?



Figure 1. Two snapshots of the director's (a) and matcher's (b) ipads during the communicative task

We use a novel experimental semiotic task in which a pair of participants play a communicative task. In each game, the director is given a target drawing and he has to type its description for the matcher (Fig. 1a). The description can be written in English, but has a limit of 16 characters and includes only lower-case letters and spaces. The

matcher tries to guess the target from an array of drawings, and then produces a copy of the target drawing to let the director know which of the array drawings she has chosen (Fig. 1b). Finally, the director has to guess from the matcher's drawing which of the array drawings she understood. For each correct guess, the pair scores 5 points. Additionally, If both guesses are correct, indicating common ground about label and drawing has been established, the drawing is added to the world, and can appear in the context or as a target in future games.



#### Figure 2

The result for each pair is a tree of signals and meanings (Fig. 2) where each drawing produced has a description and descends from a parent --the target in the game where it was produced. We coded three such trees with 120 drawings each, to identify meaningful features in descriptions and in drawings. E.g. in Fig. 2, 'loops' in the description and circles in the drawing are associated features. If forms and meanings affect each other in a symmetrical fashion, we should expect similar levels of (a) changes in drawing features following related changes in description features and (b) changes in the description features following related changes in the drawing features. We find, however, that changes in the system originate in drawings while descriptions tend to follow. We discuss the impact of the discrete/continuous difference between typed words and drawings, and the nature of the communicative task.





[representation] Tuesday, 14:30-15:00, room 201 Marcin **Trybulec**, marcin.trybulec[at]umcs.lublin.pl Maria Curie-Sklodowska University in Lublin, Poland

# Ethnography of external representations reconsidered

The aim of the presentation is to reflect upon the notion of external representation (ExR) used by David Kirsh in "Thinking with External representations" (2010). Kirsh aptly stresses that the material dimension of representation plays crucial role in cognition, especially as it comes to sharing the same content, rearranging ideas, re-describing problems to be solved, and constructing abstract structures. One of the possible way to analyse the notion of external representation used by Kirsh is to focus on epistemological and ontological features of external representations. For example, we can reasonably ask the question whether the idea of external representation is consistent in itself, since ExR always had to be interpreted and as such, it will consist of some internal components (Wachowski 2014). The account presented in my paper is more parsimonious. I will ask the question, whether all external representations are necessarily spatial, visual and stable? Kirsh claims that " key difference between internal and external representations (...) is their difference in stability and persistence over time" (Kirsh, 2010, p. 447). This claim seems to be dubious. The argument against it will be developed in three steps. First part justifies the claim that Kirsh analysis of external representations is based upon incomplete distinction between external and internal representations. The distinction is incomplete because it ignores the fact that not every external representation is spatially stable and persistent over time (e.g. speech acts, sign language). It will be argued that even though, Kirsh mention spoken words as an example of external representation, in fact his analysis is confined to graphical representations (e.g. maps, receipts, mathematical notation, video in choreography, models in architecture etc.). The second part is devoted to answer the question what are the threats of assuming that all external representations are persistent and stable. If we classify oral





utterances as belonging to broader class of external representations, we will be prone to ignore the specific consequences of spoken language as transient phenomena, and ascribe to it concequences typical to graphical representations (Linell, 2004). This conclusion would be unjustified in the light of anthropology of communication (Finnegan, 1988) and psychology of reading (Homer, 2009; Olson, 2013). Even though ethnography of external representation pays special attention to material dimension of external representations, it left no space for transient representations which are both material and external. Third part of the presentation justifies the claim that more fine grained classification of external representation is needed. In order to do so I will use classification based on classical typology of signs in semiotics (Heersmink, 2013).

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#### References

Finnegan, R. H. (1988). *Literacy and Orality: Studies in the Technology of Communication*. Oxford: Blackwell Pub.

Heersmink, R. (2013). A Taxonomy of Cognitive Artifacts: Function, Information, and Categories. *Review of Philosophy and Psychology*, 4(3), 465–481.

Homer, B. D. (2009). Literacy and metalinguistic development. In D. R. Olson & N. Torrance (Eds.), *The Cambridge Handbook of Literacy* (pp. 487–500). Cambridge [etc.]: Cambridge University Press.

Kirsh, D. (2010). Thinking with external representations. *AI & SOCIETY*, *25*(4), 441–454.

Linell, P. (2004). *The Written Language Bias in Linguistics: Its Nature, Origins and Transformations*. London, New York: Routledge.

Olson, D. R. (2013). Writing, the discovery of language, and the discovery of mind. *Dialogue and Universalism*, 23(1), 9–14.





[experimental] Tuesday, 11:30-12:00, room 4 Kristian **Tylén**, kristian[at]cc.au.dk Svend **Østergaard**, semsvend[at]dac.au.dk Aarhus University, Denmark

## The social route to abstraction

Abstraction lies at the heart of human cognition, categorization and semiosis. We are sensitive to regularities even when these concern higherorder complex relations, and readily infer rules from complex sensory stimulus (Gómez, 2002). Most theories of abstraction and complex rule formation - often implicitly - take the individual as a starting point: as individuals successively encounter varied tokens that share relations among their features, they generalize these as belonging to the same type (Medin & Smith, 1984). However, it has also been suggested that abstraction might be related to human-specific modes of social behavior and shared attention (Tomasello, 1999). The combination and integration of perspectives from two or more individuals already in the outset accommodates larger degrees of variability due to individual differences in experience, knowledge and cognitive style (Page, 2008). This is likely to make groups converge on representations that are more abstract (Schwartz, 1995).

In this paper we present two experiments that compare the performance and behavior of individuals and groups in problem solving tasks affording cognitive processes of abstraction. Our results suggest that the probability of reaching more abstract and superior solutions is highest in groups of individuals and evidence is presented that this effect is contingent upon the extent to which groups display aspects of cognitive diversity and complementarity.

#### References

Gómez, R. L. (2002). Variability and detection of invariant structure. *Psychol Sci*, *13*(5), 431-436.





Medin, D. L., & Smith, E. E. (1984). Concepts and concept formation. Annu Rev Psychol, 35(1), 113-138.

