

# ***STRUCTURE AND CONTEXT***

***Turku, Aug 21-22, 2006***

## ***Abstracts***

updated:  
Monday, August 21, 2006

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# *Plenaries*

## **1. Person in context: Perspectives on person marking in Finnish**

*Marja-Liisa Helasvuo, University of Turku, Finland*

In my presentation I will discuss person marking as a grammatical system in Finnish. The category of person is expressed in three coding systems in Finnish, in personal pronouns, person marking on verbs, and possessive suffixes (for more discussion, see Helasvuo & Laitinen in press). I will concentrate on the first two. Moreover, I will focus on two forms of the person system that systematically create open reference, namely the passive and the so-called zero person (a third person singular verb form without an overt subject). These forms involve personal reference but the reference is open and has to be construed in the context. Using natural data from both written and spoken genres, I will further demonstrate that not only these forms but also others (1<sup>st</sup> and 2<sup>nd</sup> person) can be used to create open reference (cf. English *you* as a speech-act person vs. the so-called “generic you”).

Comrie (1977) discusses the Finnish passive as one example of an impersonal passive (cf. also Sands & Campbell 2001). Here, the term *impersonal* is used to convey that the agent is non-specific, i.e. it has no overt expression or a specific referent. Blevins (2003) goes even further, rejecting the treatment of the Finnish passive as a passive; instead, he suggests that it should be analyzed as an impersonal as opposed to a passive construction. He bases his argument on the fact that the Finnish passive is subjectless, as no other argument takes the place of the suppressed subject. According to him, impersonal verb forms are insensitive to the argument structure of the verb. I will show, however, that the object of a passive clause in Finnish does exhibit features typical of subjects of active clauses (case marking, word order). Therefore the passive should not be analyzed as an impersonal construction. In contrast, the zero person construction fits Blevins’ criteria for impersonals much better than the passive since there are no changes in the coding of grammatical roles (case marking, agreement and word order).

I will show that speakers alternate between different forms of personal reference in accordance with the needs of the interactional or textual (micro)context. Analysis of natural discourse data shows that open and non-specific reference is tolerated well. In written discourse non-specific reference can be used as a resource for example to create textual cohesion (e.g. by using same grammatical forms whose reference is to be construed differently). In conversation, if there are any problems, speakers have the opportunity to display that they are facing problems with any aspect of the talk so far, including the choice of referential forms. Otherwise, smooth transition from one speaker to another is an indication that the open reference was sufficient. In this way speakers negotiate reference and, in essence, co-construe it.

### References

- Blevins, James P. 2003. “Passives and impersonals”. *Journal of Linguistics* 39.473–520.  
Comrie, Bernard 1977. “In defense of spontaneous demotion: The impersonal passive”.  
*Syntax and semantics* ed. by P. Cole & J. Sadock, Vol. 8, 47–58. New York:  
Academic Press.

- Helasvuo, Marja-Liisa & Lea Laitinen in press. "Person in Finnish: Paradigmatic and syntagmatic relations in interaction". *Grammar from the human perspective: case, space and person in Finnish* ed. by Marja-Liisa Helasvuo & Lyle Campbell, 173–207. CILT 277. Amsterdam & Philadelphia: John Benjamins.
- Sands, Kristina & Lyle Campbell 2001. "Non-canonical subjects and objects in Finnish." *Non-canonical marking of subjects and objects* ed. by Alexandra Y. Aikhenwald, R. M. W. Dixon & Masayuki Onishi, 251–305. Amsterdam & Philadelphia: John Benjamins.

## 2. Optimal use of context in knowledge-based machine translation

*Arvi Hurskainen, University of Helsinki, Finland*

The discussion here is based on the work of 20 years for developing Swahili Language Manager (SALAMA). Currently we are finalizing the system that translates text from Swahili to English.

In knowledge-based machine translation (MT), context plays a central role in constraining inappropriate interpretations. In morphological description, all possible grammatically correct interpretations, including all possible lexical equivalences in the target language, are given to each word-form. The morphological description is non-deterministic, i.e. it contains the correct interpretation in the given context, but also all other interpretations, which may be correct in some other context, but not in the current one. Much of the work after morphological analysis is in fact disambiguation based on context-sensitive rules.

When the aim of the MT system is to translate unrestricted text, the number of possible contexts becomes unmanageable without the possibility of using sets in writing rules. Thus, instead of referring to individual surface strings in rules we can refer to set names. A set name includes all the individual strings (words, tags, glosses etc.) defined for that set name. The morphological analysis itself produces a number of set names. For example, 'N' may be defined to stand for nouns, 'V' for verbs, and 'A' for adjectives. Because it is not feasible to define in morphology all sets needed in later processing, new sets can be defined later when need arises. Therefore, in order to optimize the size and speed of the system, sets are used whenever possible.

The context must be considered in each phase of MT. Already at the word level we have to consider whether the word is a lexeme as itself, or whether it is part in a multi-word expression (MWE). If the latter is true, we have to consider whether it is a fixed expression or whether it has inflecting members. If it is a fixed expression appearing as such in all contexts, it may be defined as a single unit already in the tokeniser, which is a pre-processor separating words from punctuation marks and diacritics. Such a fixed expression will then be listed as such in the morphological lexicon. On the other hand, if the MWE has inflecting members, such as a verb, the isolation and description of such a MWE must be done after the morphological analysis. A MWE describes one concept, and often it is glossed with one word in the target language. Therefore, the original glosses of each member of the MWE must be removed and the whole expression given a new gloss. At the same time we have to make sure that no grammatical information needed in later processing will be lost in this operation.

The choice of the correct translation depends often on the context, and sometimes also on the domain. The latter problem can be solved so that for each domain we have a separate domain-specific lexicon, which lists the correct glosses for each lexeme in that domain. Sometimes the choice is very difficult, especially if we want to choose the most elegant translation among near-synonyms. Additional semantic tagging, which can be formulated on the basis of statistical methods, such as Self Organizing Maps and Bayesian Networks, will help in this difficult task.

Because Swahili and English have a very different word order, a number of re-ordering rules are needed. Here normally the local context (= types of adjacent words) is sufficient for rule writing.

Context is important also in producing correct surface forms in the target language. A sentence, together with grammatical information, provides the context, on the basis of which the conversion rules are written. Rules, sometimes quite complicated, are also needed for controlling the presence or absence of certain words in the target language. Also here, rules are formulated as general as possible so as to maximize efficiency.

The function of SALAMA, especially the questions discussed here, will be demonstrated in vivo.

More: <http://www.njas.helsinki.fi/salama>

### 3. The role of context in the analysis of Lancashire dialect

*Anna Siewierska and Willem Hollmann, University of Lancaster, UK*

The present paper discusses the contextual underpinnings of the intra-speaker distribution of three morpho-syntactic variables found in Lancashire dialect, namely the was/were alternation, the reduction of the definite article and the order of pronominal themes and recipients in ditransitive clauses (Siewierska & Hollmann 2006; Hollmann & Siewierska 2006). The discussion is carried out with respect to the three categories of context distinguished by Allan (1986), the setting, the world spoken of and the textual environment. Our analysis, based on a corpus drawn from the North West Sound Archive, suggests that while all three morpho-syntactic variables are affected by the textual environment, the was/were alternation appears to be also influenced by the setting and definite article reduction by the world spoken of. Since speakers are more likely to be aware of the categories of setting and world spoken of than of the textual environment, in the light of our findings, the possibility arises that the three morpho-syntactic variables in question may differ in Lancashire dialect with respect to another speaker oriented parameter, not a contextual one, namely socio-linguistic salience (Kerswill & Williams 2002). Our analysis of the three variables with respect to Labov's (1972, 2001) scale of socio-linguistic salience, *indicator > marker > stereotype* reveals that this may well be so. If these findings with respect to the socio-linguistic salience of the three variables are confirmed by the use of additional methodologies, our investigation may be seen to have identified the existence of a close correlation between the categories of context and the scale socio-linguistic salience.

#### References

- Allan, Keith (1986). *Linguistic Meaning*: Keagan Paul.
- Hollmann, Willem and Anna Siewierska (2006). Corpora and (the need for) other methods in a study of Lancashire dialect. *Zeitschrift für Anglistik und Amerikanistik* 54.
- Kerswill, Paul and Ann Williams (2002). "Salience" as an Explanatory Factor in Language Change: Evidence From Dialect Levelling in Urban England." Mari C. Jones and Edith Esch (eds.), *Language Change. The Interplay of Internal, External and Extra-Linguistic Factors*. Berlin/New York: Mouton de Gruyter, 81-110.
- Labov, William 1972. *Sociolinguistic Patterns*. Philadelphia. University of Pennsylvania Press.
- Labov, William 2001. *Principles of Linguistic Change*. Malden (Mass>): Blackwell.
- Siewierska, Anna and Willem B. Hollmann. 2006. "Ditransitive clauses in English with special reference to Lancashire dialect." In Mike Hannay and Gerard Steen (eds.), *The English clause: usage and structure*. Amsterdam/Philadelphia: John Benjamins.

Section papers

## 1. Contexts and indexes

*Henning Andersen, University of California, Los Angeles, USA*

In the Saussurean conception of the linguistic sign—a conventional (arbitrary) combination of signifiant (expression) and signifie (content)—both the syntactic and the pragmatic dimensions of language are extraneous to the signs that are used in speech.

In the terms of the semeiotic of Charles S. Peirce, these dimensions of sign use are naturally integrated in as much as the conventional sign (the symbol, whose interpretation is warranted by a rule) may include indexical (as well as iconic) elements. Very simply put, the standard format of a linguistic sign rule,  $X \text{ } \text{Æ} \text{ } Y / Z$  (the content  $X$  is represented by  $Y$  in the context  $Z$ ) establishes a sign ('signifiant')  $Y$  with two objects ('signifies'): we can say that  $Y$  stands for  $X$  and points to (indexes)  $Z$ . (Each of the relationships,  $X$ - $Y$  and  $Z$ - $Y$ , may be supported by iconic relations.)

Signs of this structure are extensively in evidence on several levels of sentence structure. (i) On the level of the morphological word, morphophonemic alternants—in addition to their grammatical (or lexical) content—point to grammatical (or lexical) expression or content elements in their environments. (ii) In the verb phrase, different cases (and/or word order) index the different valency roles of the given verb. (iii) On the phrase and clause levels, concord and agreement phenomena are not 'targets' determined by 'controllers', as current theory would have it, but indexes of other constituents of the phrase, respectively, the clause, the co-text, or the context. (iv) On the clause level, endophoric, exophoric, and modal elements point to elements in the surrounding co-text or context. (v) On the utterance level, discourse markers, moods, and exophoric elements are the indexes that embed the utterance in its speech act. Here too lexical content elements refer to (index) elements of presuppositional content and thereby define the extent to which the utterance is felicitous, appropriate, or coherent, fulfills the addressee's Gricean expectations, and so forth.

In this study an attempt will be made to extend the layered structure that is so relatively evident in the grammatical indexing on the word-to-clause levels (i-iv) to the higher levels of content structure engaged at the utterance level (v). Such an application of Peircean sign theory promises to be useful in clarifying the interaction of linguistic structures and context.

## 2. Structure and Context in Ambiguity Analyses

*Sosei Aniya, Hiroshima University, Japan*

The paper presents an integrated ambiguity analysis model and its application to English examples. The model not only incorporates analysis techniques of current linguistic theories but also concepts of Relevance Theory (Sperber and Wilson, 1984; Wilson, 1994). Of importance are four problems: (i) what is a relevant context in analyzing ambiguity?; (ii) what belongs in the relevant context?; (iii) what is the proper formalization of context for analyzing ambiguity?; and (iv) what does context-dependency mean in analyzing ambiguity? Specifically, I address the following issues: (i) the shared-knowledge between the author/speaker and the reader/listener; (ii) the formalization of ambiguity detection; (iii) the identification of the lexical/syntactic category and thematic role of an ambiguous expression; (iv) the formalization of ambiguity representation including the syntax-semantics interface; (v) the recognition of perceived interpretations of an ambiguous expression; (vi) the formalization of optimal meaning selection among perceived meanings of an ambiguous expression by incorporating a basic idea of Optimality Theory (Kager, 1999; Prince and Smolensky, 2004).

Ambiguity analyses were proposed under various models of grammar: Generative Grammar (Chomsky, 1977; Radford, 1999; Webelhuth, 1995), HPSG (Asudeh and Crouch, 2001), Categorical Grammar (Dowty et al., 1981), Functional Grammar (Bloor and Bloor, 1995), and Experience-based Model (Sturt et al., 2003). None of the analyses, however, is sufficient since their analyses are confined to out-of-context examples. Nor do they match with my integrated ambiguity analysis model because of the lack of analysis devices taking context into consideration.

In my presentation, I analyze ambiguity taking examples from English jokes, slogans, and literary works. In order to show the wide applicability of my integrated ambiguity analysis model, I also examine Zen koan examples.

### References:

- Asudeh, A. and R. Crouch. 2001. "Glue Semantics for HPSG." Proceedings of the 8th International HPSG Conference. Norwegian University of Science and Technology. pp. 221-234.
- Bloor, T., and M. Bloor. 1995. *The Functional Analysis of English: A Hallidayan approach*. New York: Arnold.
- Chomsky, N. 1977. *Essays on Form and Interpretation*. Elsevier North Holland.
- Kager, R. 1999. *Optimality Theory*. Cambridge: Cambridge University Press.
- Prince, A., and P. Smolensky. 2004. *Optimality Theory: Constraint Interaction in Generative Grammar*. Blackwell Publishing.
- Radford, A., M. Atkinson, D. Britain, H. Clahsen and A. Spencer. 1999. *Linguistics: An Introduction*. Cambridge University Press.
- Sperber, D. and D. Wilson. 1984. *Relevance: Communication and Cognition*. London: Blackwell.
- Sturt, P, C. Fabrizio, V. Lombardo, and P. Frasconi. 2003. "Learning first-pass structural attachment preferences with dynamic grammars and recursive neural networks." *Cognition* 88 (2) pp. 133-169.
- Webelhuth, G. 1995. *Government and Binding Theory and the Minimalist Program*. Cambridge, Massachusetts: Basil Blackwell Ltd.

Wilson, D. 1994. "Relevance and Understanding" in Brown, G., K. Malmkjaer, A. Pollitt and J. Williams (eds.), *Language and Understanding*, Oxford University Press, p. 38-58.

### 3. A potential role of the striate cortex V1 in pre-emptive perception.

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The accumulation of a massive amount of data emphasizes the need to translate data management and systems analysis tools from the fields of engineering, mathematics, physics and computational sciences into cognitive neuroscience. It is becoming also clear that epistemology may contribute a powerful tool for planning experiments in an attempt to experimentally answer age old questions of how we perceive and act. In our studies we use some concepts, derived from Schopenhauer to help to organize experimental data into defined time segments and establish pre-perceptual structure for both internal and external context.

We studied volitional saccadic eye movements and obtained electrophysiological and functional MRI evidence for neuronal mechanisms mechanism which may bridge volitional eye movements to subsequent perception.

**The EEG** was recorded over occipital, parietal and temporal electrodes in 16 healthy subjects ranging in age from 18 to 56 years Eye movements were recorded with the EOG and infrared corneal reflection. The EEG was analyzed in three time windows bracketing and during each saccade. The EEG segments were separately analyzed for single eye movements using the continuous wavelet transform and Hilbert transform and finally a general linear mixed model, with variables of saccade direction, electrode location, saccade direction, light versus blindfolded.

Gamma range oscillatory activity dominates the intrasaccadic EEG (Bodis-Wollner et al 2002) over the parietal and occipital cortices even in the absence of visual input. Intrasaccadic gamma power grows between the start and finish of a saccade even in the absence of visual input.

**Functional MRI (BOLD)** responses were obtained in a volitional saccade paradigm in three subjects. We analyzed separately centrifugal (away from the center of the head) and centripetal (toward the body midline) saccade responses (Rieger et al 2005) In the absence of any visual input the striate cortex codes centripetal saccades in egocentric coordinates, while parietal responses adhere to retinotopical coordinates.

**Discussion:** Pre-emptive perception

Gamma activity (Singer 1999) has been proposed to reflect synchronization of thalamo-cortical neuronal groups as a mechanism to permit neuronal groups to act together, necessary for voluntary motor action.

We divided perisaccadic time segments into pre-, intra- and post-saccade time. Intrasaccadic gamma power modulation may serve for continuous computation of eye position from the beginning to the end of the saccade. The eye position signals are most likely to represent ongoing monitoring of predicted eye position.

Online, pre-emptive computation of saccade direction is likely to be useful for predicting the presence of a target. Pre-emptive placement of targets in both visual and egocentric coordinates may gain time for fast computations serving perception and consequent for action.