Page, S. E. (2008). *The difference: How the power of diversity creates better groups, firms, schools, and societies*: Princeton University Press. Schwartz, D. L. (1995). The emergence of abstract representations in dyad problem solving. *The Journal of the Learning Sciences, 4*(3), 321-354. Tomasello, M. (1999). *The Cultural Origins of Human Cognition*. Cambridge, Mass.: Harvard University Press.

[conceptualization] Tuesday, 12:00-12:30, room 101 Valentyna **Ushchyna,** uval[at]ukr.net Lesya Ukrainka Eastern European National University, Lutsk, Ukraine

# Situated conceptualization of risk: Towards a socio-cognitive semiotics of stancetaking in risk discourse situation

This study concerns the socio-cognitive dynamics of interactive processes of stancetaking in the discourse situations of risk. Discursive construction of stances in the risk discourse situation involves personal risk perception and conceptualization as well as interpersonal communication of risks. Therefore, stancetaking on risk is seen here as an intricate and dynamic phenomenon that links both individually cognitive and commonly shared social processes of sense-making.

Language, as a prime means to stimulate and manage the building of situated conceptualizations for understanding different cultural and social environments, serves the main source through which "people are categorizing their experience of the world" (Taylor 2003, p. xii). Linguistic cues work as the most important reference points for meaning construction. They transform cognitive processing from an individually to a socially-distributed activity, and thus, motivate researchers to promote the ecological view of discourse production as a socio-semiotic practice.





The objective of this study is to find out what linguistic means and cognitive mechanisms are used by the speech participants to conceptualize the discourse situation as a situation of risk and analyze the ways the stances on one and the same problem (e.g., the risk of war, the risk of economic problems or the risk of political crisis) are taken by different discourse participants under different communicative conditions.

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The theoretical framework for the study synthesizes sociocognitive approaches to discourse analysis (van Dijk 2008; Kesckes 2012, Wodak 2006), which form an interface of mind, discourse interaction and society. In other words, the use of socio-cognitive approach allows looking into the ways in which individual cognitive processes are related to the structures of discourse, verbal interaction, communicative events and social semiotics of situated discourse. FrameNet, based on a theory of meaning called Frame Semantics, deriving from the work of Fillmore *et al.* (2003), offered its version of the RISK situation model. This model served as a conceptual foundation for the analysis of stance, framed by the situational context of RISK.

Risks are seen as both real and constructed: risk thinking is a way of intending to control one's life and the world in general. We often make necessary choices in different situations of life applying mental models and common sense knowledge, which guide our decision-making. "Risk society" (Beck 1996) becomes a discursive stage where risk thinking produces even more real risks. People become the risk subjects facing a necessity of risky decisions on a regular basis.

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[language&vincinities] Monday, 14:30-15:00, room 101 Anu **Vastenius**, anu.vastenius@semiotik.lu.se Jordan **Zlatev**, jordan.zlatev@semiotik.lu.se Joost **Van de Weijer**, joost.van\_de\_weijer@ling.lu.se Lund University, Sweden

# Constituent order in pictorial representations of events is influenced by language

The origin of word order in human language has been addressed in recent years in empirical research, and in some studies SOV has been found to be the most basic or default order. Goldin-Meadow et al. (2008) conducted a study to test how speakers of languages with different word orders represent events with pictures and gestures. The results showed that the participants predominantly used the order Actor-Patient-Act (ArPA) in their nonverbal representations, irrespective of their native language. Based on this, Goldin-Meadow et al. (2008: 9167) concluded: "there appears to be a natural order that humans, regardless of the language they speak, use when asked to represent events non-verbally".

Later on, other studies have thrown doubt on the universality of such a "natural order" (e.g. Schouwstra & de Swart, 2014). To investigate this issue, we replicated the experiment by Goldin-Meadow et al. using a slightly modified design. In the replication, no gestures were used, as they are intrinsically more related to language than pictures (Kendon, 2004), and therefore possibly more easily influenced by the native-language word order. Furthermore, contrary to the original study, the pictures were printed on separate, non-transparent cards, which needed to be placed in a particular order so as to produce a representation of the event. In the original study, the pictures were printed on transparencies, which always resulted in the same final product regardless of the order in which they were placed. Consequently, no consistent strategy of ordering was required. In our study, participants performed the task on a transversal plane with a sagittal directionality (from furthest to closest to them). More





specifically, the participants had to place the picture cards below one another on a 13 x 52 cm board, with the narrow side facing them. The intention was that, in this way, they would be minimally influenced by the direction of motion shown in the pictures.

Twenty-six native speakers of Kurdish (SOV) in the Kurdish region of Iraq and twenty-seven speakers of Swedish (SVO) were presented with 36 video clips showing the events. Half of each language group were asked to describe the event prior to ordering the pictures, and the other half only to order the pictures after each video.

The results showed that, unlike in the original study, the constituent order of the native-language did have an impact on the order of the pictorial representations when using this experimental design. The speakers of Swedish were less consistent in using the ArPA order than the speakers of Kurdish, and this tendency was stronger for the participants who described the events verbally before representing them pictorially. This can interpreted as a moderate version of linguistic relativity, such as Slobin's (1996) thinking-for-speaking, stating that language modulates the cognitive representations that are recruited during the process of language use. It is likely that the explicit linear order in which the pictures had to be placed was more analogous to word order, and hence was more easily influenced by it, than in previous designs.

#### References

Goldin-Meadow, Susan, Mylander, Carolyn, So, Wing Chee, and Özyürek, Asli (2008) The natural order of events: How speakers of different languages represent events nonverbally. *PNAS*, 105: 9163-9168.

Kendon, Adam (2004) *Gesture: Visible action as utterance*. Cambridge: Cambridge University Press

Schouwstra, Marieke., de Swart, Henriëtte (2014) The semantic origins of word order. *Cognition 131*: 431–436.

Slobin, Dan I. (1996) From "thought and language" to "thinking for speaking". In J.J.Gumperz & S.C Levinson (Eds.) *Rethinking linguistic relativity* (p.70-96). Cambridge: Cambridge University Press.





[semiotics] Wednesday, 10:30-11:00, Aula Tommi **Vehkavaara,** tommi.vehkavaara[at]uta.fi University of Tampere, Finland

# Making semiotic concepts for cognitive semiotics – many rather than one concept of sign

Cognitive semiotics (CS) has been characterized "as an interdisciplinary matrix of (subparts of) disciplines and methods, focused on the multifaceted phenomenon of *meaning*" (Zlatev 2012). One of the many difficulties of this challenging project is the integration of conceptual and empirical studies. Often in empirical studies, the used semiotic concepts (e.g. meaning or sign) are referred only in some vague intuitive senses. Theoretical studies, in turn, easily stuck into debates between competing abstract definitions without any criteria specific enough which would control their applicability (Sonesson 2008 and Zlatev 2009). In order to apply abstract semiotic concepts controlledly in concrete empirical data, we need to make the used semiotic concepts clear.

Another difficulty is inherited from the initial idea of CS which was to integrate cognitive sciences and the humanities, "with the ultimate aim of providing new insights into the realm of human signification" (Zlatev 2012). Now as this has been further extended to cover also non-human signification, we may ask whether the study of non-human signification and its theoretical concepts should somehow be subordinate to the study of human cognition or rather be considered *per se*, independently on its implications to human signification. If those forms of cognition that are shared by humans and non-human agents without language faculty, there is a risk that the choices and definitions of the preferred theoretical concepts of CS are ill-advisably linguistically or humanistically biased (especially because many of the leading cognitive semioticians are linguists or have got their basic education in linguistics).

One way to proceed in both of these problems is to look beyond the mere abstract definitions of our concepts to the *perceptions* or *intuitions*, from





which the defined concepts of sign and meaning are derived, how these *derivations* are executed, and what kind of "essential features" they are supposed to preserve. For help of this meta-semiotical question, I will recall C.S. Peirce's notion of concept formation: all the elements of concepts are originated by perception/intuition:

"The elements of every concept enter into logical thought at the gate of perception and make their exit at the gate of purposive action;" (EP 2:241, CP 5.212, 1903)

In this formulation of Pragmatism (that it is!), the meaning of an (intellectual) concept can be found by considering the possible "exit gate", but the content is inherited from the perceptual/intuitive origin. The role of origin is not to justify or warrant the abstracted concept or its possible applications – quite the contrary – there is no guarantee that the abstracted concept will after all be applicable to describe the common sense prototype from which it was derived. Origin does not in principle limit its applicability to completely different kind of phenomena either. But the inspection of the intuitive origin and the derivation of the concept may teach us what kind of concept it is, what kind of hidden structure it has, i.e. what kind of implicit elements, relations, etc. its derivation requires and which are not abstracted away.

As there are several concepts of sign that have been applied in CS, they can be compared with respect to their derivation. Happily, three concepts of sign have clear and explicit derivations: Peirce's logical sign, Saussure's structural-linguistic sign, and Sonesson's phenomenologically derived concept of sign. All of them can be found collaterally useful concepts for CS, but having their own restrictions due to their origins.

Peirce's concept of sign was derived as a mean for *representative cognition* familiar to us in scientific or rational *inquiry*, and the initial problem is how a rational inquirer interprets his/her (surprising) observations or perceptions (sign) in order to compose a truthful conception (interpretant, "Dicisign" of Stjernfelt 2014) about their real conditions (object). Although many Peircean semioticians, especially biosemioticians (like Stjernfelt), feel justified to abstract this concept further and apply it even to the metabolic





processes of the most simple forms of life, the look to Peirce's derivations of his logical sign shows that the basic triadic structure of sign is dependent on interpreter's conscious interest on truth – a faculty that bacteria (and often also humans) certainly lack. This does not mean that Peirce's concept would be completely inapplicable in biosemiotics, only that the constitutional requirements of the sign relation should be fulfilled in its application.

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Saussure's prototype of sign, in turn, was meant to be a vehicle of (linguistic) *communication* of mental ideas and its derivation led to the abstracted concept lacking the referential content. Although Sonesson's derivation of his concept of sign is more phenomenological than structuralistic, his starting point intuition seems to be not very far from Saussure's one – sign consists minimally of the union of expression and content). But Sonesson's derivation starts from the core phenomenon of CS, *perception* (and not from communication) resulting a hierarchy of "meanings" of which only the highest one deserves to be called as sign. The vague idea of linguistic sign and meaning seems nevertheless to constrain the derivation to some extent, which is not problematic *per se* unless it is claimed that such concept of sign is somehow privileged in CS (or the only "true" concept of sign).

Besides these three intuitive origins, rational inquiry, communication of ideas, and meaningful perception, there is still (at least) one possible starting point. I have suggested (Vehkavaara 2006) that certain applications require differently derived concept of sign starting from the idea of *intentional action*. Any action that is more directed than blind compulsive reactions requires some kind of anticipation of the result of a planned action. Such anticipation can be thought to be an internal sign by which the actor uses as a mean to guide or constrain the results of action. The resulting *practical* or *constructive* concept of sign is a normative and dynamic sign but its triadic structure is different than the one of Peirce's concept. When the empirical studies are made in CS, we should seriously consider which one(s) of these types of concepts (or perhaps some fifth one) are the best to model the studied cognitive phenomena.





#### References

Brandt, Per Aage (2004) *Spaces, Domains and Meanings. Essays in Cognitive Semiotics.* Bern:

Peter Lang.

Deacon, T. W. (1997). The symbolic species: the Co-evolution of language and the brain. New York: W.W. Norton.

El-Hani Charbel, João Queiroz, Claus Emmeche 2009. *Genes, information, and semiosis*. Tartu: Tartu University Press.

Kull, K. (2009). Vegetative, animal, and cultural semiosis: the semiotic threshold zones. *Cognitive Semiotics* 4/2009: 8–27.

Peirce Charles S. (CP): Collected papers of C. S. Peirce.

Peirce Charles S. (EP): Essential Peirce.

Saussure, Ferdinand de 1916. *Course in General Linguistics*. (Transl. Roy Harris, 1983). Chicago & La Salle (III.): Open Court 1997

Stjernfelt Frederik (2007): Diagrammatology. Springer.

Stjernfelt Frederik (2014): Natural Propositions. Docent Press.

Sonesson Göran (2008): From the meaning of embodiment to the embodiment of meaning: A study in phenomenological semiotics. In Ziemke, Zlatev, Frank (eds.): *Cognitive Linguistics Research, 35.1: Body, Language, and Mind, Volume 1: Embodiement.* Mouton de Gruyter: 85-127.