**Conclusion:** The timing of occipital and parietal intrasaccadic gamma shows that the cortex has ongoing information which parallels, if not represents moment-to-moment eye position. This mechanism may allow online computation regarding to where a saccadic eye movement is aiming. Imaging data show that volitional saccades are coded both in ego- and in retinotopic space. Apparently the striate cortex is part of

the circuit which provides neurophysiological mechanisms for egocentric - and externally driven retinotopic coordinates for pre-emptive perception.

#### 4. Limitations of Styles and Standards of Genres as a Context

*Alexandre Bouchev, Military University of PVO, Russia*

The studies of socio-political discourse in up-to date mass media reveal one of the main means of persuasiveness – the usage of clichés. The usage of clichés creates the SENSE OF STEREOTYPED. The triteness of collocation is regarded as the powerful means of automatic perception of the text. The binary opposition AUTOMATISATION::ACTUALISATION is at work whilst assessing the proposition. The idea of regarding the text as the combination of new non-stereotyped ideas and devices and trite hackneyed means belongs in modern epoch first to Mukarzevsky. Later on it was developed by stylistics and semantics. The idea to apply it to political discourse and to call it the technique of comprehension is not widely acclaimed.

The usage of actualization (foregrounding) and the contrary process is not widely acclaimed as a technique of understanding. It has not been studied yet as a powerful means in argumentative discourse. Neither is in the center of rhetorical and semantico-stylistic studies, especially those of political rhetoric.

What is the sense in this communicative approach – using automatic clichés? The contents of the message - the extralinguistic facts - are to be highlighted and it is done through the standardized, not aesthetic means.

The ideas of verbal camouflage of cynicism – *Linguistik der Luege*, the process of euphemistic and periphrastic nomination in publicist rhetoric shed light to the idea under discussion.

The publicist discourse in the media must be viewed through the prism of rhetorical analysis. The idea coincides with the prevailing trends to regard the language as the means to construct and express reality and to a certain extent modify it in discourse. Moreover modern mass-media have keen interest and deep specialization in creating different images, which are sometimes a far cry from what reality is.

Quite a number of works of modern rhetoricians state that the texts in mass-media have the trend to disguise the truth through the arrays of automatic, clichéd expressions, euphemisms, periphrases, litotias, etc.

Let us have a look at the news story format in publicist discourse that is abundant in the linguistic means that are in the center of our study.

Clichés and stereotyped expressions of political discourse. In the article below we actualize traditional clichés of the materials of this very kind – they are the frequently used bricks in the construction of the buildings of different political discourse.. Although the means of creating sense may be elusive, they are to be traced in the text.

The notions of actualization (which was coined in philology by Mukarzevsky) and opposing automatic usage (stereotyped expression) are paramount to comprehension of political discourse. It hasn't yet been fully elaborated. The specific features of political mass-media are its concentrated terse discourse character, the usage of linguistic means of information and persuasion of its addressees, the absence of contextual choice, the absence of preparation and deliberation of speech. The stylistic factors of this discourse are clear-cut and are represented by stereotyped expressions in nominative role.

The semantic emphasis on the language in publicist rhetoric is of relevance here. Hence is the standard and non-standard nomination as the techniques of argumentative discourse.

We are badly needing the analytical instruments that make it possible for us detecting the SENSE OF STEREOTYPED in the below mentioned fragments of

discourse. Thus the attitude is born and it is of vital importance, taking into consideration the consequences in life.

Nations *harbour terrorists, freedom is at risk.*

And America and our allies must not, and will not, allow it.

We will *bring terrorists to justice.* And second, we must prevent the terrorists and regimes who seek chemical, biological or nuclear weapons from threatening the United States and the world.

Our military has put the terror training camps of Afghanistan out of business, yet *camps still exist in at least a dozen countries* (Philippines, Bosnia, Somalis).

The absence of actualization, the absence of contextual variants and variative versions, the introduction of the standard form the specifics of stylistic peculiarities of discourse like the one studied by us is typical (Арнольд 2002: 343-344): The role of stereotyped expression in prejudiced meanings seems to be evident.

The media culture of spin-doctoring deserves being shed light at.

### References:

Арнольд И. В. Стилистика английского языка. М., 2002.

## 5. Visual meaning in multimodal discourse: an experimental pragmatic approach

*Vincent T. Chang, National Chengchi University, Taiwan*

**-- CANCELLED --**

### **Rationale:**

How does our knowledge of language and of context endow us to understand what we are told, to resolve ambiguities, to grasp both explicit and implicit contents, and to appreciate non-literal expressions—metaphor, irony, pun, hyperbole, humour, poetic effects, and, non-verbal communication? These issues have often been approached within linguistic pragmatics and psycholinguistics, whilst with only limited interactions between the two. This paper thus aims to explore the audience's perception, comprehension and interpretation of visual image in multimodal communication<sup>1</sup>, reexamining the explanatory adequacy of Relevance framework (Sperber & Wilson 1986/1995) and exploring the significant novelty of experimental pragmatics (Noveck & Sperber 2005).

### **Research questions:**

This paper attempts to investigate implicit meaning conveyed in multimodal discourse, trying to explain and render plausible interpretations to the following research questions:

1. What explicit and implicit information and cognitive contextual effects would be perceived and inferred by the (different) receptors through the integration of the visual images and slogans employed within institutionalised discourse / specialised communication?
2. The implicit meaning, especially weak implicatures<sup>2</sup> involving feelings, attitudes, emotions and impressions, will fall into an indeterminate range. Can we regard these as scalar implicatures with different functional loadings or weights?
3. Which inferred salient implicature of implicit meanings could possibly be served as default value?
4. Will the results of this study enhance the explanatory power of Neo-Gricean pragmatic theories in terms of language, cognition and communication, e.g. Relevance Theory (Sperber & Wilson 1986/1995; Noveck & Sperber 2005)?

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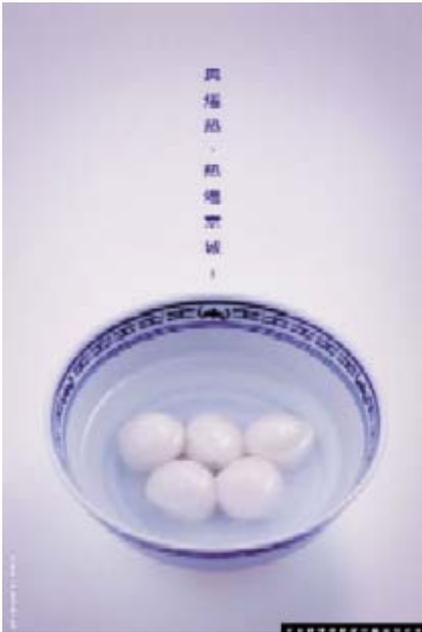
<sup>1</sup> 'Multimodality' has been defined in semiotics as the co-existence of more than one mode, or sign system, within the same text. From advertising, film and television to websites, game environments and mobile technology, the texts that surround us today are increasingly multimodal.

<sup>2</sup> Assumptions that are derivable from the proposition expressed by the utterance together with the context are called implicatures. (Tanaka 1994: 26-7) Also Tanaka notes (ibid.: 29), "...there is no clear cut-off point between assumptions strongly backed by the communicator, and the assumptions derived from the utterance on the addressee's sole responsibility." But both strong and weak implicatures are in accord with 'principle of relevance'.

## Methodology

The current study is to conduct an experiment by randomly sampling one dozen students from different departments at NCCU to look into six captions designed for the Olympics 2008 released by Mainland China. The subjects are to watch (and hence process) the six captions (for around one to two minutes) first, as shown below; and then report/narrate the pictures they just perceived and processed respectively as much as they possibly can (for three to five minutes or so). These activated meanings are then tape-recorded for further analysis.

[A]



### Expected results:

What the subjects have (actively, creatively and imaginatively) inferred are supposed to fall into a wide range of weak implicatures along with strong implicatures, depending on the different degrees of involvement and shared background knowledge in terms of cultural, social, political aspects etc. At the least case, the subjects could process and tell what is all about the slogan "奧運熱，熱遍京城!" (*Olympic Fever Heats the Whole Beijing!*) — the explicit meaning. Or if unfortunately not, then the communication is unsuccessful, which somehow still conforming the principle of relevance. After all, by the same token, we couldn't expect that all the students in one class would understand one joke simultaneously, or would process therein at the same speed. Considering "...there is no clear cut-off point between assumptions strongly backed by the communicator, and the assumptions derived from the utterance on the addressee's sole responsibility," (cf. fn. 2) we group/classify the implicatures according to the order that they previously narrated. We compare then those implicatures inferred and derived by those subjects to see the overlapping (or quasi-overlapping/similar) parts to re-/organise and find the functional loadings — scalar implicatures (cf. Noveck & Sperber 2005). Also expectedly to assign the salient meaning(s) of them as default value accordingly.

**Keywords:** cognition, experimental pragmatics, implicature, multimodal discourse, relevance, visual meaning

**References:**

- Forceville, Charles J. (2005). Multimodal metaphors in commercials. Paper for "The pragmatics of multimodal representations" panel at the 9th International Pragmatics Association (IPrA) Conference, July 10-15, Riva del Garda, Italy.
- Noveck, Ira A. and Dan Sperber (Eds.). (2005). *Experimental Pragmatics*. (Palgrave Studies in Pragmatics, Languages and Cognition). Palgrave Macmillan.
- Pilkington, Adrian. (1992). Poetic Effects. *Lingua* 87: 29-51.
- Sperber, Dan, and Deirdre Wilson. (1986/1995). *Relevance: Communication and Cognition*. 2nd ed. Oxford: Blackwell.
- Tanaka, Keiko. (1994). *Advertising Language: A Pragmatic Approach to Advertisements in Britain and Japan*. London: Routledge.

## 6. Misunderstanding as Contextual Asymmetry

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This paper draws some proposals on context description applied on talk-in-interaction structure characterizing the “standard” case of misunderstanding (Weigand). In turn-taking organization of conversational analysis (Sacks, Schegloff & Jefferson) this structure can be presented as follows: first turn --> next (inappropriate) turn --> repair; two turns are two parts of an adjacency pair. If context description is linked to structure, contextual properties of the next (inappropriate) turn should be divergent of those of the first turn.

“Context” is understood here as a set of elements that the participant chooses according to their relevance (Sperber & Wilson) each time the message is being interpreted / produced. It is the context that the participant builds “in his/her head” – which can be called “cognitive context” – and which is therefore individual and unique for each turn. But it is possible that one or several elements (or the relationship between the elements) of one given context were similar to those of another context. In other words, cognitive contexts may have common properties and can thus be compared. What are these properties?

The answer may be found in research on foreign language classroom talk (Cicurel, Edmondson), which offers the concept of “discourse world” or “universe of reference”. This research demonstrates that classroom talk habitually goes on in different “worlds”, such as fictional world, pedagogical world, world of language, etc. Such co-existence of different worlds in talk-in-interaction requires that participants evoke the world of current sequence “in their heads” and shift from one world to another. Simultaneously, as in any talk-in-interaction, participants also build their cognitive contexts. Thus, world and cognitive context take place on the same level at the same moment. But if one particular cognitive context is unique and hence cannot be the same for different utterances, the same world can occur in different sequences produced by different participants and/or in different situations. In other words, the world’s manifestations are recurrent. The assumptions are that worlds exist not only in classroom talk but also in (all) other kinds of talk-in-interaction, and consequently, that each particular cognitive context contains at least one element (or a relationship between different elements) indicating that this context belongs in one particular world.

Combining the concept of “world” with adjacency pair’s structure provides two possible cases: 1) first and next turn within the same world; 2) first turn within one world, next turn within another; the term “contextual asymmetry” is used for the latter. In the first case, misunderstanding may or may not occur. In the case of contextual asymmetry, however, misunderstanding should always occur because the next turn is always inappropriate. Thus, identifying contextual asymmetry via cognitive context and world description applied on talk-in-interaction structure may be useful to predict repair in the “standard” case of misunderstanding, and it may probably also explain some sources of misunderstanding (for example, when problematic reference or action recognition hypotheses fail). In addition, this kind of context description may provide some interesting features of how participants use worlds in talk-in-interaction for different purposes.

## References:

- Cicurel, F. (2002). Les réagencements contextuels dans l'enseignement des langues. In Discours, action et appropriation des langues (coord. F. Cicurel & D. Véronique), Presses Sorbonne Nouvelle, 179-194.
- Edmondson, W.J. (1985). Discourse worlds in the classroom and in foreign language learning. *Studies in Second Language Acquisition* 7, 159-168.
- Sacks, H., Schegloff, E. A. and Jefferson, G. (1974). A Simplest Systematics for the Organization of Turn-Taking for Conversation, *Language* 50, 696-735.
- Sperber, D. and Wilson, D. (1986). *Relevance: Communication and Cognition*. Blackwell, Oxford, UK.
- Weigand, E. (1999). Misunderstanding -The standard case. *Journal of Pragmatics* 31. 763-785.

## 7. Context-relatedness of subject choice: Evidence from the Feature Hierarchy and the German *bekommen*-passive

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The “Hierarchy of features and ergativity” (Silverstein 1976) represents a systematic overview of the criteria, which have been found to be responsible for “ergativity splits” in Australian languages.

+definite/referencial/ specific	1st person (speaker) 2nd person (addressee) 3rd (pronoun)/demonstrative name, kin term human being animate inanimate abstract	Accusative marking for transitive patient (O) ↑ (tendency)  ↓ Ergative marking for transitive agent (A)
-definite/referencial/specific		

The hierarchical ordering of nominals has an effect on the occurrence of the accusative marker in accusative languages like German, too. The hierarchy results from the fact that pronouns tend to occupy the subject position cross-linguistically, while the kinds of nominals which represent the bottom of the hierarchy do not. In a semantic interpretation, the upper hierarchy positions are attested a high agentivity potential: In split-ergative languages, for example, it is said to be “more natural” for pronouns and humans to be the “agentive argument” of a transitive construction and thus, overt case marking is used for A-arguments only when they are low on the hierarchy (ergative case) and for O-arguments only when they are high on the hierarchy (accusative case).

According to Michael Silverstein (1981), the positions on the hierarchy vary with respect to their degree of “indexicality”. 1st and 2nd person pronouns are highly indexical: They indicate the existence of their referents in the discourse while there would be no discourse without those referents. In this view of the hierarchy, the “most natural” perspective is the one that immediately starts from the discourse situation itself. So, the starting point of an utterance will preferably be something that is presupposed in the discourse (see also De Lancey 1981).

The emerging of a new passive structure, the so-called *bekommen*-or recipient-passive, supports this context-based motivation for subject choice: In *bekommen*-passive structures, the recipient or benefactive, which would be marked by dative in a ditransitive active construction, becomes subject. *Bekommen* has auxiliary function in this construction. The status of this *bekommen*-construction as a passive construction, although not uncontroversial, is quite accepted among German grammarians.

In this paper, I will present a corpus-based analysis of *bekommen*-passives from spoken and written language. It will be shown that the respective frequencies of types of nominals that occur in the subject position of a *bekommen*-passive correspond to the ordering of nominals in the feature hierarchy, in that pronouns tend to get subject, while indefinites hardly ever do. As the *bekommen*-passive can be used as a reference-tracking device, special attention will be paid to the use of zero anaphora in the subject position of the *bekommen*-passive.

It will be argued that one motivation for the development of the *bekommen*-passive is the need to get the recipient/benefactive into the subject position of a

ditransitive sentence when it is highly topical which means that it is very close to the ongoing discourse (its contents, participants and immediate surroundings). Thus, subject choice and the emerging of new structures can be said to be context-driven.

## 8. Activity and information: Finnish left-dislocations as means for providing information while not forwarding the activity

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**-- CANCELLED --**

The paper will focus on left-dislocated constructions in Finnish. The method used is ethnomethodological conversation analysis. The data consist of everyday telephone conversations and television talk shows.

Left-dislocation is a primarily spoken language construction that consists of an initial lexical noun phrase that specifies a referent, and a subsequent clause with a pronominal constituent that is co-referential with the initial noun phrase. The initial noun phrase can be more or less complex:

***nää kellarit mitkä oli semmosii paikkoja mistä niinku pääs***  
**these cellars that were the kind of places where [mice] got [in]**

*nii (.) siäl on sitte muurattu ja rapattu <pintaa:>*  
 PRT **they** have been built up and plastered

Various studies have suggested that left-dislocation is a means for introducing new topical referents to a discourse. However, it has also been suggested that referents introduced by a left-dislocated construction are low on the continuity scale: they are generally new, and they are not continuous in up-coming discourse.

Conversation analytical studies have shown that the primary context for talk-in-interaction is based on conversational activities rather than physical or institutional settings or topical development. Furthermore, context is dynamic and co-constructed by the participants. Analysing talk-in-interaction as sequences of activities sheds new light on the left-dislocated constructions, as well. The paper will show that the structure of left-dislocations is interrelated with the turn-taking system, since it allows the speaker to produce two actions within a single TCU (cf. Geluykens 1992): first to point out, and even extensively describe a referent, and then to say something about it. The space for description may be used for e.g. giving further information in view of the identification of the referent, or giving a description that supports the subsequent action.