Sonesson Göran (2012): The Foundation of Cognitive Semiotics in the Phenomenology of Signs and Meanings. *Intellecta* **58**(2)/2012: 207-239. Vehkavaara Tommi (2002): Why and how to naturalize semiotic concepts for biosemiotics. *Sign Systems Studies* **30**(1)/2002: 293-313.

Vehkavaara Tommi (2006): Limitations on applying Peircean semeiotic. Biosemiotics as applied objective ethics and esthetics rather than semeiotic. *Journal of Biosemiotics* 1(2)/2006: 269-308.

Zlatev Jordan (2009): The Semiotic Hierarchy: Life, consciousness, signs and language. *Cognitive Semiotics* 4/2009: 169-200.

Zlatev Jordan (2012): Cognitive Semiotics: An emerging field for the transdisciplinary study of meaning. *Public Journal of Semiotics* IV(1)/2012: 2-24.





[intersubjectivity] Monday, 10:45-11:15, Aula Elżbieta **Wąsik**, wasik[at]wa.amu.edu.pl Adam Mickiewicz University in Poznań, Poland

# Exposing the dialogical nature of the linguistic self in interpersonal and intersubjective relationships from the first-person, secondperson and third-person perspective

The subject matter of this paper comprises the linguistic properties of the human self whose dialogical nature results from the fact that it takes an active part as a member of a society in observable interpersonal and assumable intersubjective relationships. Alluding to the notion of selfhood, borrowed from philosophy and psychology, the paper departs from the view about the two existence modes of communicating individuals: (1) the self as a subjective knower, or the "I", and (2) the self as an object that is known, or the "Me". Accordingly, it points out to consequences resulting, for researchers of language communication, from the distinction between: (1) a mental subject, i.e., the "I" as an internally conceivable experiencing agent who formulates and interprets its thoughts in sign patterns, and (2) a physical person, i.e., the "Me" as an externally observable object of experience who sends and receives its messages through sign-processing activities. In this context, particular attention is payed to the diversity of the linguistic properties of human selves who are able to speak different languages and their varieties as the basic means of signification and communication. This statement entitles the author of the following paper to propose the concept of the linguistic self being accessible as an object of potential investigations on the basis of significative-communicative acts performed in different domains of its everyday life. In particular, the mental significative-cognitive processes of humans and their manifestations in social and cultural practices should be exposed while resorting to knowledge coming from cognitive sciences and semiotic phenomenology. Special emphasis deserves here a holistic approach to human cognition for which not only human mind is responsible but the whole body of a cognizing





subject as a biological organism and psychical being. Finally, in reference to the dialogical structure of human consciousness, emerging and developing thanks to social interactions, this paper expounds on the ways and possibilities of understanding and interpreting verbal utterances of communicating selves engaged in the roles of experiencers, interlocutors, observers and narrators. What they mean is in fact not contained in words but rather determined by the distance between them as communication participants who talk otherwise about themselves, about those with whom they communicate and about those about whom they communicate. It is their intentions which are attached to their utterances when they act according to their feelings and emotions, beliefs, attitudes, needs, and values in specific situational and social contexts.

[philosophy&cognition] Wednesday, 11:30-12:00, room 101 Zdzisław **Wąsik,** zdzis.wasik[at]gmail.com Philological School of Higher Education in Wrocław, Poland

## Epistemology as a semiotic cartography of human cognition

This paper will depart from the famous *dictum*: "The map is not the territory" expressed by Alfred Korzybski in *Science and Sanity* (1933))—on the basis of Ernst Mach's *Beiträge zur Analyse der Empfindungen* (1886) and Richard Avenarius' *Kritik der reinen Erfahrung* (1888)— known thanks to Gregory Bateson's anthology *Steps to an Ecology of Mind* (1972) and subsequently his book *Mind and Nature* (1979) in a human-centered epistemology as the science of the ways of acquiring knowledge about reality by cognizing organisms as (non)human selves. With reference to the modelling abilities of animals and humans in their extraorganismic perception and intraorganismic apprehension of reality, the author will ponder the approaches of Jakob von Uexküll, *Umwelt und Innenwelt der Tiere* (1921/1909/), Ernst Cassirer, *An Essay on Man* (1944), Juri Lotman, "The place of art among other modelling systems", ([2011[1967], and





Thomas A. Sebeok, "In what sense is language a 'primary modelling system'?" (1988). The point of arrival for the sake of a detailed presentation will constitute a metascientific understanding of epistemology specified as a set of investigative perspectives by Zdzisław Wasik in his Epistemological Perspectives on Linguistic Semiotics (2003) and Lectures on the Epistemology of Semiotics (2014). In detaching investigative "perspectives" of cognizing subjects from cognized "properties" of investigated objects, epistemology is seen there as a branch of the philosophy of science studying the nature of human knowledge principally accumulated in the body of theories and praxis which result from research activities of scientists who address respective questions connected with the ontological and gnoseological status of scientific objects and the methodology of scientific fields in particular. The examination of the epistemological positions, represented by a given discipline, is based on the conviction that the choice of a given investigative approach stipulates a scientist's outlook upon the nature of his/her investigated object. In consequence, this outlook usually coincides with the choice of conceptual and operational investigative tools providing thus a basis for the formulation of investigative postulates. Bearing in mind the co-occurrence of different approaches to the object of scientific study and to the investigative domain of a scientific field, and concentrating on consequences resultant from a specific epistemological position assumed by a subject of science in accordance with a chosen investigative goal, the aim of epistemology is therefore seen in answering how far the commitments of scientists to their attendant views on their object of study correspond to its investigative approachability.

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[Peircean] Monday, 15:30-16:00, room 201 Donna **West**, westsimon[at]twcny.rr.com State University of New York at Cortland, USA

### Seeing the Unseeable: Abductions as Creative Firstnesses

This inquiry investigates the influence of hallucinations upon abductive reasoning and ultimately upon truth-seeking (cf. West in press). It explores the semiosis of unbidden envisionments -- guessing right by entertaining perceptual judgments arising from uncontrolled hunches in Firstness. Wellfounded guesses in Firstness surface spontaneously, sometimes from other, more foundational Firstnesses, and sometimes from brute force real-world impositions in Secondness. In either case, Peirce's contention that foundational inferences (abductions) derive from "judicative perception" (5.186: 1903) validates the influence of idiosyncratic, created judgments upon hypothesis-making, and ultimately upon the process of truth-seeking. The pervasive hold of different kinds of Firstnesses (hallucinations, fantasies, and dreams) upon individual emotive profiles and action habits will be showcased. Accordingly, Peirce's three kinds of hallucination (EP2: 192 1903) will be outlined (obsessional, social, creative); and the myriad ways in which inferences emerge from unforeseen inner sources to play out as active strategies will be addressed. In fact, Peirce's pragmatic account emphasizing that signs are ultimately grounded in experience, however empirical, is obviously not insulated from seeds germinated in the Firstness of the guessing instinct. Peirce's creative kind of hallucinations (not grounded in delusion or fear) giving rise to novel action habits can defy mere convention, by growing up in episodes of bodily mimesis. The promise of Peirce's third kind of hallucination (creative) will be distinguished as a forum for birthing fictional objects/concepts (versus imaginary ones), rather than encroachment of faulty reasoning – a comparison which Gibson (1979: 261) clearly articulates. For Gibson, "fiction" enhances information pickup, and does not "automatically lead one astray," akin to Peirce's creative hallucination.





These created judicative perceptions give rise to perceptual judgments which qualify as "extreme abductive inferences" (5.180-212: 1903) – illustrating that the playing-field for the emergence of good guesses may best be just this kind of hallucination, because it is by way of spontaneous but uncontrolled judgments that idiosyncratic fictions have the best chance for implementation. Peirce is adamant that dreams and imaginings inhabit our very action habits: "Day dreams are often spoken of as mere idleness...but for the remarkable fact that they go to form habits...by virtue of which we really behave in the manner we had dreamed of doing" (6.286: 1893). In fact, it is in children's play that dreams often inscribe themselves upon localized canvases of Secondness, when freedom to prescind (to narrowly focus upon pregnant possibilities) can supersede mere conventions in Thirdness.

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#### References

Gibson, J. (1979). *The Ecological Approach to Visual Perception*. Hillsdale, NJ: Lawrence Erlbaum Associates.

Peirce, C.S. (i. 1866 – 1913). The Collected Papers of Charles Sanders Peirce, Vols. I – VI eds. Charles Hartshorne and Paul Weiss (Cambridge, Massachusetts: Harvard University Press 1931 – 1935), Vols. VII – VIII ed. Arthur Burks (Same publisher, 1958).
Peirce, C.S. (i. 1866 – 1913). The Essential Peirce: Selected Philosophical Writings. Vol. 1, N. Houser & C. Kloesel (Eds.); Vol. 2, Peirce Edition Project, (eds.). Bloomington: University of Indiana Press, 1992-1998.

West, D. (In press). Toward the final interpretant in children's pretense scenarios. In J. Pelkey, Ed. *Semotics 2015.* 





[Peircean] Monday, 16:00-16:30, room 201 Jack J. **Wilson**, mljjw[at]leeds.ac.uk The University of Leeds, United Kingdom Hannah **Little**, hannah[at]ai.vub.ac.be Vrije Universiteit Brussel, Belgium

# A Neo-Peircean Framework for Experimental Semiotics

In experimental semiotics, how signs are characterised is a primary concern. Some new terminology is surfacing to deal with the nuanced nature of iconicity (e.g. absolute and relative iconicity, Monaghan et al., 2014). However, existing Peircean terminology that provides a more nuanced framework is currently underrepresented in the literature.

Much of the experimental semiotics literature (see Galantucci and Garrod, 2010, for a review) focusses on the relationship between sign and object (symbol, index and icon), taking the focus away from communication (Short, 2007). We reintroduce two types of Peircean sign, *sinsigns*, (single instances of a sign tied to a context of use), and *legisigns* (conventions) (Peirce, 1955). Sinsigns may be tied to legisigns as *replicas*, or be one off signs. These terms can further be combined with the notions of symbol, index and icon.

Garrod et al. (2007) argued that icons evolve into symbols via interaction. In their pictionary task, participants started by producing iconic sinsigns, but in Peircean terms, signs retained iconicity after interaction but became legisigns. The establishment of legisigns may initially have no effect on the production of iconic sinsigns. However, as a legisign becomes increasingly significant, a sinsign might lose iconicity, without its iconicity necessarily disappearing entirely.

In Little et al. (2016), participants used a continuous signalling space (pitch) to describe a continuous meaning space (size). The paper argued that mappings between continuous spaces were iconic strategies (e.g. participants making high-pitched signals for small referents). However, in Peircean terms, size-pitch mappings could occur for different reasons. It could be because small things typically make high noises (making the sign





an iconic sinsign), or it could be an iconic legisign, established by convention via the aforementioned relationship, or it could be an symbolic legisign if there is no reason for high noises to be related to small referents.

In experimental semiotics, there is also a trend to measure iconicity by getting naive participants to pair signs with their intended meanings (Garrod et al., 2007; Perlman et al., 2015). However, methods such as these can only separate iconic sinsigns from other types of sign.

With this contribution, we aim to argue that Peirce established an underused nuanced framework that we can use to understand new results in experimental semiotics. Using a neo-Peircean framework, we will review the examples above, as well as others from the current literature.

#### References

- Galantucci, B., & Garrod, S. (2010). Experimental semiotics: a new approach for studying the emergence and the evolution of human communication. *Interaction Studies: Social Behaviour and Communication in Biological and Artificial Systems.*
- Garrod, S., Fay, N., Lee, J., Oberlander, J., and MacLeod, T. (2007). Foundations of representation: where might graphical symbol systems come from? *Cognitive Science 31, 961–987*.
- Little, H., Eryilmaz, K., & de Boer, B. (2015). Linguistic Modality Affects the Creation of Structure and Iconicity in Signals. In D. C. Noelle, R. Dale, A. S. Warlaumont, J. Yoshimi, T. Matlock, C. D. Jennings, & P. P. Maglio (Eds.), *Proceedings of the 37th Annual Conference of the Cognitive Science Society* (pp. 1392-1398). Austin, TX: Cognitive Science Society.
- Monaghan, P., Shillcock, R. C., Christiansen, M. H., & Kirby, S. (2014). How arbitrary is language?. Philosophical Transactions of the Royal Society B: Biological Sciences, 369(1651)
- Perlman, M., Dale, R., & Lupyan, G. (2015). Iconicity can ground the creation of vocal symbols. *Royal Society Open Science*, 2: 150152.
- Peirce, C. S. (1955). *Philosophical Writings of Peirce*, Justus Buchler (ed.). New York: Dover Publications





Short, T. L. (2007). *Peirce's Theory of Signs*. New York: Cambridge University Press

[conceptualization] Tuesday, 15:00-15:30, room 101 Paul **Wilson**, p.wilson[at]psychology.bbk.ac.uk University of Lodz, Poland Barbara **Lewandowska-Tomaszczyk**, blt[at]uni.lodz.pl State University of Applied Sciences in Konin, Poland

# Compassion and Sympathy in British English and Polish: A Cultural Linguistic Perspective

The focus of our cross-cultural investigation is to compare conceptualisations of compassion and sympathy *emotion clusters* in British English and Polish.