In the data, left-dislocations introduce new referents or offer new interpretations of previously discussed referents, which is consistent with the dominant literature. However, the paper will argue that the referents are not topical, but that left-dislocation is a means for providing new information to support some other action, while not taking the activity forward. Rather, they stop developing the activity for providing additional information. Hence, left-dislocations occupy specific positions within a sequence: they are used to introduce referents to an already on-going sequence to elaborate, exemplify or argue against the on-going activity. Thus they are not used for beginning new sequences or topics, but rather for inserting new referents to an on-going sequence, new sub-topics to an on-going topical sequence, or offering new interpretations of the on-going topic.

## 9. Computerised meaning acquisition: structured co-text as context for interpretation

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If the context of the production of a sentence is reflected in its linguistic form, from a strictly referential perspective not only the choice of vocabulary to denote things, but also the arrangement of words may vary according to this context. Yet not many of us would want to follow the early Wittgenstein in claiming that the sentence atoms structurally correspond to the world atoms they refer to (so that the structure of the sentence always corresponds to the structure of the world). Nevertheless we can think of cases where this correspondence is at least partly observable.

Examples would be ‘describing a route graph’, or ‘describing what can be seen while traveling along a certain path’. In such cases, we can take the structured co-text of a notion as its context for interpretation.

This can be illustrated using a software for computerised meaning understanding, SCIP2. It supports the view that machine understanding may be based on a quantitative analysis of given text. The use of SCIP2 is twofold:

It is a. a natural language production system that is based on describing the experiences of an artificial agent in an artificial world (module 1). It is b. an automatic semiotic system which uses the produced corpus and mechanically (i.e., without expert knowledge of the language used) transfers it into a quantitative representation (module 2), which then is suitable for tasks like drawing a map of object constellations (module 3). Each successive step is structurally coupled to its predecessor, or, to put it differently, each step is the context for the production of its successor and guarantees their structural similarity.

Despite the limited linguistic complexity of the texts produced and analysed, SCIP2 can serve as a testbed for algorithms that compute (successions of) representations of natural language meanings, offering ways to inspect how well the coupling of a level of representation to qualities of its initiating context was done. In that sense, it can help to detect those computations that are good signs of their initial context of production. Following the Peircean semiotic insight that a sign gathers its meaning by being continuously translated into successive sign events, we may formulate this result: If we model meaning acquisition in text understanding as context-/structure-sensitive translation and algorithmically put the emphasis on “keeping the semiosis running”, we can at least partly computerise it.

## 10. In the right context: lexical meaning seen from a language contact perspective

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The presentation will discuss the role and significance of context when processing linguistic expressions that contain codeswitching. The role of context in linguistic analysis is often debated and different frameworks define context in very different ways. The fundamental questions relate to how much the context contributes to linguistic expressions, what it contributes and how it ought to be defined. Traditional views are challenged when taking evidence from codeswitching into consideration. The introduction of linguistic material from another language makes the linguistic expression more heterogeneous and provides other perspectives than monolingual expressions do. I will discuss various aspects of context based on codeswitching language material.

The ongoing work that will be presented is analyses of codeswitching based on Myers-Scotton's Matrix Language Frame Model (MLF) (e.g. Scotton, 1993). That framework does however, not cover the role of context in the interpretation of such expressions. It will be argued that the contention by relevance theorists that concepts are often formed ad hoc based on a combination of core lexical information and contextual information yields fruitful results when applied to codeswitching. Studies by Barsalou (e.g. Barsalou, 1992) finds evidence to support that all communicated concepts are ad hoc. This requires a large contribution by the context, as lexical items are reduced semantically to core concepts that are dynamically broadened or narrowed by the context. Such a view contributes to a better understanding of how codeswitching (as well as linguistic borrowing) is a viable form of expression for the language user. It does also increase the significance of context. How are we to define context in mixed-language expressions, and consequently in other expressions?

### References:

- Barsalou, L. 1992. "Frames, concepts, and conceptual fields." In E. Kittay & A. Lehrer (Eds.), *Frames, fields, and contrasts: New essays in semantic and lexical organization* (pp. 21-74). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Scotton, C. M. 1993. *Duelling languages: Grammatical structure in codeswitching*. Oxford: Oxford University Press.

## 11. The Role of Context/Pragmatics in Metatypology

*Esa Itkonen, University of Turku, Finland.*

The received view of linguistic typology is based on the following assumptions. The semantics of each language contains a repertoire of grammatical meanings. These repertoires are similar to the extent that their mutual differences may be disregarded. Thus, in principle, one and the same semantic content is expressed in different languages by dissimilar morpho-syntactic means: same meanings, different forms. This is the rationale of **morpho-syntactic** typology.

Morpho-syntactic typology must, however, be supplemented with **semantic** typology. The need for semantic typology has been shown most dramatically by Levinson (2003), which establishes the existence of three distinct spatial frameworks, namely INTrinsic, RELative, and ABSolute. These constitute three dissimilar semantic systems, without any possibility of direct translation from one into another (pp. 57–59). Here the typological interest resides in the semantic content while its formal realization is irrelevant: “the frame-of-reference distinctions are as much lexical as grammatical” (p. 301); hence, different meanings, indifferent forms. More precisely, what is at issue are different **semantic** meanings. Whatever mutual understanding and/or translation there may be between, e.g., REL and ABS languages, it must — by definition — exist at the level of **pragmatic** meanings.

Next, we must ask whether semantic typology can be extended beyond the spatial frameworks. In so doing, we will have to question some of the assumptions that underlie morpho-syntactic typology.

In Levinson’s (2003) case, different languages encode fundamentally dissimilar (grammatical) meanings. A less drastic case is the one where one language fails to encode a grammatical meaning which another encodes explicitly. It is a well-known fact that the logical connectives *and*, *or*, and *if – then* are lacking in many languages (cf. Itkonen 2003: 150–151, 2005a: 154–155; Levinson 2003: 292–293). Yet the speakers of such languages behave in ways which, from the logical point of view, are similar to ours. Again, since the similarity cannot obtain at the level of semantics, it must obtain at the level of **pragmatics**. (It makes sense to assume, with Levinson, that this similarity of behavior is due to a set of common [in principle, non-linguistic] **concepts**.)

To fix our ideas, let us consider whether or to what extent the notion of conditionality (= *if – then*) is expressed in Diyari, based on Austin (1980). As I interpret Austin’s (1980) data, Diyari has a converb system with three relative tenses (= A[nterior], S[imultaneous], P[osterior]) and switch reference (SS = same subject vs. DS = different subject), producing six distinct converbs: A&SS, A&DS, S&SS, S&DS, P&SS, P&DS (cf. Itkonen 2005b: 28–33). This converb system is, incidentally, identical with that of Arrernte (cf. Wilkins 1988: 150). Now, conditionality is expressed in Diyari by S&SS/DS, or what Austin (1980) calls ‘relative clause’; for instance:

<i>yini</i>	<i>nhi_ki-rda</i>	<i>wakara-rnanhi</i>	/	<i>_anhi</i>	<i>madi-ya</i>
2SG.NOM	here-‘near’	come-S&DS	/	1SG.NOM	Marree-ALLATIVE
<i>mind-i-lha</i>	<i>_ana-yi</i>	/	<i>yula-Ø</i>	<i>mani-lha</i>	
run-FUT	AUX	/	police-ABS	get-P&SS	

‘If you come here, I will run to Marree to get the police’

Thus, this sentence has the structure ‘S&DS / main clause / P&SS’, where S&DS and P&SS have the status of conditional and final clause, respectively. In addition to

conditionality, S-converbs perform the function of temporal, causal, manner, complement, and relative clauses: “It is important to note that the Diyari sentence is simply **vague** as to the semantic connection between the clauses” (Austin 1980: 209; emphasis in the original). Hence, correct understanding of sentences is a matter of **context**-dependent interpretation which transforms **semantic** indefiniteness into **pragmatic** definiteness.

An even more drastic example of semantic vagueness/indefiniteness is offered by Rembarnga (cf. McKay 1988): the verb has the structure PAT-AG-V, e.g. *barran-ba-V* (= ‘them-they’) and the subordinate status of a clause is indicated by the change  $a \rightarrow i$ , e.g. *birrin-bi-V*. The superordinate vs. subordinate distinction equals that between figure and ground. The subordinate clause has temporal, locational, conditional, causal, complement, and relative uses, but “in Rembarnga the various ‘uses’ are not differentiated at all from one another” (p. 8).

Our result, prompted by the need to explore the limits of Levinson-type semantic typology, revitalizes Givón’s (1979) distinction between ‘pragmatic vs. syntactic mode’. Yet the following qualifications are in order. First, the distinction, as intended here, is not just about parataxis vs. hypotaxis, but also about indefinite vs. definite hypotaxis. (Diyari and Rembarnga are indefinite where e.g. English is definite.) Second, it is not the case that the pragmatic mode connected with parataxis and with indefinite hypotaxis is characteristic of preliterate societies only, as Givón (1979: 306) would have it. For instance, the Late Archaic Chinese used by Confucius is a good example of the pragmatic mode: “it has relatively few morpho-syntactic structures beyond principles of constituent order, and the richest grammatical category is a class of utterances-final particles denoting mood, speaker’s attitude and discourse functions” (Li 1997: 276; cf. Itkonen 2001: 73–74).

For the sake of completeness, it is good to add that there is reason to postulate the existence of a third kind of typology, distinct both from morpho-syntactic and from the semantic type, namely **lexical** typology. As outlined by Talmy (2000: Part I), lexical typology investigates what kind of additional information (= ‘co-event’, path, or figure) is encoded in verbs of different languages. To give another example, Dixon (2002: 56–63) claims that the lexical categories of Australian languages have the following characteristic features: nouns and verbs exhibit generic vs. specific pairs and conflate actual/potential while verbs conflate volitional/non-volitional. As these examples show, lexical typology may still be seeking its final form. So much is clear, in any case, that it can be reduced neither to morpho-syntactic nor to semantic typology. It follows that we can no longer speak of typology *tout court*. Rather, an undifferentiated notion of ‘typology’ must be replaced by **metatypology** comprising (at least) morpho-syntactic, semantic, and lexical typology.

## References:

- Austin, Peter. 1980. A grammar of Diyari, South Australia. Cambridge UP.  
 \_\_\_\_ (ed.) 1988. Complex sentence constructions in Australian languages. Amsterdam: Benjamins.  
 Dixon, R.M.W. 2002. Australian languages. Cambridge UP.  
 Givón, Talmy. 1979. On understanding grammar. New York: Academic Press.  
 Itkonen, Esa. 2001. Maaailman kielten erilaisuus ja samuus, 2. painos. Turun Yliopisto: Yleisen kielitieteen julkaisuja 4.  
 \_\_\_\_\_. 2003. Methods of formalization beside and inside both autonomous and non-autonomous linguistics. University of Turku: Publications in General Linguistics 6.

- \_\_\_\_\_. 2005a. Analogy as structure and process. *Approaches in linguistics, cognitive psychology, and philosophy of science*. Amsterdam: Benjamins.
- \_\_\_\_\_. 2005b. Ten non-European languages: An aid to the typologist. University of Turku: *Publications in General Linguistics* 9.
- Levinson, Stephen C. 2003. *Space in language and cognition*. Cambridge UP.
- Li, Charles. 1997. On zero anaphora. J. Bybee et al. (eds.): *Essays on language function and language type, dedicated to T. Givón*. Amsterdam: Benjamins.
- McKay, Graham R. 1988. Figure and ground in Rembarnga complex sentences. In Austin 1988.
- Talmy, Leonard. 2000. *Toward a cognitive semantics, vol. II*. The MIT Press.
- Wilkins, David. 1988. Switch-reference in Mparnte Arrernte (Aranda). In Austin 1988.

## 12. Towards a Modular Approach to an Anaphor Resolution

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Over the last decades both formal and experimental research revealed a range of structural and pragmatic constraints that affect reference resolution. An as yet unresolved issue, however, is when during processing these constraints influence the comprehension process and, furthermore, whether the associated processes are governed fundamentally by one mechanism or by different independent ones. Recent linguistic accounts of anaphor resolution propose a two-route architecture for the interpretation of pronominals (e.g., Grodzinsky & Reinhart, 1993; Reuland, 2001). A pronoun can either be resolved by a grammatical operation in logical syntax (i.e., variable binding) or through value assignment in discourse (i.e., co-reference). According to Reuland (2001), logical syntax and discourse are in fact two functionally independent modules. It is proposed that a general economy principle governs the division of labour between the modules, which are associated with different processing costs. Variable binding is thought to be more economic than co-reference. By incorporating the economy principle, the theory assumes a processing hierarchy in which variable binding has precedence over co-reference. Hence, if a pronoun is ambiguous between a variable binding and co-reference antecedent the pronoun is predicted to be (initially) interpreted as referring to the former and not the latter.

The two-route architecture of the system comes with one important implication illustrated in (4). Logical syntactic constraints (i.e., Principle B) rule out a variable binding relation between the pronoun and the antecedent, as the pronoun is structurally too close the antecedent (i.e., not free in its binding domain). However, we need another specific rule to explain why the availability of a co-referential interpretation does not systematically bypass the effect of Principle B.

Rule I compares variable binding with co-reference interpretations to decide whether a co-reference dependency is allowed (Grodzinsky & Reinhart, 1993; Reinhart 2000). Without going into detail, this rule prevents discourse processes from by-passing logical syntax where the latter rules out an interpretation as ungrammatical. The question is whether Rule I always compares variable binding with co-reference interpretations, or is only executed if a dependency is initially ruled out by logical syntax. In an eye-tracking experiment we manipulated the interpretation of ambiguous and unambiguous pronouns in an attempt to explore how variable binding, co-reference and Rule I influence the way readers resolve pronouns. The results show that if a pronoun was ambiguous between a variable binding and co-reference antecedent, the variable binding antecedent was initially preferred even if discourse information (in our case topicality) clearly favoured the co-reference antecedent. This suggests that during pronoun resolution our language system considers structural constraints before contextual or discourse factors (like topicality) can affect the interpretation process. Therefore, we argue that logical syntactic processes function independently from discourse processes, indicating that it may be warranted to consider logical syntax and discourse as distinct modules of the language system. Furthermore, the language system does not seem to apply Rule I in cases where both variable binding and co-reference lead to the same grammatical interpretation suggesting that Rule I is only relevant in cases that are potentially ungrammatical.

### 13. From Context to Language and from System to Instance

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**-- CANCELLED --**

In this paper I intend to expand on the notions of *context of situation* and especially *context of culture* as developed by M.A.K. Halliday in Systemic Functional Linguistics (SFL). According to Halliday (1999), the context of situation is an instantiation of the context of culture the same way as a text is an *instantiation* of language as system. As important as this insight may be, we still need further explicit taxonomy to relate language to the context of culture. I will argue that, in order to more specifically describe and explain the relationship between text and context, we may use sociological theories such as Giddens' *structuration theory* where significations will be associated to three broad dimensions of social life, namely, social practices, role prescriptions and social structures in the form of rules and resources. I will illustrate how such sociological dimensions – especially rules and resources as *structuring properties* – may be investigated in texts and thus how texts can be shown to interact with the wider context of culture and the more immediate context of situation. Overall the proposal aims at expanding our present knowledge on the inter-relationships between language and society.

## 14. Theory of Enunciation Meets Functional Grammar: Context and Illocution in EU Law

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**-- CANCELLED --**

Combining a textual (linguistic) analysis of clause types and a contextual (discourse) analysis of intertextuality, this paper aims at determining the link between context and illocution in passages of EU founding treaties related to cultural and linguistic diversity.

A linguistic analysis is an essential part of discourse analysis (e.g., Halliday (1994: xvi-xvii). In a discourse analysis of law, the linguistic component of analysis can be carried out, for example, by using categories of systemic-functional grammar (e.g., Halliday & Matthiessen 2004). For example, provisions not providing norms to be obeyed or determining sanctions when rules are not obeyed are more often encoded in attributive and identifying clauses than provisions with real legal force, which are typically material and modally marked as obligation. However, an intertextual analysis (Fairclough 1999: 184, 203-8) is needed when both types of provisions appear in the same legal act.

The concept of intertextual analysis appears to correspond with Foucault's notion of "margins of utterance." According to Foucault (1969: 128-129), an utterance ("énoncé") is surrounded by margins populated by other utterances, yet distinct from what is generally understood as the context. Indeed, these margins are distinct from the context for the very reason that they create the context. Thus, a particular sentence is not the same utterance in different genres; a particular chain of utterances around one utterance does not constitute the same context in different genres. The sentence *the Union is founded on the principles of liberty, democracy, respect for human rights and fundamental freedoms* would therefore constitute a different utterance in article 6 of the Treaty on European Union and in a textbook; its context would also be different even if it contained exactly the same words exactly in the same order.

On the other hand, in the French tradition of linguistic discourse analysis, while the propositional meaning ("signification") is created essentially in the linguistic context of the utterance, the discursive meaning ("sens") of the utterance consists of the description of the act of utterance or enunciation ("énonciation", e.g., Ducrot 1984: 182-183). Thus, the discursive meaning of an utterance presented as request, such as *Close the door, Could you please close the door?, or It is kind of cold in here?* is that the act of utterance requests the interlocutor to close the door. In this understanding, illocution resides in the discursive meaning. But should the discursive meaning of the above-mentioned passage of EU law correspond with the general rule-setting illocution of law or should it be regarded as a fragment of another discourse embedded in the treaty, with a different illocution? In other words, should illocution be determined by the context, in which case the treaty would constitute a single utterance, or should it be separated from it, in which case the treaty would be a chain of utterances?

Finding answers to these questions and their implications to the theory of discourse and law's ideology is the goal of this paper.

### References:

Ducrot, Oswald. *Le Dire et le dit*. Paris: Minuit, 1984.

- Fairclough, Norman. Linguistic and Intertextual Analysis within Discourse Analysis. The Discourse Reader. Ed. Adam Jaworski and Nikolas Coupland. London: Routledge, 1999. 183-211.
- Foucault, Michel. L'Archéologie du savoir. Paris: Gallimard, 1969.
- Halliday, M.A.K. and Christian M.I.M. Matthiessen. An Introduction to Functional Grammar. Third Edition. London: Arnold, 2004.

## 15. Lexicon, constructions, context and Finnish deverbal causatives

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In my paper, I discuss the formation of lexical and construction meaning as an interaction between morphology, semantics and pragmatics. The main question of my paper is how the grammatical context (constructions and grammatical rules) on one hand and the text context on other interact with each other. As a result of my analysis, I will show that the context specific meanings of a verb form a network that can describe the motivation of the particular meanings.

I am concentrating on certain causative verbs in Finnish. The Finnish derivation system has a very productive causative morpheme *ttA*. One group of Finnish causative verbs express that the action denoted by root verb is performed by somebody else than the subject argument (e.g. *Tom maalauttaa Peterilla talon*. ‘Tom has Peter to paint the house’).

This derivational mechanism is highly productive, and there are no structural restrictions for that process (Kytömäki 1978). However, these verbs often occur in complex syntactic and semantic configurations. Thus, the “productive” reading is not necessarily valid when it comes to the interpretation of authentic utterances. Sometimes a lexeme may be so strongly associated with a specific type of context that it can alone activate a whole situational context.

In my analysis, I will focus on *ttA*-causatives that are derived from intransitive motion verbs (e.g. *juoksuttaa* ‘make run’), or words that express body position (e.g. *kyykyttää* ‘make squat’). I will analyze data from two large corpora: the Finnish language corpus Kielipankki (‘language bank’, 76.5 million words) and Internet discussion groups.

I will demonstrate how the meaning of the verb *kyykyttää* is used in different settings and how different meaning components are activated. I will also discuss the use of the verb *kyykyttää* in the Power Misusing construction (Paulsen 2006).

## 16. The structure of phraseological meaning and context

*Oksana Petrova, Åbo Akademi University, Turku, Finland.*

There can be no doubt about the fact that phraseological units (PU) reveal their semantic properties to the utmost only when being used in the context of speech. Thus empirical studies of PUs functioning in context are necessary for determination of their actual meanings, which can be applied e.g. in phraseography or when developing a model of their semantic representation.

This paper presents a study based on more than 300 examples of contextual realization of a network of structurally and semantically related constructions, derived from Finnish PU *heittää helmiä sioille* [cast pearl+PL+PARTITIVE swine+PL+ALLATIVE] ‘to cast pearls before swine’. All examples occur in postings on Usenet discussion groups. Unlike PUs which signify a single concept (e.g. *heittää lusikka nurkkaan* [cast spoon corner+ILLATIVE] ‘to die’), this PU’s semantic structure is more complex. Both of its noun components can be assigned thematic roles and have broad referential capacity. The network also includes several polysemic constructions, for instance the verbless construction *helmiä sioille* [pearl+PL+PARTITIVE swine+PL+ALLATIVE] has developed additional meanings, which are not listed in any dictionary.

Main objectives of the study lie within the scope of atomization and formalization of meanings within this network of PU’s. The process includes several stages: 1) Finding meaning-explicating and disambiguating elements of surrounding context, including contextual referents of lexical/semantic components, e.g. in the following example lexical components of the PU and contextual elements corresponding to them are marked with indexes:

Sehän on siis [aivan mielettömän hyvä mainossarja]1. Ja lisäksi [**helmiä**]1 [**ei ole tarjailtu**]2 [**sioille**]3, sillä tätä [Hasan & Partnersin suunnittelemaa kampanjaa]1 [näytetään]2 vain ja ainoastaan sivistyneille suomalaisille, [ei]2 [ruotsalaiselle roskasakille joka nyt ostaa Arlaa kuitenkin]3.  
 ‘So it is [an extremely good series of ads]1. And besides, [**pearls**]1 [**haven’t been offered**]2 [**to swine**]3, because this [campaign designed by Hasan & Partners]1 [is shown]2 only to cultivated Finns, [not]2 [to a Swedish mob that buys Arla anyway]3.’

However, in the majority of cases contextual links are not as explicit and cannot be traced as easily as in the above example. The problem of sufficient context will be discussed in relation to this. The context is regarded sufficient if it provides enough information for establishing the meaning in each case of realization. 2) Grouping units according to their meanings. 3) Separating core semantic components from contextually conditioned ones. 4) Formalization of abstract meanings that are connected through a network using the formal apparatus of conceptual semantics (Nikanne 1990).

## 17. Contextuality as Defined via Topological Structure

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We consider only texts written with good grace and intended for human understanding, called *admissible*. We distinguish *sense*, *meaning* and *reference*. The term *fragmentary meaning* of some fragment of a given text is accepted as the content grasped in some particular situation of reading following the reader's presuppositions and prejudices in the interpretative process, which we formalize by the term *sense*.

For the text understanding is not postponed until its final sentence, it should have meaningful parts; their meanings determine the meaning of the whole. We argue that:

- (i) *an arbitrary union of meaningful parts of an admissible text is meaningful;*
- (ii) *a nonempty intersection of two meaningful parts of an admissible text is meaningful.*

For an admissible text  $X$  is meaningful by definition, it remains to define formally the meaning of its empty part  $\emptyset \subset X$  in order to provide  $X$  with some topology called *phonocentric*, where opens  $U \subset X$  are all its meaningful parts (called further *fragments*).

Let  $X$  be an admissible text, and let  $\mathcal{F}$  be an adopted *sense* of reading. For each open  $U \subset X$ , we collect all fragmentary meanings of  $U$  in the set  $\mathcal{F}(U)$ . Thus we are given a map  $U \mapsto \mathcal{F}(U)$  defined on the set  $\mathcal{O}(X)$  of all opens  $U \subset X$ . The hermeneutic circle's precept 'to understand a part in accordance with the understanding of the whole' defines a family of maps  $\text{res}_{V,U}: \mathcal{F}(V) \rightarrow \mathcal{F}(U)$ , where  $U \subset V$ , such that  $\text{res}_{V,V} = \text{id}_{\mathcal{F}(V)}$  and  $\text{res}_{V,U} \circ \text{res}_{W,V} = \text{res}_{W,U}$  for all nested opens  $U \subset V \subset W$ . Mathematically, the data  $(\mathcal{F}(V), \text{res}_{V,U})_{V,U \in \mathcal{O}(X)}$  is a *presheaf* over  $X$ . Two meanings  $s, t \in \mathcal{F}(U)$  are equal if for each  $U_j$  of some open covering  $\bigcup_{j \in J} U_j = U$ :  $\text{res}_{U,U_j}(s) = \text{res}_{U,U_j}(t)$ . The hermeneutic circle's precept 'to understand the whole by means of understanding of its parts' implies that for each family  $(s_j)$  such that  $s_j \in \mathcal{F}(U_j)$ ,  $\bigcup_{j \in J} U_j = U$ , and  $\text{res}_{U_i, U_i \cap U_j}(s_i) = \text{res}_{U_j, U_i \cap U_j}(s_j)$ , there exists  $s \in \mathcal{F}(U)$  such that  $\text{res}_{U,U_j}(s) = s_j$ . Whence:

**Frege's Generalized Compositionality Principle.** *A presheaf of fragmentary meanings  $\mathcal{F}$  naturally attached to any sense of an admissible text  $X$  is really a sheaf; the sections  $s \in \mathcal{F}(U)$  over  $U \subset X$  are fragmentary meanings of  $U$ ; the (global) sections  $s \in \mathcal{F}(X)$  are meanings of the text  $X$  as a whole.*

So far, we have considered the meanings of opens of a topological space corresponding to text. We define now the meanings of its points (sentences). Two fragmentary meanings  $s \in \mathcal{F}(U)$ ,  $t \in \mathcal{F}(V)$  are said to induce the same contextual meaning at  $x \in U \cap V$  if there exists some open neighborhood  $W$  of  $x$ , such that  $W \subset U \cap V$  and  $\text{res}_{U,W}(s) = \text{res}_{V,W}(t) \in \mathcal{F}(W)$ . This relation 'induce the same contextual meaning at  $x$ ' is clearly an equivalence relation; any equivalence class of fragmentary meanings agreeing in some open neighborhood of a sentence  $x$  is called a *contextual meaning* of  $x$ . Recalling the construction of *inductive limit*, we obtain:

**Frege's Generalized Contextuality Principle.** *Let  $\mathcal{F}$  be an adopted sense (of reading) of an admissible text  $X$ ; for a sentence  $x \in U \subset X$ , its contextual meaning is defined as  $\text{germ}_x(s)$ , that is a germ at  $x$  of some fragmentary meaning  $s \in \mathcal{F}(U)$ ; the set  $\mathcal{F}_x$  of all contextual meanings of a sentence  $x \in X$  is defined as the inductive limit  $\mathcal{F}_x = \varinjlim (\mathcal{F}(U), \text{res}_{V,U})_{U,V \in \mathcal{O}(x)}$ .*

We define similarly a phonocentric topology and contextual meanings at the level of sentence. At each semantic level, every  $s \in \mathcal{F}(U)$  determines a genuine function  $\dot{s}: x \mapsto \text{germ}_x(s)$  defined on  $U$ . This *functional representation* of fragmentary meanings clarifies their nature and let us establish an *inductive theory of meaning* describing how the interpretative process runs.

### References

- Prosorov, O. (2005a). Compositionality and contextuality as adjoint principles. In M. Werning, E. Machery, & G. Schurz (Eds.), *The compositionality of meaning and content, (Vol. II : Applications to Linguistics, Psychology and Neuroscience)* (pp. 149–174). Frankfurt: Ontos-Verlag.
- Prosorov, O. (2005b). Formal hermeneutics based on Frege duality. In E. Maier, C. Bary, & J. Huitink (Eds.), *Proceedings of SuB9* (pp. 286–298). Nijmegen: NCS.
- Prosorov, O. (2006). Sheaf-theoretic formal semantics. *TRAMES Journal of the Humanities and Social Sciences*, 10(1), 57–80. (Published by the Estonian Academy of Sciences and Tartu University)

## 18. Verb Constructions within and out of context

*Michaela Pörn, Åbo Akademi University, Turku, Finland.*

The Swedish interrogative *var* (*where*) expresses location (*Var är han? Where is he?*) whereas *vart* (*where*) expresses direction (*Vart gick han? Where did he go?*). The problem is that *vart* (*\*Vart är han? Where is he?*) is overused in Swedish both in Finland and in Sweden. In Finland such grammar “mistakes” are often explained by influence from the Finnish language. The overuse of *vart* in Sweden, on the other hand, cannot be blamed on the Finnish language. Instead of stating that a construction like *Vart är han?* is grammatically incorrect, it would be more important to study whether there are situations or contexts that could show the meaning of the expression. The meaning of such verb constructions can be explained by referring to the underlying language expression, in other words, to the conceptual structure of the verb.

When describing verb constructions it is important to use a cognitive model, Conceptual Semantics (Jackendoff, Nikanne, Pörn), that studies the interaction between language and the human mind. The expression *Vart är han? (Where is he?)* can, within context, be related to the meaning “*Vart gick han?*” (*Where did he go?*) whereas it lacks meaning out of context. Thus, verb constructions can be context-dependent. The purpose in this paper is to show the significance of context within certain verb constructions. I will also discuss the description of context-dependency within the Conceptual Semantics framework.

## 19. Enriching Pragmatic Terminographic Definitions with Contextual Information (1)

*Arianne Reimerink, (2), Silvia Montero-Martínez(3) & Mercedes García de Quesada(4)  
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In terminology management, the basic criterion for termbase construction are the needs of the intended end user. The aim of this article is to propose a way to represent specialized concepts in order to provide each user with an adequate understanding of their meaning. To guarantee the usefulness of a termbase for a wide range of users, it must be able to provide information at different levels of complexity without jeopardizing the user-friendliness of the tool. We show how a different and broad consideration of context and definition structure can widen the pragmatic scope of a termbase. We use the continuum from general to specialized language, to extract definitory contexts with which users can interact to comply with their needs. We apply Spanish FrameNet to the specialized field of coastal engineering to show how different user needs can be met through a more open-minded attitude towards definition, context and conceptual structure.

*(1) This research is part of the projects Spanish FrameNet TSI2005-01200 and PUERTOTERM: knowledge representation and the generation of terminological resources within the domain of Coastal Engineering BFF2003-04720, both funded by the Spanish Ministry of Education.*

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## 20. Polysemy, context and constructions: the case of English adjectives

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**-- CANCELLED --**

In this paper, I discuss the polysemy of English adjectives. Traditionally, research on “polysemy” – the phenomenon that one phonological form is associated with multiple but related meanings (e.g. nose, which is associated with “facial organ”, “sense of smell”, “attribute of a wine”, etc.) – was mainly conducted inside historical and lexical semantics, where the scope of interest was limited to exploring the phenomenon inside language itself, cut off from such factors as bodily experiences, cognition, and emotion. Today, polysemy has become one of the most central issues in linguistics and also in the cognitive sciences at large.

Fauconnier and Turner (2003) maintain that meaning potential lies at the very heart of the nature of a language (i.e. that a language is and what it is for), and that the pervasiveness of polysemy is not merely an accident of history (or of synchrony), but instead it is a manifestation of the adaptability, flexibility, and richness in meaning potential. They discuss the meaning of adjective-noun combinations (e.g. safe beach) without any special reference to the properties of this particular construction. In this paper, I show that polysemy research should also take into consideration the properties of constructions. I argue that the polysemy of English adjectives is the result of the interaction of the language user with the particular linguistic “construction” (in the sense of construction grammar; e.g. Goldberg 1995).

Constructions constitute a very important part of context. I suggest that the linguistic construction and the language user constitute the “linguistic” ecology. In this view, a construction (given in a context) is analyzed as an environment with which the language user interacts (e.g. by hearing it or reading it) to pick up the meaning of a given expression.

A corpus-study of happy shows that out of 247 the use signifying “someone who has feeling of pleasure or contentment” (considered as the central sense based on the frequency in the sample) is found both attributively and predicatively (e.g. happy people; The boy was not happy), whereas the other non-central uses such as those signifying “faces suggestive of people feeling happiness” (e.g. happy faces) and “time in which people feel happy” (e.g. happy years) are only found attributively. Previous accounts do not explain why the sense availability of adjectives differs across different constructions. I argue that it is the attributive construction that allows both the central and the non-central uses to be found attributively. I maintain that the function of attribution is to characterize the referent not only literally, but also metaphorically and metonymically so that the speaker can describe the referent in the way s/he wishes to. The reason why the meaning of angry is more limited predicatively than attributively can be ascribed to the fact that predication does not urge flexible meaning inference for an extended sense (particularly so for a metonymic sense). Predication is suitable for a context of “aboutness” (i.e. it is suitable for referring to the immediately salient state of a referent).

## **21. A contrastive and diachronic analysis of the thematic openings of Finnish and German linguistic journal articles 1897-2003**

*Michael Szurawitzki, Åbo Akademi University, Finland*

My text linguistic study aims at analysing the thematic openings of Finnish and German linguistic articles both contrastively and diachronically (1897-2003). German was the central academic discourse at the beginning of the period in focus, and was the central discourse on philology. Finnish at the same point had only started to emerge as an academic language. Thematic openings of research articles can show most clearly how the authors place themselves in relation to the discipline and to other texts. Thematic openings, perceived in a contrastive rhetoric tradition (cf. Swales 1981 and 2004), also constitute a separate unit and thus can be made the object of an own analysis /study. The results of a preliminary analysis indicate that there can be detected significant development especially when it comes to analysing the articles' thematic openings. Functionally they have to exist in all articles, however, not necessarily in terms of formal aspects, when one moves back in time. That makes them a possible subject for both contrastive and diachronic analyses.