Meaning clusters involve senses that are usually only partially overlapping. Some of our thinking tends to be more *effable*, i.e., possible to express in a language, while a large part of it remains more felt than expressed, more imagined than put in words. Katz's *Principle of Effability* (1978), proposing that every thinkable thought in natural language can be encoded and expressed by a sense of some sentence in language, does not stand up to criticism pronounced by semioticians, philosophers and linguists. Thus, what is communicated verbally is not in one-to-one correspondence with our thinking and feelings. (Lewandowska-Tomaszczyk 2012). Ontological categories expressed verbally in one language are left non-verbalized in another. Thus they are only partially, i.e., *approximately*, aligned to similar, albeit not identical concepts in another language (Lewandowska-Tomaszczyk 2012) and that is why users refer to them in terms of clusters of meanings rather than by a single form.

Three methodologies were employed to compare pride in British English and Polish. The GRID instrument (e.g., Fontaine et al. 2013) employs a system of dimensions and components, which bring about insight into the





nature of emotion prototypical structures. The cognitive corpus linguistics approach provides information on the metaphoric uses of the terms and frequencies and distributional patterns of relevant linguistic patterns. In the online sorting methodology graphical representations of emotion clusters were created on the basis of the frequency of co-occurrence of each emotion with the other emotions in the categories that were formed by the participants.

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The results show that *compassion* is characterised more positively than its Polish counterpart, *współczucie*, which is consistent with the relatively more individualistic conceptualisation of *compassion* that is more likely to have a self-focus on the help that one might offer a suffering individual vis-à-vis the relatively more collectivistic conceptualisation of *współczucie* that possibly has a more outward focus on the suffering of an individual in need of help. Other results showing the greater association between *współczucie* and *wstyd* (shame) suggests that *compassion* and *współczucie* might also differ conceptually in terms of compassion type, with the former possibly being characterised by *genuine* compassion and the latter by *submissive* compassion.

Further results show that *sympathy* has a more central location in its cluster structure than its Polish equivalent, *sympatia*. Additionally, it was found that *sympatia*, polysemous in Polish between the senses of compassion and fondness/liking, has a relatively more positive valence than *sympathy*.

#### References

Fontaine JRJ, Scherer KR, Soriano C. (2013). Components of emotional meaning: a sourcebook. Oxford: OUP.Katz, J., (1978) Effability and Translation. In: *Meaning and Translation: Philosophical and Linguistic Approaches*, ed. F. Guenthner and M. Guenthner-Reutter. New York: NYU Press, 191-234.

Lewandowska-Tomaszczyk B. (2012). Approximative spaces and the tolerance

threshold in communication. *International Journal of Cognitive Linguistics* vol.2, no2. Nova Science.





[embodiment&situatedness] Tuesday, 14:00-14:30, Aula Jordan **Zlatev**, jordan.zlatev[at]semiotik.lu.se Lund University, Sweden

# **Embodied Intersubjectivity and Cognitive Linguistics**

Is linguistic meaning grounded in bodily experiences or social-cultural practices? Traditionally, there has been a tension between those who have argued for (the primacy of) one or the other. Even in attempts to resolve this tension "dialectically" (Zlatev, 1997), embodiment and situatedness were opposed to one another. In cognitive linguistics, the emphasis has usually been on the body, as a physical (biological, neural) phenomenon (Lakoff & Johnson, 1999). More recently, there has been a growing "social turn" in the field (Verhagen, 2005). However, this gives little attention to the lived and living body.

First, I argue that embodiment and intersubjectivity should not be juxtaposed, especially if their understanding and interrelation is informed by phenomenology (Zlatev, 2010). In fact, Merleau-Ponty (1962) combined the two concepts in a single expression, coining the term *intercorporéité* translated as intercorporeality or *embodied intersubjectivity*. This emphasizes the central role of the sentient and active human body for relating to others and jointly constituting a shared meaningful world.

Second, I show the relevance of bodily intersubjectivity for central concepts in cognitive linguistics such as (image) schemas (Zlatev, 2007), (conceptual) metaphors (Zlatev, Blomberg, & Magnusson, 2012), and construal (Möttonen, 2016). At the same time, this casts new light on these phenomena, and suggests rather different analyses from the traditional ones in terms of cross-domain mappings and mental simulation.

#### References

Lakoff, G., & Johnson, M. (1999). *Philosophy in the flesh: The embodied mind and its challenge to western thought*. New York: Basic books.





Möttonen, T. (2016). *Construal in expression: Intersubjective approach to cognitive grammar*. Helsinki: University of Helsinki.

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- Verhagen, A. (2005). Constructions of intersubjectivity: Discourse, syntax, and cognition. Oxford: Oxford University Press
- Zlatev, J. (1997). Situated embodiment : studies in the emergence of spatial meaning: Stockholm: Gotab.
- Zlatev, J. (2007). Intersubjectivity, mimetic schemas and the emergence of language. *Intellectica, 46,* 123-152.
- Zlatev, J. (2010). Phenomenology and cognitive linguistics. In S. Gallagher
   & D. Schmicking (Eds.), Handbook of phenomenology and cognitive science (pp. 415-443): Springer.
- Zlatev, J., Blomberg, J., & Magnusson, U. (2012). Metaphors and subjective experience: motion-emotion metaphors in English, Swedish,
   Bulgarian and Thai. *Moving Ourselves, Moving Others: Motion and emotion in consiousness, intersubjectivity and language*, 423-450.