The articles analysed come from academic journals which look back on a long tradition in their respective countries. The German journal is the *Beiträge zur Geschichte der deutschen Sprache und Literatur* (PBB), which has continuously been published since 1878. The Finnish journal is the *Virittäjä*, first published in 1897. Both journals are among the leading (also) linguistically oriented academic media of their language areas. The articles selected for analysis are of linguistic content and written by native speakers. The time frame chosen for the diachronic analysis is 1897-2003, so that one can conduct an analysis starting with the *Virittäjä*'s first volume, i.e. 1897. The corpus (appr. 120 articles) has been compiled. The study aims at gaining new ground in the field of academic discourse and providing new insight as to how the relation between academic German, being the major academic discourse at the outset of our analysis, and Finnish, an emerging academic language, can be analysed both contrastively and over time. The relations between Finland and Germany have traditionally quite strong, and Germany e.g. remains Finland's most significant trade partner to the present day. The study's value also lies in contributing conclusions to aspects of German-Finnish intercultural academic communication, since the German linguistic articles analysed are addressed towards a global academic audience immediately, whereas the Finnish analysed articles can only by means of German-language abstracts (this is the case in some *Virittäjä* articles selected for the corpus) take part in intercultural communication.

## 22. Analyzing contextual features from the point of view of CxG and interaction

Camilla Wide, Svenska litteratursällskapet I Finland

**-- CANCELLED --**

One of the main problems within Construction Grammar for linguists interested in interactional features of grammatical structures is how to formalize contextual features in terms of attributes and values. This paper explores how contextual features can be described within the CxG framework - without compromising the basic assumptions made within CA-inspired interactional linguistics.

In his early work on Construction Grammar, Fillmore stressed the importance of considering communicative purposes and interactional features when describing grammatical constructions (1989). In my paper I will analyze the demonstrative pronoun *den* 'the, that' in Swedish from both a Construction Grammar and an interactional point of view. I will pay special attention to the use of *den* in Swedish dialects in Eastern Nyland in Finland where the grammaticalization of *den* toward a definite article, supplementing the normal *-(e)n/-et* definite article suffix, seems to have gone further than in standard varieties of Swedish. As the following examples show, the form *de* 'the/that' can be used together with noun phrases that lack modifiers but include suffixes of definiteness - even when referring to unique referents such as 'the time':

*gee hii de book-in* 'give here the book-the'  
*va mån de klåkk-an ska vara?* 'what may the klock-the [= time] be?'

In standard Swedish *den* is used as a definite article only in noun phrases including modifiers, cf. *bil-en* 'the car', *den röda bil-en* 'the red car-the'. Thus the Eastern Nyland use of *den* in noun phrases without modifiers, as above, has traditionally been analyzed as a case of double definiteness. However, the use of *den* in Eastern Nyland is closely connected to assumptions about common ground of a certain kind. Since *den* is a deictic pronoun, contextual information plays a crucial role in the use, interpretation and description of structures that include *den*. When analyzed more closely, the Eastern Nyland structures with *den* seem to be licensed by a construction which draws primarily on contextual information. In order to formalize this construction, tools for describing various aspects of contextual information are needed. The paper suggests a solution in which these tools are developed in terms of meaning potentials, in this case the potential of *den* as a (discourse) focus marker and rhetorical device.

### References:

Fillmore, Charles J. 1989. Grammatical Construction Theory and the familiar dichotomies. In R. Dietrich & C.F. Graumann (Eds.), *Language processing in social context*, 17-38. Amsterdam: North-Holland/Elsevier.

# *Workshop I: “Diachronic typology of voice and valency-changing categories”*

**Organizers:** *Dr. Seppo Kittilä, University of Turku/Helsinki, Finland, and Dr. Leonid Kulikov, University of Leiden, Netherlands.*

## *General description*

The last decades of the 20th century are marked with the rapid development of the typological study of voice and other valency-changing categories, such as passive, causative, reflexive, antipassive and anticausative (decausative). We now dispose of rich catalogues of possible systems of valency-changing derivations attested in the languages of the world. More specifically, we know a lot about the morphological, syntactic and semantic synchronic properties of these categories. On the other hand, a systematic treatment of these categories in a diachronic perspective is lacking. The rise, development and decline of these categories mostly remain on the periphery of the typological interests. Such an imbalance of the synchronic and diachronic typology (which is not limited to the valency-changing categories) has a number of reasons.

One of the main reasons for this imbalance can be found in the fact that synchronic linguistics have at its disposal the material of hundreds of languages of various genetic affiliation and different structural types, whereas the material for diachronic typological generalizations is much more limited. There are relatively few languages for which we dispose of textual evidence for the period sufficient to observe essential changes in the morphological system and syntactic types (say, 1000 years or more). Many of these languages belong to two major families, Indo-European and Afro-Asiatic. This unavoidably limits the typological diversity of the data. This being the state of affairs, it is advisable to start a diachronic typological research with collecting evidence from languages (language groups) with a history well-documented in texts for a sufficiently long time span (no less than 1000 years). On the other hand, in the case of languages with a less documented history, important generalizations can be obtained on the basis of comparison of genetically related languages, which can serve as a basis for reconstruction of possible scenarios of changes within the system of valency-changing categories. Approaching the history of a particular valency-changing category, such as passive or causative, it might be useful to trace the relevant category C (passive, causative etc.) from the earliest attested texts in an ancient language (L0) onwards up to its reflexes in the daughter languages (L1, L2 etc.). Of particular interest would also be - if available - evidence from the sister languages of L0 (L', L'' etc.), which can serve as a basis for a tentative reconstruction of the hypothetical history and possible sources of C in proto-language \*L.

These and related issues will be in the spotlight of our workshop “Diachronic typology of voice and valency-changing categories”. The workshop brings together scholars working on valency phenomena in both (1) languages (language families) with well-documented history (such as Indo-European or Semitic) and (2) languages which furnish less historical evidence but, nevertheless, can provide us with some valuable

data on the basis of comparison of daughter languages and linguistic reconstruction (as is the case with Uralic). Languages of different language groups from all over the globe will be examined in the workshop.

**The participants of the workshop and their affiliations** (tentative)

- 1) Carla Bruno (Università per Stranieri di Siena) → abstract in a separate file
- 2) Gerd Carling (Uppsala)
- 3) Dmitry Ganenkov, Timur Maisak and Michael Daniel (Moscow)
- 4) Riho Grünthal (University of Helsinki)
- 5) Steffen Heidinger (University Stuttgart & Paris 8)
- 6) Seppo Kittilä (University of Turku/Oulu)
- 7) E. Kondratyeva & E. Brechalova (Russian State University for the Humanities, Moscow)
- 8) Leonid Kulikov (Leiden University/Universität Göttingen)
- 9) Leonid Kulikov & Ilona Manevskaia (St. Petersburg)
- 10) Nikolas Lavidas (University of Athens)
- 11) Alexander Letučij, Alexander (Russian State University for Humanities, Moscow)
- 12) Igor Nedjalkov (St. Petersburg Institute of Linguistic Studies)
- 13) Irina Nevskaya (Frankfurt/Main)
- 14) Kjartan Ottosson (Norway)
- 15) Nicoletta Puddu (University of Pavia)
- 16) Chris H. Reintges (Leiden University) → abstract in a separate file
- 17) Uri Tadmor (Max Planck Institute for Evolutionary Anthropology, Leipzig)
- 18) Junichi Toyota (University of Lund)
- 19) Liana Tronci (Università per Stranieri di Siena) → abstract in a separate file

# Abstracts

## 1. Vedic *i*-forms from a functional view

Carla Bruno, *Università per Stranieri di Siena, Spain.*

The aim of this paper is to investigate the function of Vedic so-called ‘passive aorists’, a set of verbal forms – restricted to the 3<sup>rd</sup> sg. – characterized by a strong vocalism and a puzzling *-i*-ending, that actually occur both in passive – cf. *ástāvi* (STAV- ‘to praise’) in 1 – and non passive structures – cf. *adarśi* (DARŚ- ‘to see/to become visible’) in 2 and *pādi* (PAD- ‘to fall’) in 3 –.

- (1) *ástāvya agnir narāṃ suśévo*  
*vaiśvānarā ṛṣibhiḥ sōmagopāḥ* (RV X, 45, 12ab)  
 ‘Agni, the men’s kindly Vaiśvānara, the Soma’s keeper, has been praised by the ṛṣis’
- (2) *uṣā adarśi raśmibhir vyāktā* (RV VII, 77, 3c)  
 ‘Dawn has become visible, adorned with sunbeams’
- (3) *vājrasya yāt pātane pādi śuṣṇaḥ* (RV VI, 20, 5b)  
 ‘When Śuṣṇa has fallen at the vajra’s fall’

In fact, the non passive employ of *-i*-aorists and its relationship with the passive use has been a particularly long debated issue.

The analysis is carried on from a functional perspective and particular attention is devoted to the syntactic distribution of Vedic *-i*-forms in comparison both with active and middle forms. In particular, the examination of the different syntactic contexts shows that *-i*-forms cover a specific area inside the broader functional domain of middle inflection. This area can be easily defined in a syntactic framework.

Moreover, this perspective reveals striking analogies between *i*-aorists and *-ya<sup>te</sup>*-presents and highlights – besides the formal differences – a common principle leading to the development of a passive morphology in the present as well as in the aorist.

### *Selected bibliography*

- M. Benedetti, *Dispersioni formali del medio indoeuropeo*, in L. Costamagna & S. Giannini (eds.), *Acquisizione e mutamento di categorie linguistiche*, Atti del Convegno Annuale della SIG (Perugia, 24-26 ottobre 2003), Il Calamo, Roma, 2004.
- C. Bruno, *Forme della sintassi media. Due studi sulla lingua del Rgveda*, Guerra, Perugia, 2005.
- J. H. Jasanoff, *Hittite and the Indo-European Verb*, Oxford University Press, Oxford 2003.
- L. Kulikov, *The Vedic -ya-presents*, Leiden 2001.
- M. Kümmel, *Stativ und Passivaorist im Indoiranischen*, Vandenhoeck & Ruprecht, Göttingen 1996.

## **2. TBA**

*Gerd Carling, Uppsala, Sweden.*

### 3. Lability over time: comparative evidence from Lezgian languages

*Dmitry Ganenkov, Timur Maisak, and Michael Daniel, Moscow, Russia.*

Introducing an Agent participant into - or, conversely, deleting it from - the verbal valency normally requires morphological or morphosyntactic marking, causative in the former, anti-causative in the latter case. Exceptions from this rule are called labiles, or more specifically P-Labiles (e.g. Kibrik 1996), verbs that freely occur in both +Agent and –Agent contexts without valency changing markers.

The problem of labiles is well formulated in a cross-linguistic survey by Haspelmath (1993). Isolating some typical semantic features of labiles in the languages of the world, he then adds that these are necessary but by no means sufficient conditions of lability. Some predicative meanings are predisposed to lability ('boil', 'break'), but it is to a great extent up to the language in question to choose whether the verb is labile or not.

Thus, the phenomenon of lability combines semantic and lexical basis, in the sense that lability is more or less licensed by the verbal semantics cross-linguistically (labile domain), but in every given language is a lexical property. It is not infrequent that a labile has synonymous verbs that are strictly transitive / intransitive.

An insight may be provided by a diachronic study of lability in a group of related languages. What happens to labiles over time? When an originally labile verbal stem A drifts into a new meaning which is not typically labile and a stem B takes its place, there are several possibilities: A may remain labile (lexical factor stronger than semantic factor) or loose lability (semantic factor stronger than lexical factor); B may become labile (semantic factor stronger ...) or not (lexical factor stronger ...).

We are trying to consider these issues basing on the data from the rich in labiles Lezgian languages (Nakh-Daghestanian). The set of 'labile meanings' is relatively steady in Lezgian, including both such typically labiles as 'bend' (Agul *č'urXas*, Tabassaran *č'aIRus*, Lezgian *q'azunun*, Archi *xašas*) or 'burn' (Tabassaran *ugus*, Lezgian *kun*, Agul *ugas*, Rutul *hudH<sub>w</sub>as*, Archi *uk?as*) and labiles highly specific of Lezgian, especially 'kill~die' (Rutul *jiq'is*, Lezgian *q'in*, Agul *k'es*, Tabassaran *jik'*).

Our data shows that labiles are not a stable lexical class, diachronically, and verbs that are labiles in some languages may have strictly transitive and intransitive cognates across Lezgian. Both evolution from non-labiles into labiles and from labiles into non-labiles is attested. Thus, Tsakhur differentiate the aforementioned 'kill~die' meanings by a pair of verbs with the same stem but different preverbs *q-ek'es* 'die' vs. *g-ek'es* 'kill'. On the contrary, the verb that is reconstructed for proto-Lezgian as intransitive 'go' or 'come' develops in Budukh into a labile *č-a=R-* 'go, bring'. Another relevant observation is that prefixed verbs may be labile while the non-derived verb is not (as Rutul *at'us* 'cut' and *h-at'us* 'cut, get cut', other derivatives being strictly transitive and intransitive), or vice versa.

#### References

- Haspelmath, Martin. 1993. More on the typology of inchoative/causative verb alternations // Comrie, Bernard & Polinsky, Maria (eds.). *Causatives and transitivity*. (Studies in Language Companion Series, 23.) Amsterdam: Benjamins, 87-120.

- Khanmagomedov, B. G.-K. Očerki po sintaksisu tabasaranskogo jazyka. Maxachkala, 1970.
- Khanmagomedov, B. G.-K., Shalbuzov, K.T. Tabasaransko-russkij slovar'. Moscow: Nauka, 2001.
- Kibrik, A.E, Plungian V.A., Raxilina, E.V. Kauzativnaja konstrukcija v tabasaranskov jazyke. In: Kibrik, A.E. (ed.) Tabasaranskije etudy. Moscow, 1982.
- Makhmudova, S.M. Morfologija rutul'skogo jazyka. Moscow, 2001.
- Nikolayev, S.L., Starostin S.A. 1994. A North Caucasian etymological dictionary. Moscow: Asterisk publishers.
- Shejxov, E.M. Sopostavitel'naja grammatika lezginskogo i russkogo jazykov. Morfologija. Sintaksis. Moscow, 2004.

#### **4. Complexity versus simplification in the development of Uralic transitive clause**

*Riho Grünthal, University of Helsinki, Finland*

One of the main differences between historical and comparative studies of the Uralic and Indo-European languages is that nominal inflection has presumably played a considerably more significant role in the history of the Uralic languages. Because the written sources originate only from the second millennium A.D., there is only very little evidence on earlier historical valency-changing operations in the Uralic languages.

This paper seeks to discuss the correlation between changes in verbal and nominal categories in transitive clause in evidence of the north-western Uralic languages, i.e. Finnic, Saamic and Mordvin. In principle the change in the relation between the arguments of a transitive clause may happen a) in the form of subject, b) in the form of the predicate, c) in the form of the object, or in two or all of them. Given that almost all Uralic languages are nominative (absolutive) languages and only certain Khanty dialects display ergative patterns, the diachronic changes of the verb of the transitive clause and the object will be focused. We shall maintain that transitivity is a property of verb that is manifested either in the verb, in the object or both.

The historical development of the case of object in the Finnic languages that can be reconstructed since the earliest Proto-Uralic system includes the rise of a complex object marking system that is partly shared by Mordvin, and the decrease of the complexity after phonological attrition and merger of object-marking cases especially in Livonian and to some extent in Estonian. All available evidence suggests that the restructuring of transitive clause happened solely in terms of suffixal units that already had a grammatical status as bound morphemes when they participated in the process. Thus it appears that morphology was frequently restructured by means of semantic change and internal recombination.

While several Uralic languages such as Mari, Permic languages, Hungarian, and Samoyedic languages display a rather uniform transitive clause pattern, the dissimilarity between transitive clause patterns is striking especially in the Finnic and Mordvin(ic) languages. The existence of a special object conjugation adds the properties of verb in Mordvin, but even the cases of object have become morphologically more complex and exhibit an indefinite and definite declension. Although the verb and the object display different morphosyntactic categories, they are both used as indexes of transitivity and the properties of object. The contrary of the former is a considerable simplification that is seen in the transitive clause of Livonian, in which the merger of grammatical cases has caused overlapping between the case of subject and object in basic affirmative transitive clauses.

In sum the Uralic languages provide evidence on changes in transitive clause that reflect very different characteristics of the given language. The most extreme alternatives demonstrate a cumulation of morphological categories, whereas the opposite alternative is that properties that used to be marked by bound morphemes are integrated in syntax and analytic constructions.

## 5. French anticausatives in a diachronic perspective

*Steffen Heidinger, University Stuttgart & Paris 8, France.*

The goal of my contribution is to give a rough diachronic description of the valency changing category *anticausative* in the history of French.

[1.1] In Modern French there are two constructions to express anticausative semantics:

- |                                    |  |
|------------------------------------|--|
| (1) Pronominal Anticausative (PAC) | <i>Le verre s' est cassé.</i><br>the glass SE BE broken<br>'The glass broke' |
| Intransitive Anticausative (IAC)   | <i>Le verre a cassé.</i><br>the glass HAVE broken<br>'The glass broke'       |

Several proposals have been made as to what extend and in which parameters the two constructions differ from each other (cf. (2) and Larjavaara (2000) for a survey).

- |     |                     |                       |                                   |
|-----|---------------------|-----------------------|-----------------------------------|
| (2) | PAC                 | IAC                   |                                   |
|     | a telic/perfective  | atelic/imperfective   | Zribi-Hertz (1987)                |
|     | b externally caused | not externally caused | Rothemberg (1974), Labelle (1992) |
|     | c metaphorical      | Concrete              | Lagane (1967), Forest (1988)      |
|     | d eventive          | non-eventive          | Bassac (1995)                     |

Although these proposals do not contradict each other, not all of the proposed properties are always equally present. It seems to be the case that the two constructions possess a potential of several opposing properties that can be more or less salient/active depending on the verb that occurs in the construction. Since no author has either systematically investigated the relation of these properties with verbs/verb types, or disentangled the internal relation between these properties, the picture we have of the relationship and the differences between PAC and IAC in Modern French is still somewhat chaotic and unsatisfactory.

[1.1D] The relative chronology of the emergence of the two constructions is that IAC is older than PAC. The absolute chronology especially of the emergence of PAC is less clear. Most proposals, however, revolve around the 14th century, i.e. the end of the Old French and the beginning of the Middle French period, as the time when the new pattern emerged (see below).

Given the multitude of properties in which PAC and IAC (may) diverge in Modern French, one ultimately has to ask the question about the diachronic evolution of these differences. Have they all been there from the beginning (i.e. when PAC emerged), or were there several stages at which one or the other difference was more important?

[1.2. & 1.2D.] In the evolution from Latin to Modern French *se* and its processors have undergone a gradual change from free morpheme to clitic. Although *se* has been a clitic since the beginning of the history of French (9th century), several syntactic changes took place (e.g. concerning the position of *se* relative to the verb) after this point in time (Kaiser 1992). Some changes, e.g. those concerning its distribution with infinitives, took place after the emergence of PAC (~14th century). In its description of these changes the literature does not differentiate between the different functions of *se*.

It might thus be worth investigating whether the different functional variants of *se* behave differently during the changes.

[1.3. & 4] According to Labelle (1992), in Modern French PAC is the only productive pattern to derive an anticausative from its transitive-causative counterpart. This is due to the fact that verbs derived with the most productive suffixes to form verbs of change of state (*-fier* and *-iser*) only appear in PACs.

Still the labile pattern (cf. (3)) is far from being extinct in Modern French. According to Rothemberg (1974) there are 311 labile verbs in Modern French (out of 7080 examined verbs). (Note, however, that the intransitive variant of a labile verb does not necessarily display anticausative semantics.)

- |     |   |   |
|-----|---|---|
| (3) | <i>Jean a cassé le verre.</i><br>'Jean broke the glass' | <i>Le verre a cassé.</i><br>'The glass broke' |
|-----|---|---|

Lagane (1967) even notes that in Modern French the number of labile verbs increases through (i) the elision of *se* (PAC>IAC) and (ii) the transitivization of IACs. But still these two mechanisms are far from being productive and show no regularity.

[1.3D. & 4D] Although there are (again) no diachronic studies that might tell us something about the change of the productivity of the two constructions, some general remarks can be made anyway. The first one is that before the reanalysis of *se*, IAC was the only way to express anticausative semantics with a verb. One would thus assume that due to the lack of competing patterns - and despite the fact that not every IAC must have a transitive-causative counterpart, i.e. not every IAC is labile - the number of labile verbs was higher than after the emergence of the new pattern.

The following effects of the emergence of PAC on IAC are attested:

- |     |   |                      |                  |
|-----|---|----------------------|------------------|
| (4) | a | Addition             | (IAC => IAC+PAC) |
|     | b | Replacement          | (IAC => PAC)     |
|     | c | No Effect: Stability | (IAC => IAC)     |
|     | d | No Effect: No IAC    | (*IAC => PAC)    |

One group of verbs that systematically replaced its IAC through PAC (effect (4b)) are the verbs of change of state with the prefix *a-*. A pilot study on the development on the valency of 20 such verbs has brought among others the following results:

- 1) All 20 verbs could be used in IAC in 1300 and were labile at that point in time.
- 2) From 1300 on, the group of verbs has undergone a substantial change and all verbs have lost their intransitive use.
- 3) The emergence of the derived anticausative (PAC) varies from verb to verb. The data does not reveal one point in the history of the language when the encoding generally changes, but rather shows that a gradual spread over the verbs has taken place.
- 4) For some verbs there is a period attested when IAC and PAC coexisted as the anticausative alternants, while in other cases PAC has emerged after the loss of IAC.

[2.3. & 2.3D] In Modern French the clitic *se* has several functions, namely reflexive, reciprocal, middle, anticausative, and passive. This polysemy is due to the fact that in the process of reanalysis the older and oldest functions of the clitic were preserved while only the "adverbial" and non-valency changing function of *se* (the clitic underlined participation of the subject in the event [2.2 & 2.2D]) was lost.

With regard to the relative chronology of the emergence of the functions

anticausative and passive in French, Lerch (1938) among others argues that the se-passive emerged prior to the se-anticausative. A typological argument against this viewpoint is provided by Haspelmath (1990) who shows that the languages that use the same marker for reflexive and passive and not for anticausative are outnumbered by languages that use the same marker for reflexive, anticausative and passive or reflexive and passive. This would suggest a reanalysis path Refl.>Anticausative>Passive. Lerch (1938) notes, however, that the anticausative function of se had already existed in Early Romance and was only suspended in Old French. In this respect his proposal does not conflict with Haspelmath (1990).

## **6. An introduction to valency-change: functional and typological remarks**

*Seppo Kittilä, University of Turku/Helsinki, Finland*

In my talk, I will discuss the most frequent valency-changing categories from a functional-typological (as opposed to formal) perspective. These include passive, antipassive, reflexive, anti-causative, causative and applicative. My presentation also touches upon the notion of basic transitive clause as the notion is relevant to the paper and the workshop in more general terms. My talk serves as a starting point for the whole workshop. It is especially meant for those who are not familiar with all the valency-changing categories discussed in the workshop.

## 7. Valency-changing categories in Korean

*E. Kondratyeva, E. Brechalova, Russian State University for the Humanities, Moscow, Russia.*

1. Passive and causative in Korean are expressed by the same markers, with the exception of affixes **-wu-**, **-i.wu-**, **-hwu-** and **-y-** which are used for causative:

- passive: affixes **-i-**, **-ki-**, **-hi-**, **-li-**

- causative:

1. - affixes **-i-**, **-ki-**, **-hi-**, **-li-**, **-wu-**, **-i.wu-**, **-hwu-** (see Kholodovich, 1954) and maybe also **-chwu-**, **-chi-**, **-ukhi-**, **ikhi-**, **-kwu-**, **-u-**, **ay-** (Martin, p. 220)

2. analytic causative **-key ha-** (converb+auxiliary verb)

There is also benefactive construction:

- benefactive: analytic **-a/e cwu-** (**tuli-**) (converb+verb 'to give')

2. Competing markers:

(1) synchronically: The affixal way of making passive/causative form is non-productive and valid only for predicatives of Korean origin. The analytical way is productive.

(2) diachronically: The affixal way of making causative forms was attested at the 15th century text (one example of passive: *pwo-i-* 'to be seen') (see Kholodovich 1986). At the 17th century text these affixes were construed as passive as well as causative (Verkholyak). Expression of passive/causative at the 18th century text is close to Modern Korean (Kondratyeva 2005). As far as productivity and its change in the history is concerned we cannot say responsibly whether it has changed or not. The corpus of attested Middle Korean texts is limited. So based upon the attested texts we are inclined to say that the productivity has not changed.

3. Labile (ambitransitive) verbal forms:

All participle forms are labile verbal forms. While being secondary predication forms they reflect the valency-change but do not change themselves.

<i>ai-ka</i>	<i>pwo-nun</i>	<i>kaykwuli-ka</i>	<i>ka-n-ta</i>
<u>baby-Nom</u>	<u>see-Part</u>	<u>frog-Nom</u>	<u>go-Fin</u>
'frog observed by a baby goes'			

<i>ai-lul</i>	<i>pwo-nun</i>	<i>kaykwuli-ka</i>	<i>ka-n-ta</i>
<u>baby-Acc</u>	<u>see-Part</u>	<u>frog-Nom</u>	<u>go-Fin</u>
'frog looking at a baby goes'			

4. Paradigmatic features of morphological Xs:

They have the same paradigms as verbs without passive/causative affixes and have not changed in the history. Adjectives and copulas (**i-ta** 'to be', **ani-ta** 'not to be') belong to the class of predicatives as well as verbs. The causative affixes can be attached to adjectives, but not to copulas, and make transitive causative verbs. The markers of causative/passive do not combine with nouns.

5. Syntax: the main features of X constructions.

Agent in passive construction is expressed by Dat **-eykey** (in active sentence was expressed by Nom **-i/-ka**). Direct object of the original transitive verb expressed by Acc **-lul/-ul** can be promoted to the passive subject and is encoded by Nom. (**-i/-ka**).

The causee is expressed by Acc **-lul/-ul** in case of causative verb derived from intransitive verb or adjective. In the case of causative verb derived from transitive verb the causee is encoded by Dat (**-eykey**/colloq.variant **-hanthey**/literary variant **-(u)lo** (Instr.) **ha.ye-kum** (postverb)). The initial direct object is encoded by Acc **-lul/-ul** without any change.

6. Following types of verbs can be passivized/causativized:

vc	<	vt
	<	vi
	<	adj
vp(i)	<	vt
vpt	<	vt

## 8. Typology of valency-changing categories in a diachronic perspective: The case of Indo-European and Indo-Aryan

*Leonid Kulikov, University of Leiden, Netherlands*

The present paper concentrates on the diachronic aspects of the typology of transitivity oppositions and valency-changing categories. It also aims to draw attention to the regrettable imbalance of the synchronic and diachronic typological studies, due, in particular, to the lesser typological variety of data available for a diachronic research.

As a general approach for a study of a linguistic category (or group of categories) in a diachronic typological perspective, I suggest a systematic analysis of the evidence available from the earliest attested texts in an ancient language (L0) onwards up to the reflexes of the category under study in daughter languages (L1, L2, ...), compared to the material from the sister languages of L0. Such a method can be applied to the study of valency-changing categories (passive, causative, etc.) in languages (language groups) with a history well-documented in texts for a sufficiently long period of time (around 1000 years or more), such as Indo-Aryan, Latin/Romance, or Greek.

The paper will survey the evidence available from a number of ancient Indo-European (foremost, Indo-Aryan) languages. In the case of Indo-Aryan, the rich evidence collected by the Indo-European comparative linguistics creates a good basis for hypotheses about the origin and possible sources of the morphological categories attested in Old Indo-Aryan (Vedic Sanskrit) and thus provides material for a retrospective diachronic typological research. On the other hand, evidence from late Vedic and Middle Indo-Aryan texts, as well as from New Indo-Aryan languages, allows for a prospective diachronic study (how the Old Indo-Aryan categories develop into their reflexes in Middle and New Indo-Aryan).

A diachronic typological analysis of the reflexes of the transitivity markers and oppositions reconstructed for Proto-Indo-European uncovers a few basic types of development attested in daughter languages. On the one hand, several groups, including most Germanic, Romance and Slavic languages, replace the old syncretic marker of the valency-reducing categories, the middle type of inflexion, with a new one, mostly going back to the Proto-Indo-European reflexive pronoun *\*s(u)e-*. On the other hand, a number of Romance and Germanic languages attest the emergence and expansion of the labile patterning, i.e. the rise of verbs which allow for valency change (transitive/intransitive) with no change in verbal morphology (cf. English *open*, *change*, *break*). In their intransitive usages, labile verbs can function as anticausatives (cf. *The door opens*), agentless passives (cf. *The book sells well*), reciprocals (cf. *They kissed*). This type of evolution, well-attested in the **Western** part of the Indo-European area, might be called ‘**syncretic**’.

By contrast, some other daughter languages radically abandon the syncretic strategy and develop special markers for several intransitive derivations. These include, in particular, Indo-Aryan and Armenian markers of morphological passive going back to Proto-Indo-European suffix *\*-ie/o-*; Old Indo-Aryan reflexive pronouns *tanū-* (originally meaning ‘body’) and *ātmán-* (‘breath’); the reciprocal pronoun *anyó ... anyá-* (*anyonya-*) ‘another ... another’; productive morphological causative suffixes in Indo-Aryan (*-áya-*) and Tocharian (*-sk-*). One might call this type ‘**antisyncretic**’. An important feature (isogloss) shared by several **Eastern** Indo-European languages of the antisyncretic type, such as Indo-Aryan, Iranian, and Armenian, is the parallel development of the new non-syncretic passive and productive morphological causative.

## 9. Nominative/accusative, passive and ergative constructions in late Sanskrit and their reflexes in Classical Tibetan translations

*Leonid Kulikov & Ilona Manevskaia, Leiden and St. Petersburg*

The present paper focuses on the mapping of the basic syntactic patterns of Sanskrit onto the system of constructions in Tibetan. In particular, we will discuss possible ways of rendering the Sanskrit passive constructions by means of Tibetan quasi-passive patterns (with the clause-initial object noun).

Translating texts from Sanskrit (an Indo-European language of the nominative/accusative syntactic type) into Tibetan (a Sino-Tibetan language of the ergative-absolutive type) suggested that one of the Sanskrit syntactic patterns should be considered as the equivalent of the Tibetan non-marked ergative pattern (with the postposition *gis*). Quite naturally, the regular Sanskrit nominative-accusative transitive construction was often rendered as the regular ergative pattern in Tibetan translations. More difficulties were posed by rendering Sanskrit passive constructions. In such cases, Tibetan translators used several techniques for mapping passive patterns onto the much less variegated Tibetan system, in order to copy the rich syntactic variety of Sanskrit into their language.

In particular, we find the construction (which might be considered the ‘quasi-passive’ equivalent of the Sanskrit passive) with the object in the clause-initial position, sometimes with the topicalized agent noun phrase (marked by the topical postposition *ni*). Another common strategy was agent deletion: Sanskrit passive patterns could be rendered as simple intransitive constructions in Tibetan.

Most intricate was the relationship between the Sanskrit intransitive-passive construction with the resultative participle in *-ta-/-na-* and Tibetan syntactic patterns. In some varieties of late Sanskrit, the *-ta-/-na-* construction was reinterpreted as the non-marked standard syntactic model and, accordingly, the instrumental argument (passive agent) of this construction was reassessed as transitive subject. Subsequently, this pattern has been adopted as basic and further reanalysed as ergative (yielding ergative constructions in many Middle and New Indo-Aryan languages). This process was also supported by independent inner developments in the Old Indo-Aryan syntax, such as the decay of synthetic past tenses and expansion of the constructions with resultative participles in *-ta-/-na-*.

We can also assume the opposite influence of the Tibetan translations on the syntactic system of the source language, Sanskrit, within the common Indo-Tibetan tradition of text generation as maintained and preserved by bilingual Sanskrit-Tibetan scholars. In particular, the influence of the Tibetan ergative model could support the inner development of the ergative pattern in late Sanskrit texts.

## 10. The development of the Greek labile verbs

*Nikolaos Lavidas, University of Athens, Greece*

1. The aim of this paper is to explore the diachrony of the Greek labile types, i.e. of the verbs that show a valency alternation with no formal change in the verb. This valency alternation is characterized by verbs with transitive and intransitive uses, such that the transitive use of a verb V means roughly ‘cause to V-intransitive’ (Levin 1993). In Modern English the transitive (causative) (1a) and the anticausative (intransitive) verb (1b) have the same form:

- (1) a. *I broke the vase*                      b. *The vase broke*

In Modern Greek the anticausative verb bears active morphology (active suffix) (2a), namely it has the same form as the transitive verb (2b) (labile verbal forms). In anticausative structures as in (3a), however, the anticausative verb is marked with passive morphology (non-active suffix) as are the verbs with passive, reflexive or middle meaning (cf. Embick 1998):

- (2) a. *O kimas ksepago-se*                      b. *I Maria ksepago-se ton kima*  
           the meat.NOM defrosted.Act                      the Maria.NOM defrosted.Act the  
           meat.ACC  
           ‘The meat defrosted’                                      ‘Maria defrosted the meat’
- (3) a. *I epidosis tis veltio-thikan*  
           the records.NOM her improved.NonAct  
           ‘Her records improved’
- b. *I Maria veltio-se tis epidosis tis*  
           the Maria.NOM improved.Act the records.ACC her  
           ‘Maria improved her records’

Starting from synchronic analyses on intransitivity and anticausativity (Alexiadou & Anagnostopoulou 2004 and Theophanopoulou-Kontou 2004), we discuss: (i) the direction of the causative-anticausative pattern derivation (transitivization); (ii) the instability of the morphological marking of some semantic groups within the anticausative verbs in different periods of Greek; (iii) the crosslinguistic diachronic paths, as they are observed in the change of the Latin reflexive *se* to the reflexive and anticausative *se*, and in the rise of the labile patterning in English.