[blending] Wednesday, 12:00-12:30, room 4 Konrad **Żyśko,** konradzysko[at]gmail.com Maria Curie-Sklodowska University in Lublin, Poland

# Can conceptual blending reconcile two opposing parties? A construction of semiotic expressions as blends during Marsz Wolności i Solidarności and protests of Komitet Obrony Demokracji in Poland.

The aim of this presentation is a semiotic analysis of creative signs used by the participants of Marsz Wolności i Solidarności (the March of Freedom and Solidarity) and the supporters of Komitet Obrony Demokracji (Committee for the Defence of Democracy) during two public demonstrations in Poland, held on the 13<sup>th</sup> and 19<sup>th</sup> of December 2015, respectively. We assume the notion of creativity after Tokarski (2013), which should be understood as "an attempt made at presenting a non-





standard worldview and introducing alterations in the existing system of values". We also claim that it is conceptual blending (Fauconnier and Turner, 1996) that is capable of synthesizing known concepts with the new ones, and consequently helping to account for meaning emerging dynamically from such a creative use of signs. We argue, after Brandt and Brandt (2002), that the construction of semiotic expressions as blends is dependent on communication contexts and is determined by the specific communicative goals.

#### References

Tokarski, Ryszard. Światy za słowami: wykłady z semantyki leksykalnej. Lublin: Wydawnictwo UMCS, 2013.

Fauconnier, Gilles and Mark Turner. "Blending as a central process of grammar". In *Conceptual Structure, Discourse and Language*, edited by A. Goldberg. Stanford: Center for the study of Language and Information, 1996.

Brandt, L., and Brandt, P. A. 2002. Making Sense of a blend. *Apparatur* 4:62-71.

[lang evo] Monday, 15:00-15:30, Aula Przemysław **Żywiczyński**, przemek[at]umk.pl Sławomir **Wacewicz**, wacewicz[at]umk.pl Nicolaus Copernicus University in Toruń, Poland

## Pantomime in language origins

In current language evolution research, the importance of pantomime is revived in two highly influential accounts of language origins: by Michael Arbib (2005, 2012) and by Michael Tomasello (2008). However, despite the popularity of their proposals, the concept of the pantomimic stage is often considered a weak point in their scenarios (e.g. Tallerman 2007). Arbib describes pantomime mostly in intuitive terms and mainly from a





neuroscience perspective, while Tomasello proposes pantomime and pointing to be the two types of communication bootstrapping the emerging language faculty but focuses on the latter, and does not go on to flesh out the pantomimic component of his conception with empirical evidence.

The underlying problem of those and similar pantomimic accounts is that the notion of pantomime has not so far been analysed in much theoretical and empirical detail. Across the language evolution disciplines, research into pantomime remains relatively limited and fragmented, with disparate findings not integrated into a more comprehensive framework. In this paper, we lay foundations for a coherent account of this topic, working from a broad understanding of pantomime, informed by Merlin Donald's (1991, 2001) and Jordan Zlatev's (2008) concept of bodily mimetic communication – volitional and holistic (but non-conventional) communication of complex messages, with or without nonlinguistic vocalisation. From this vantage point, we carry out further definitional work, consulting a wide spectrum of research positions, such as literary theory (Broadbent 1901, Callery 2001, Lust 2002) and narratology (Labov & Waletzky 1976, Genette 1980, Herman 2007), gesture studies (Hewes 1973, McNeill 1992, McNeill in press), sign linguistics (Emmorey 2002) or neurocognitive and neurotherapeutic research (Ferguson et al. 2012, Rose 2003, Nispen et al. 2012).

Finally, we discuss the consequences of such a more refined understanding of pantomime for the evaluation of Arbib's and Tomasello's proposals. At this juncture, we also consider the question of whether the "pantomimic" proposals fit better gesture-first or multimodal hypotheses.

#### References

Arbib, M. A., 2005. "From monkey-like action recognition to human language: an evolutionary framework for neurolinguistics." Behavioral and Brain Sciences 28: 105–167.

Arbib, M. A., 2012. How the brain got language. Oxford: Oxford University Press.





Broadbent R. J., 1901. A history of pantomime. London: Simpkin, Marshall, Hamilton, Kent & co.

Callery D., 2001. Through the body. London and New York: Nick Hern Books.

Donald, M., 1991. Origins of the modern mind: Three stages in the evolution of culture and cognition. Cambridge: Harvard University Press. Donald, M., 2001. A Mind So Rare. The Evolution of Human Consciousness. New York: Norton. Emery, N.J.

Emmorey, K., 2002. Language, cognition, and the brain: Insights from sign language research. Psychology Press.

Ferguson, N. F., Evans K., Raymer, A. M., 2012. "A Comparison of Intention and Pantomime Gesture Treatment for Noun Retrieval in People With Aphasia." 41st Clinical Aphasiology Conference. American Journal of Speech-Language Pathology 21. S126–S139.

Genette, G., 1980. Narrative Discourse. An Essay in Method. New York: Cornell University Press.

Herman, D., 2007. "Introduction", in: David Herman (ed.) The Cambridge Companion to Narrative, 3-21.

Hewes, G. W., 1973. "Primate communication and the gestural origin of langauge." Current Anthropology 14.1/2, 5-24.

Labov, W., Waletzky, J., 1967. Narrative Analysis: Oral Versions of Personal Experience, in: June Helm (ed.) Essays on the Verbal and Visual Arts. Seattle: University of Washington Press.

Lust, A., 2002. "From the Greek Mimes to Marcel Marceau and Beyond: Mimes, Actors, Pierrots, and Clowns: a Chronicle of the Many Visages of Mime in the Theatre." Scarecrow Press.

McNeill, D., 1992. What Gestures Reveal About Thought. Chicago: The University of Chicago Press.

Nispen, K. van, Sandt-Koenderman, M. van de, Mol, L., Krahmer, E. J., 2012. "Specific pantomimes for specific objects: A study on the different modes of representation used in pantomime." in: Proceedings of the 5th conference of the International Society for Gesture Studies The communicative Body in Development, p.71-.





Rose, M., Douglas, J., 2003.Limb apraxia, pantomine, and lexical gesture in aphasic speakers: Preliminary findings. Aphasiology, 17(5): 453-464.

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Tallerman, M., 2007." Did our ancestors speak a holistic protolanguage?" Lingua117: 579–604.