2. The anticausative members of the alternation in Ancient (Classical) Greek (even the verbs that have active morphology in Modern Greek) bore constantly middle/passive (non-active) morphology:

- (4) *en faragksi sipe-tai nekys*                      (Eurip. Aposp. 786, 2)  
       in ravine rot.NonAct corpse.NOM  
       ‘a corpse rots in a ravine’

Ancient Greek had three different voice suffixes: (a) active voice suffixes for transitive verbs (with direct objects in accusative), (b) middle voice suffixes for reflexives, anticausatives and transitive verbs with affective meaning (subject version), (c) passive voice suffixes for passive constructions. Middle and passive voice were

distinguishable only in the Future and Aorist Tense - all the other tenses bore the same non-active morphology. However, very soon, already in Ancient Greek, it was possible to use either middle or passive in a reflexive-anticausative or passive constructions.

Textual evidence indicates that the labile patterning in the later periods of Greek is a result of (a) the basic process for the production of novel valency alternations, that is transitivity (causativization), (b) changes in the morphology of the intransitive (anticausative) verbs.

(a) Causativization in Greek is not limited to a specific period of the language; examples of causativization are attested from all the periods of the Greek language. Two separate subcategories of causativization could be distinguished:

(i) *there are cases of causativization of non-active intransitives.*

(5) Postclassical Greek:

*id-o.Act* 'I gladden sb.' for *id-ome.NonAct* 'I am glad, I am pleased'

(ii) *an active basically intransitive verb is employed transitively (as a causative verb).*

For example, in Medieval Greek the verb *arosteno*, which was used only as intransitive in Ancient Greek ('I am ill'), occurs as a causative verb too ('I make somebody ill'):

(6) *o logismos gi gieni gi arost-i me* (Erotokr. A' 2094)  
 the thought neither cures neither makes ill.Actme.ACC  
 'the thought neither cures me nor makes me ill'

The causativization is very productive in Modern Greek (Hatzidakis 1927, Theophanopoulou-Kontou 2003). However, causativization is not possible with all intransitive verbs (cf. Hale & Keyser 1993, 2002):

(7) *\*me skarfalo-se sto vouno*  
 me.ACC climbed.Act on the mountain  
 'he forced/ made me climb on the mountain'

(b) A change in the morphological marking of some anticausatives occurs in Hellenistic Koine period. Many non-active anticausative verbs change to active (anigete - open.NonAct 'intr. open' → anig-i - open.Act 'intr. open'), while no change is observed in the causative use of the verbs (anig-i - open.Act 'trans. open').

(8) *ina anig-osin i ofthalmi imon* (New Testament, Matthaïos, 20, 31, 3)  
 for open.Act the.NOM eyes.NOM our  
 'so that our eyes open'

This change should be combined with the fact that, from the Hellenistic Koine period and on, the middle voice gradually waned and got replaced by the passive voice in reflexive and anticausative constructions. Moreover, it should be underlined that in this period neither the middle nor the passive voice could be used transitively with an affective meaning (subject version).

3. Similar diachronic changes could be observed in Latin and English, for example:

(a) In Archaic Latin, the reflexive *se*-pronoun co-occurs with the *-r* (non-active) type to denote anticausatives (Cennamo 1998). By the end of the 4<sup>th</sup> century anticausatives are formed by the means of the *se*-pattern instead of *-r* for all verbs

(Feltenius 1977). However, active morphology starts to be used increasingly for anticausatives, with verbs denoting spontaneous situation (*mutare* ‘change’, *scindere* ‘crack’) and situations that most typically involve an external causer (*sanare* ‘heal’, *vexare* ‘oppress’) (Hofmann & Szantyr 1965, Feltenius 1977).

(b) In the history of English almost all verbs expressing motion (such as *climb*, *bolt*, *burst*, *glide*, *run*, *spring*) which were exclusively anticausatives in Old English are found in later stages of English as causatives (with a direct object) as well (Mustanoja 1960, Visser 1973, Rissanen 1999). Causativization is very productive nowadays too (cf. Davidse & Geyskens 1998). Furthermore, changes in morphological marking are observed through the periods of the English language (cf. Krahe & Meid 1969):

(9) Old English: *causative* *gehwitian* ‘make white’ - *anticausative* *hwitian* ‘become white’ Middle English: loss of the causative prefix *ge-*

4. A detailed examination of the related data will reveal that the labile verbal forms occur (a) due to changes in the anticausative suffix or due to the loss of the causative prefix, (b) due to the process of transitivization, i.e. the transitive use of basically intransitive verbs. Finally we account for the relationship of the Greek voice system with the PIE voice system. PIE had a two-voice system, with the primary opposition between the active and the middle voice (Delbrück 1897, Brugmann 1916, Szemerényi 1996).

#### References:

- Alexiadou, A. & Anagnostopoulou, E. 2004: “Voice morphology in the causative-inchoative alternation”. In A. Alexiadou, E. Anagnostopoulou & M. Everaert (eds.), *The Unaccusativity Puzzle*. Oxford, New York: Oxford University Press, 114-137.
- Brugmann, K. 1916: *Vergleichende Laut-, Stammbildungs- und Flexionslehre der Indogermanischen Sprachen*. Part II, 3.1., 3.2. *Verbum finitum*. Strassburg: Trübner.
- Cennamo, M. 1998: “The loss of the voice dimension between Late Latin and Early Romance”. In M. Schmid, J. R. Austin & D. Stein (eds.), *Historical Linguistics 1997*, 81-100.
- Davidse, K. S. & Geyskens, S. 1998: “Have you walked the dog yet? The ergative causativization of intransitives”. *WORD* 49.2, 155-180.
- Delbrück, B. 1897: *Vergleichende Syntax der indogermanischen Sprachen*. Vol. II.
- Embick, D. 1998: “Voice systems and the Syntax/ Morphology interface”. *MIT Working Papers in Linguistics* 32, 41-72.
- Feltenius, L. 1977: *Intransitivizations in Latin*. Uppsala: Almqvist & Wiksell.
- Hale, K. & Keyser, J. 1993: “On argument structure and the lexical expression of syntactic relations”. In K. Hale & J. Keyser (eds.), *The View from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*. Cambridge, Mass.: MIT Press, 53-110.
- Hale, K. & Keyser, J. 2002: *Prolegomenon to a Theory of Argument Structure*. Cambridge, Mass.: MIT Press.
- Hatzidakis, G. N. 1927: “On causative diathesis” [in Greek]. *Proceedings of the Academy of Athens 1927 (January 27th)*, 16-21.
- Hofmann, J. B. & Szantyr, A. 1965: *Lateinische Syntax und Stylistik*. München: C. Beck.
- Krahe, H. & Meid, W. 1969: *Germanische Sprachwissenschaft*. Berlin: de Gruyter.

- Lavidas, N. 2005: The diachrony of the Greek anticausative morphology. Presentation at the 'Workshop on the morphosyntax of Greek', LSA Institute, MIT, 22 July 2005.
- Lavidas, N. & Papangeli, D. 2006: Deponency in the Diachrony of Greek. Presentation at the 'Deponency and Morphological Mismatches', Surrey Morphology Group, The British Academy, 16 January 2006.
- Levin, B. 1993: *English Verb Classes and Alternations*. Chicago: The University of Chicago Press.
- Mustanoja, T. 1960: *A Middle English Syntax*. Helsinki: Société Neophilologique.
- Rissanen, M. 1999: "Syntax". In R. Lass (ed.), *The Cambridge History of the English Language*, vol. III 1476-1776. Cambridge: Cambridge University Press, 187-331.
- Szemerényi, O. 1996: *Introduction to Indo-European Linguistics*. Oxford: Clarendon Press.
- Theophanopoulou-Kontou D. 2003: "The verbs of motion in Modern Greek and their causative use" [in Greek]. In D. Theophanopoulou-Kontou et al. (eds.), *Modern Approaches in Greek Linguistics*. Athens: Patakis, 236-255.
- Theophanopoulou-Kontou, D. 2004: "The structure of VP and the mediopassive morphology. The passives and anticausatives in Modern Greek". *Parousia* 15-16, 173-206.
- Visser, F. T. 1973: *An Historical Syntax of the English Language*. Leiden: E. J. Brill.

## 11. How can we deal with lability diachronically?

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Lability - ability of verbs to be both transitive and intransitive - is very problematic for diachrony. Absence of morphological markers does not allow to speak about grammaticalization and use semantic maps of meanings. However, I will try to show that sometimes we can try to speak about 'direction of derivation' in this case.

### 1. Tests for direction of derivation

#### 1.1. Meaning

##### a) more wide/more narrow

If one of the meanings of a labile verb is rather wide and the second is narrow and covers a small class of situations (or is used in a special sublanguages) we can often say that the second one is new. Cf., for example, occasionally labile verbs like *ujti* 'go out; make go out': the second use is colloquial and is used about discharging; therefore, it is secondary.

In Adyghe, the verb *zebXErEteqWEn* 'spill (transitive/intransitive); be destroyed (intransitive)' is not used in the meaning 'destroy'. Therefore, the transitive use of the verb is secondary.

##### b) more abstract/more concrete

We know that the meaning of lexical and grammatical units tends to move from more concrete to more abstract. This allows us to formulate another test. If one of the uses is more concrete than another one, the second one is possibly more recent.

The Spanish verb *ascender* 'go up; promote' can designate a physical movement in the intransitive use only, which means that this use is more recent (which is proved also by Latin data).

In Russian the verb *primknut* 'join' is only intransitive and does not have a 'physical' meaning. However, other verbs with this root (cf. *somknut* 'close') are transitive, with "physical meanings". This shows that the lexeme *primknut* first got a transitive 'physical' use.

#### 1.2. Meaning of other verbs from the same root

Transitivity presumably characterizes a whole stem; therefore, we can compare a labile verb with lexemes derived from the same root. We have already seen the case of the verb *primknut*. It is intransitive and means 'join' (for instance, a group). However, all other verbs derived from this root, as was shown above, are transitive - therefore, intransitivity of this lexeme is an old property.

#### 1.3. System of valency derivation markers of the language

The third test is connected with the system of derivational markers used in a particular language. Lability often fills the places, which do not have a derivational markers: for example, if a language does not have a causative marker, causativization will probably occur without any overt morphological devices. Cf., for example, English and Russian, where occasional causatives emerge (Russian *ujti* 'go out', occasionally 'make go out', English *walk*, which is used transitively rather rare). On the other hand, cf. Agul [Daniel', Majsak, Merdanova 2006], where occasional decausativization of the type 'to be washed (in a washing-mashing)' occurs.

Therefore, if the system does not have a causative marker, for any labile verb the

direction “transitive → intransitive” is much more probable than “intransitive → transitive”.

#### 1.4. Spontaneity scale

In [Haspelmath 1993] and [Ljutikova 2002] a spontaneity scale was proposed: the more left is the situation, the more probable is that it occurs spontaneously and that the intransitive verb denoting the situation is the base one and the transitive verb the derived one. This scale does not cover the distribution of lability (labile verbs in Lezgian or German, for example, occupy a non-continuous part of the scale), but can predict the “direction of lability”.

For example, the verb ‘grow’ denotes the situation which most often occurs spontaneously. Therefore, the Italian verb *crescere* ‘grow (transitive/intransitive)’ seems to be initially intransitive (which is proved by the data from Latin, where this verb is intransitive only).

#### 2. How can a verb become labile

Lability is often results from other, more “simple” phonological, morphological, syntactic and semantic mechanisms. At the moment we can see the following ways:

- (1) “Formal” coincidence of stems: (a) full: cf. English *melt* and so on; (b) partial: cf. German *erschrecken* - transitive past *erschreckte*, intransitive past *erschrak*.
- (2) Systemic coincidence of stems: cf. Hwarshi, where the antipassive forms were generalized as both transitive and intransitive forms.
- (3) Omission of a reflexive pronoun: cf. Latin *ago* ‘lead’ - *ago se* ‘lead oneself, i.e. go’ - *ago* ‘go’ (cf., for instance, Plautus).
- (4) Omission of the direct object and reinterpretation of the remaining argument as a patient or a subject of motion: cf. Russian colloquial *gnat* ‘make (smb.) run’ - *gnat mashinu* ‘to drive a car fastly’ - *gnat na mashine* ‘to drive in a car’ - *gnat* ‘run’. The name of vehicle is omitted and the causer reinterpreted as the subject of the motion.
- (5) Omission of the subject and reinterpretation of the object as a subject: cf. Avar *boxlri* ‘burn’, whose intransitive use is a result of omission: *boxlri* ‘burn (transitive)’ - ‘to be burned by smb. (transitive with omitted subject)’ - ‘burn (intransitive)’.

#### 3. Which verbs tend to become labile first?

Another important question is which groups of verbs tend to become labile before all others and are, therefore, the central group of labile verbs? The answer is different for different types of languages.

In Caucasian and Native American Languages this group seems to be verbs with a prototypical patient (see [Dowty 1991]): primarily, destruction verbs. Cf. Lezgian, where the labile class includes the verbs *q'in* ‘kill/die’, *xun* ‘break’, *qazunun* ‘tear’, or Adyghe, with labile verbs *ze{etHEN}* ‘tear’, *qWETen* ‘break’, *jEteqWEn* ‘spill’, *jeTaTen* ‘unbind’ and so on.

However, the situation in Indo-European and Semitic languages differs from that in Caucasian and American languages: the “most labile” verbs are phase and motion verbs. Cf. Ancient Greek (*baino* ‘go/lead’, *ballo* ‘throw/throw oneself’), Russian (*kružit* ‘roll’, *katit* ‘roll’), Bulgarian (*započna* ‘begin’, *prodълžava* ‘continue’) languages. Verbs like ‘break’, which tend to be regarded as “most prototypical” labile verbs, emerge later (cf. French, which has such verbs, and Latin and other Romanian languages without such verbs). So we can assume that in different language families lability emerges in different semantic groups of verbs and then “grammaticalizes” in languages like English, as a productive means of valency derivation.

Therefore, in some cases we can understand, which use of the verb is historically

primary (see 1) and how does lability emerge (see 2). These cases show that lability is not a single phenomenon - it can result from different language mechanisms, which finally lead to emerging of lability. The tendencies in 3 show that lability can also emerge in different semantic types of verbs. Generally speaking, lability emerges from more “syntactically simple” phenomena like the subject omission. The way of emerging of the lability is, therefore, related to the features of the language: cf. Avar case in 2, (5), which can take place because Avar is an ergative language in which the direct object and the subject of an intransitive verb take the same form. These and other tendencies will be analyzed in my talk.

**References:**

- Daniel’ M.A., Majsak T.A., Merdanova S.M. 2004. Kauzativy, dekauzativy i labil’nost’ v agul’skom jazyke.//Papers of the International Symposium LENCA-2. Kazan.
- Dowty D. 1991. Thematic proto-roles and argument selection.// *Language*, v. 67, №3.
- Haspelmath, M. 1993. More on the typology of inchoative/causative verb alternations.//Comrie B. and M. Polinsky (ed.). *Causatives and Transitivity*. Amsterdam/Philadelphia: Benjamins.
- Kibrik A.E. 2002. Očerki po obsčim i prikladnym voprosam jazykoznanija. Moscow.
- Ljutikova E.A. 2002. Russkije labil’nyje glagoly v tipologičeskoj perspektive. Handout.