Tomasello, M., 2008. Origins of Human Communication. MIT Press. Zlatev, J., 2008. "The co-evolution of intersubjectivity and bodily mimesis." in: J. Zlatev, T. Racine, C. Sinha, E. Itkonen (red.) The Shared Mind: Perspectives on intersubjectivity. Amsterdam: John Benjamins, pp. 215-244.


# [posters]





[poster] Monday, 16:30-17:30, Hall

Katarzyna **Karska**, kakarska[at]gmail.com Medical University of Lublin, Poland Magdalena **Goguł**, magda.gogul[at]gmail.com Ministry of Home Affairs Hospital, Lublin, Poland

# Conceptual metaphors in radiology

The presence of constructional metaphor in all aspects of human life is unquestionable. Therefore a number of different metaphors such as mechanical, biomilitary, religious or artistic can be encountered also in medical context. Food, cooking and nutrition in general is a sphere of life that accompanies every human being since the day of the birth. The aim of the present poster is to show the variety of food metaphors employed in the field of radiology. Metaphors are particularly frequently exploited by radiologists in daily practice of image interpreting.

#### References

Biss, E. 2014. *Medicine and Its Metaphors*, last accessed on the 20th January 2016, available at https://www.guernicamag.com/features/medicine-and-its-metaphors/

Stephen R. Baker, Partyka, L. 2012. *Relative Importance of Metaphor in Radiology versus Other Medical Specialties*. In RadioGraphics. Vol. 32/1 *Tajer, C.,D. 2012. Thinking medicine metaphorically*. In Argentine Journal of Cardiology, Vol. 80 N<sup>o</sup> 6

Masukume, G. and Zumla, A. 2012. *Analogies and metaphors in clinical medicine. London.* 

Khullar, D. 2014. *The Trouble With Medicine's Metaphors.* The Atlantic. Vol. 8

Thomas C. 2013. *She's a real fighter! And other metaphors in medicine*. Available at <u>http://myheartsisters.org/2013/02/12/metaphors-in-medicine/</u>





Lakoff, G., Johnson, M. 2003. *Metaphors we live by.* Chicago. Sontag, S. 1988. *Aids and its metaphors.* New York. [poster] Monday, 16:30-17:30, Hall

Letícia **Vitral**, leticiaavitral[at]gmail.com João **Queiroz**, queirozj[at]gmail.com Federal University of Juiz de Fora, Brazil

#### The epistemic role of intermedial visual artworks

In opposition to the trivial notion of icon as a sign that stands for its object in a relation of similarity, we are going to describe and analyze several examples of intermedial visual artworks as iconic models whose main feature is the possibility of discovering new information about its object - this specific feature is called *operational criterion for iconicity*. We describe how the relations between semiotic resources perform an iconic epistemic role, dependent on the situated manipulation of the artwork's material and structural constraints.









# [practical information]









## Welcome to Lublin, the "City of three cultures"

**Lublin** – the capital of the Lubelskie Region – is the largest (ca. 350 000 inhabitants) and the fastest developing city on the right side of the Vistula River. It is also the largest academic centre in eastern Poland and one of the most important cultural centers in Poland.

Lublin is amulti-cultural melting pot, where western – Catholic, eastern – Orthodox and Jewish cultures co-existed and defined the unique value of the city. Now, Lublin is called "the gate to the East" due to its rich cultural, political and informal contacts with Ukraine and Belarus. Walking around the city: the Old City, the Jewish district, the castle and its vincinities you can discover the tracks of the old times and the three cultures. There is also one more place, a tragic place in the city, where people of the three cultures met in the past: the former German concentration camp in Lublin, popularly called Majdanek.

**Lublin, sightseeing**: Lublin is one of the oldest and most beautiful cities all over Poland: there are many sights (many of them came from XIV and XV century), there is one of the most beautiful and picturesque Old Towns in Poland. Being tired of sightseeing you can rest in one of Lublin's parks, in MCSU Botanical Gardens or in Lublin Village Open Air Museum. It is said that Lublin is – like Rome – located on seven hills. Having a bird's-eye view of Lublin, you would notice that these hills are very green – Lublin is a green city.





**Lublin, the city of inspiration:** Lublin was one of the finalists of the European City of Culture 2016 contest. Although Wrocław became the European Capital of Culture, the programme "Lublin – European Capital of Culture 2016 is realized under the banner "Lublin – city in dialogue 2017 . The year – 2017 – is important for Lublin. 700 years earlier, on August 15, 1317, Lublin received a city charter granted by King Władysław I the Elbow-high.

Lublin – an **academic city**: there are five Universities in Lublin: the largest – Maria Curie-Skłodowska University, the oldest – the Catholic University of Lublin, the Medical University, the Agricultural University as well as the Technical University. There are also several other higher education centres. Temporarily in Lublin live ca. 100 000 students.

More information: the city of Lublin webpage: http://www.lublin.eu/en





#### **Conference venue**

The Conference will be held at Maria Curie-Sklodowska University, Maria Curie-Sklodowska Sq 4/4a 20-031 Lublin

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in two buildings:

**Faculty of Philosophy and Sociology**: registration, plenary lectures (Aula) parallel sessions (rooms: 101, 201, 301), symposia (room 4), coffee&tea (room 3) &

# Faculty of Humanities: lunches (restaurant "Bazylia")







#### **Transportation within Lublin**

Most of the main attractions (including the Old City) and most popular hotels are located within 30-min walking distance from the University and the conference venue.







#### BUS

You can get to the university by busses no:

- 10, 26, 31 (bus stop UMCS 01 or UMCS 02)
- 3, 7, 12, 18, 20, 30, 57 (bus stop KUL 03 or KUL 02)
- 2, 4, 12, 13, 15, 44, 55, 74 (bus stop KUL 01)

details: http://mpk.lublin.pl/en/

Most popular tickets for busses and trolleybusses are valid for 30 minutes since punching them on board and cost 3,20 PLN. Tickets are available from ticket machines (with ZTM logo) in kiosks. You can buy tickets in selected buses or trolleybuses from ticket machines (just coins)

## ΤΑΧΙ

There are several taxi companies, e.g.:

- Ale Taxi, 81 5111111
- Echo Taxi, tel. 81 5240000
- Radio Taxi Lublin, 81 7441666
- Halo Taxi, 81 7433000
- Damel Taxi (recommeded by Airport), 81 5333333