## 12. Diachronic Paths of Valency-Changing Categories in Tungus-Manchu Languages

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The paper presents the comparative data pertaining to the valency-changing categories in Tungus-Manchu (TM) languages (causative, passive, decausative and reflexive). Languages under discussion do not belong to a well-documented group. First relatively extensive Manchu texts date back to the second half of the 17th century. As for the first extensive texts in Tungusic languages they appeared only in the first half of the XXth century. Nevertheless some important generalizations can be obtained on the basis of comparison of these genetically related languages. It is important to stress that Tungusic languages are much richer both in derivational and inflectional suffixes than Manchu (e.g. the quantity of case markers in Manchu is 5, whereas in Evenki - 12, the quantity of converbal markers in Manchu is 7 and in Evenki - 15). Differing from all Tungusic languages Manchu has neither person-number agreement markers for finite verb-forms, nor personal or reflexive possession markers for nouns, participles and converbs. All TM languages have productive causative markers (in Manchu it is *-bu /-vu* which can also function as a productive passive marker; in Tungusic languages it is *-vkAn/-vAn* and its numerous variants). All Tungusic languages also have non-productive causative marker *-v/-vu/-bu* which is obviously related to the productive Manchu causative-passive marker *-bu/-vu* (the number of non-productive causative derivatives varies in different Tungusic languages from 30 to 80). All TM languages have productive passive morpheme *-v/-vu/-bu* (and some other variants). The passive use of causative verb forms most probably appeared on the proto-TM stage due to the permissive meaning of some ancient causative forms (this type of semantic derivation has been attested in many languages of the world).

TM languages can be subdivided into three groups: 1) languages possessing both personal and impersonal passive constructions (Evenki, Negidal, Uilta (or Orok), Oroch and Udehe, 2) languages possessing only personal passive constructions (Even, Manchu, Solon), and 3) languages possessing only impersonal passive constructions (Nanai, Ulcha). It can be presumed that pra-Tungusic dialects had both diathesis types of passive constructions: personal and impersonal). The paper examines syntactic and semantic properties of two diathesis types of passive constructions paying attention to classes of verbs which can derive passive forms in the above mentioned languages. Personal passive constructions may contain the agentive object most often expressed by the dative-locative case form of the (pro)noun (suffix *-du*); less frequent is the instrumental case form (suffix *-di*), probably used under the influence of Russian. Personal passive forms are basically derived from transitive verbs (plus several intransitive weather verbs and a few verbs of motion; Evenki, Even, Negidal, Oroch). Most often personal passive constructions express the resultative or perfect meaning, less often - processive (actional), permissive or potential meanings. Even and Udehe are the only Tungusic languages which have personal passive constructions with retained direct object. Passivization of weather verbs found in Evenki, Even and Nanai leads to the increase of obligatory valencies by one. Impersonal passive forms in all Tungusic languages which possess them may be derived both from transitive and intransitive verbs and can express various modal meanings (Evenki, Nanai) and also the perfective meaning (Nanai).

Impersonal constructions containing passive forms derived from transitive verbs preserve direct objects. Impersonal passive constructions do not allow agentive objects.

Eight Tungusic languages have a non-productive decausative marker *-p* (= Uilta *-ptu* which probably was the original form of the decausative marker). The number of decausative derivatives varies from 30 in Evenki to 80 in Nanai and Even. Some scholars argued that the passive and the decausative markers might come from one marker but these forms radically differ in semantic and syntactic properties (only decausative derivatives denote spontaneous non-agentive states of affairs and only personal passive constructions allow agentive objects). In Evenki the decausative marker *-p* actually merged with the passive marker *-v*: they can often be used interchangeably and different dialects may prefer one or another variant (cf. Evenki *va-v-cha-n* / *va-p-cha-n* 'is/was killed'). Traditional Evenki grammars treat the passive and the decausative as one category and name it a "passive-reflexive voice". Still some Evenki transitive verbs retain this semantic and formal distinction, cf. Evenki: *ula-v-ra-n* 'was made wet' and *ula-p-ta-n* 'became wet (by itself)' from *ula-* 'become wet'. Other Tungusic languages strictly differentiate passive forms from decausative ones. The non-productive decausative marker *-p* can derive (with very few verbs) non-productive passive and reflexive verb forms, e.g. a) passive forms: Nanai *dabdi-* 'win' - *dabdi-p-* 'be defeated', *ango-* 'build' - *ango-p-* 'be built', b) reflexive forms: Evenki *aj-* 'save' - *aj-v-* 'save oneself' (this derivative can also mean 'be saved'), *va-* 'kill' - *va-v/va-p-* 'hurt oneself' (this derivative can also mean 'be killed'), *typa-* 'to make dirty' - *typa-v-* 'dirty oneself').

It is necessary to mention that reflexive constructions in TM languages are productively formed by means of reflexive pronouns (cf. Evenki *menmi* and Uilta *mepi* 'oneself'). Even is the only TM language in which decausative forms can form impersonal passive constructions. It is worth mentioning that in Manchu the productive causative-passive marker *-bu/-vu* can derive from very few transitive verbs semantically decausative and reflexive verb forms, cf.: a) Manchu decausative derivatives: *haha-* 'mix, entangle, confuse' - *haha-bu-* 'get/become entangled, confused, mixed', *nei-* 'open' (tr) - *nei-bu-* 'open' (intr); also 'be opened', b) Manchu reflexive derivatives: *dali-* 'hide, cover' - *dali-bu-* 'cover oneself', *achzha-* 'cut, wound' - *achzha-bu-* 'cut oneself', *lakya-* 'hang' (tr) - *lakya-bu-* 'hang oneself'. commit suicide). TM languages also have some other non-productive transitivity and intransitivity suffixes.

### **13. TBA**

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## 14. The development of the reflexive Middle Voice from Proto-Nordic to Modern Norwegian

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In this paper, I will sketch the development of the morphological category of Middle Voice or "Mediopassive"), from the earliest accessible, pre-literary stage of Old Norse to present-day Norwegian, with some glances at its Proto-Nordic origin.

1. In Viking-Age Old Norse, there was only one voice properly speaking, namely passive, expressed by the *verbum substantivum* and the past participle. The Middle Voice constituted another valency-changing category, combining reflexive, reciprocal, anticausative and sporadically a clearly passive use. In this last function it competed with the periphrastic passive, which was older and of general application. It appears that the purely passive reading of the Middle Voice recedes in the core language system for many centuries after the Old Norse period, at least in some respects, although it spreads, especially in the infinitive, in recent centuries, probably in part under Danish influence.

Concentrating mostly on the Middle Voice from now on, I start with its markers. The Middle Voice clearly involves a fully "grammaticalised" morphological suffix rather than a clitic as far back as textual evidence goes. There is no indication, however, that the semantic aspects of the "grammaticalisation" developed in tandem with the formal aspects. The semantic development was independent of the cliticisation and the subsequent change into a suffix, as can be seen from a reconstruction of the chronology involved and the fact that Old High German had a Middle Voice with all or most of the same essential semantic properties. The semantic development thus seems to have preceded the formal development. A 13th-century readjustment of the form of the Middle Voice marker from *-sk* to *-st* aligned its form with its status as an integral part of a complex of inflectional markers. At about the same time, the quite deviant forms of the 1st singular (obsolete active form with a 1st sg. suffix) were levelled with the rest of the verbal inflection. The subsequent further development of the Middle Voice suffix from *-st* to *-s* may have been triggered mostly by external influence. After the Old Norse period, the Middle marker has been heavily "degrammaticalised" in the sense that its applicability has been much reduced (see further below), although it has to some extent been "regrammaticalized" as a pure passive marker.

As for the productivity of the Middle Voice suffix in Viking-Age Old Norse, one must distinguish between its anticausative and other readings, in particular the reflexive and reciprocal ones. Judging by the abundantly documented 13th-century Classical Old Norse, where the semantic properties of the Middle Voice seem practically unchanged from the Viking Age, practically all semantically appropriate verbs seem to have been able to take the anticausative marker. The important exception has to do with "blocking", as anticausative Middle Voice forms were excluded from verbs paired with a pre-existing *na*-verb serving the same purpose, from transitive verbs formed by a historically causative *j*-suffix from an extant intransitive one, and to a large extent from verbs which from an earlier stage could be used both transitively and intransitively (in an anticausative or unaccusative sense). Although there was an alternation between reflexive Middle Voice and free reflexives for most relevant verbs, at least at the Classical Old Norse stage a certain lexical specialisation has occurred, as some verbs only show one of the alternants, at least in some of its senses. The reciprocal Middle Voice, where such alternation is ruled out by the absence of a reciprocal reading for the free reflexive, shows considerable degree of lexical specialisation, although many of the Middle verbs of this sort alternate with reciprocal pronouns at the Classical Old Norse

stage. There is insufficient evidence from the Middle Norwegian and Early Modern Norwegian periods in this regard, but in Modern Norwegian, the anticausative reading has mostly given way to collocations with the free reflexive, verbs with variable transitivity, or alternants with tenuous or absent formal links. The reflexive variant is mostly replaced with free reflexives, whereas the reciprocal reading is better preserved. Thus, the Middle Voice in Modern Norwegian is much more clearly a derivational category than earlier, apart from its purely passive use.

2. The functions and polysemy of the marker of the Middle Voice are discussed above, and so are the ways in which the basic meaning of that marker changes in the history. As for lexicalisation, taken as the lexeme-specific specialisation of meaning, there are abundant examples of this from the earliest textual evidence and at all subsequent stages. These are of quite diverse types. The development will be discussed in the paper. The etymology of the marker of Middle Voice is plain, namely reflexive pronouns in all but the 1st singular, where the personal pronoun was used instead. The Middle Voice marker does not express systematically any non-valency-changing meanings at any stage, although an "inchoative" meaning is attested at various stages in the form of deponents, with no clear indications of its secondary character.

3. The types of syncretism attested and their development are discussed under 1 above.

4. Labile (ambitransitive) verbs are attested at all stages. At the earliest stage, there are two types of such verbs, one where the intransitive ("detransitive") verb does not preserve the morphological case of the argument shared with the transitive verb, and another one where the detransitive verb keeps the dative, accusative or genitive case, even on a Theme argument, of the transitive verb. With the drastic reduction of the anticausative use of the Middle Voice in the later history of Norwegian, as well as the disappearance of morphological case, the single remaining type of detransitives is greatly expanded. It may be noted that no such development occurs in Icelandic. The details of this development in Norwegian are rather hard to follow diachronically for lack of texts.

6. Double Middle Voice marking is not possible at any stage.

7. The Middle Voice forms a complete paradigm at the earliest attested stage, except for inflected participles, which are not known from any stage of Norwegian language development. However, it is quite unclear whether there was a uniform paradigm at the Proto-Nordic stage, and it seems more likely that cliticised forms were only found in the 3rd person and the 1st sg., and possibly in the infinitive, with regular personal pronouns standing in other person-number combinations. In the later development, the range of inflected forms is greatly reduced, especially by the exclusion of polysyllabic MV endings in the past tense, ruling out past tense Middle Voice forms of the most productive inflectional class. Many verbs are restricted to the infinitive in their Middle Voice use in Modern Norwegian.

8. The Middle Voice marker can apply directly to nouns and adjectives to form deponents, especially anticausatives (of the "inchoative" type) in Old Norse.

9. The Old Norse Middle Voice in its passive reading can express the agent nominal in a prepositional phrase with *af* 'off'. In the reflexive reading, the Middle Voice marker, being a suffix already at the earliest stage for which there is textual evidence, cannot function as an anchor for any predicative dependents, which must agree with the subject instead. Although the most common semantic variants of the Middle Voice require a transitive base in Old Norse, MV of intransitive bases can be found, due to the great variety of lexicalised meanings.

## 15. The typology of reflexives in the ancient Indo-European languages

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Indo-European *\*se-/s(e)we* has traditionally been considered as a reflexive root (see Brugmann and Delbrück (1893) and many others later on). In this paper, I analyse the outcomes of *\*se-/sewe-* in the attested Indo-European languages, concluding that this stem is unlikely to have been originally reflexive, if we adopt a functional-typological definition of reflexivity (like in Faltz 1985). This thesis is supported mainly by the fact that the earlier attested Indo-European languages (Old Indian, Gatha Avestan, Hittite) show no clear traces of a reflexive use of *\*se-*. I will contend then that we must distinguish between *\*s(e)we-* and *\*se-*, the former being at the basis of the development of possessive adjectives, the latter being mainly at the basis of anaphoric pronouns. However, a certain degree of confusion between the two roots, due to their semantic proximity, as I will show, must have occurred.

On the basis of diachronic data, I will argue that *\*se-* was originally a simple marker of coreference with a previously mentioned referent. Afterwards, it specialized to mark topic continuity. Finally, in some languages it developed into a reflexive marker, while in others it was confined to non-reflexive uses.

As for *\*s(e)we-*, I suggest that it had originally the meaning of ‘own’ and ‘himself’, i.e. it was at the basis of the emphatic possessive adjective and of the intensifier (according to König’s 2001 definition). Such a combination is supported by typological data and allows us to account for the various outcomes of *\*s(e)we-* in the attested Indo-European languages.

Given that *\*se-/sewe-* cannot be considered as the original reflexive stem, I will also argue that it is impossible to reconstruct any primary reflexive strategy for Proto-Indo-European. I suggest that the creation of a primary reflexive strategy is a later phenomenon. It is worth noting that only a group of languages (Italic, Germanic, Slavic and Baltic), attested relatively late and in a circumscribed area, uses the root *\*se-/sewe-* to create reflexive pronouns (for the complex case of Greek see Puddu 2003). Other Indo-European languages (Old Indic, Tocharian, Avestan, Albanian) use a nominal strategy, while Hittite and Old Irish have no primary reflexive strategy.

### References:

- Brugmann, K., Delbrück, B. (1893), *Grundriss der Vergleichenden Grammatik der Indogermanischen Sprachen*, Strassburg, Trübner.
- Puddu, N. (2003), “Reflecting on *\*se-/swe-*, From typology to Indo-European and back” in Jones-Bley, K., Hudlin, M.E., Della Volpe, A., Robbins Dexter, M. (eds.) *Proceedings of the XIV annual UCLA Indo-European Conference*, 8-9 November 2002, *The Journal of Indo-European Studies*, Monograph, 47: 63-82.
- Puddu, N. (2005), *Riflessivi e intensificatori: greco, latino e le altre lingue indoeuropee*, Pisa, ETS.
- König, E. (2001), “Intensifiers and Reflexive Pronouns” in Haspelmath, M., König, E., Oesterreicher, W., Raible, W. (eds.), *Language Typology and Language Universals. An International Handbook*, Berlin and New York, Mouton de Gruyter: 747-760.

## 16. The diachronic typology of diathesis and valence changing processes in Ancient Egyptian

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1. DIACHRONIC DEVELOPMENT. With more than four thousand years of uninterrupted language history, Ancient Egyptian (Afroasiatic, 3000 BCE – 1300 CE) provides an ideal field of inquiry for historical linguistics, making it possible to follow morphological and syntactic changes over a long period of time. A salient aspect of Ancient Egyptian historical syntax is the typological shift from verb-initial language, in which the verb precedes the subject and the direct object (i.e. VSO: V(erb)-S(ubject)-O(bject)) to a subject-initial language, in which the subject precedes the verb and the direct object (SVO: S(ubject)-V(erb)-O(bject)) language (Loprieno 1995). Another way to look at this word order change is to say that Egyptian developed from subject-prominent language, in which the basic constructions express grammatical relations, to a topic-prominent language, in which word order alternations indicate various discourse relations (Li & Thompson 1976).

Syntactic change occurs side by side with morphological change with a general tendency to replace synthetic morphological patterns (with extensive use of affixation) by analytic ones (with a one-to-one correspondence between morphemes and words) (Hintze 1947; Schenkel 1966; Loprieno 1995). Significantly, morphological change does not necessarily entail loss, since the verbal-inflectional system of Later Egyptian (around 1500 BCE to the fifth century CE) and Coptic Egyptian, its most recent stage (from around the third to the thirteenth century CE) are morphologically more complex than those of earlier stages. However, there are significant changes in the area of diathesis and valence changing operation. While Earlier Egyptian (from 2500-1990 BCE) is a language with multiple passives, Coptic has no passive voice in the morphological sense. In earlier Egyptian, there is only one productive causative prefix *s-*, while there are three causative prefixes (*ti-*, *tre-*, *s-*) in Coptic.

2. VERBAL DERIVATION. Ancient Egyptian verb morphology is of the root-and-pattern type, with relatively abstract lexical items (roots) and stem patterns. The language makes extensive use of reduplication for the formation of (a) pluractionals (*dbn* ‘to go around’ ≈ *dbn-dbn*, *dbn-bn* ‘to go around and around’, (b) imperfective aspect, (*ḥz(j)* ‘praises’ ≈ *ḥz-z* ‘continues to praise’) and (c) a typologically marked reduplicative passive (*jwr* ‘to conceive’ ≈ *jwr-r* ‘will be conceived’). The three reduplicative stem patterns are in complementary distribution with one another, since reduplication can only apply once (Reintges 1994, 2003).

The three lexical prefixes *s-*, *ḥ-*, and *n-* have cognates in all other branches of Afro-asiatic; yet the original causative semantics of *ḥ-* and the reciprocal meaning of *n-* have been lost beyond recognition (*sq* ‘to beat’ ≈ *ḥ-sq* ‘to slaughter, behead’; *hm(j)* ‘to slander’ ≈ *n-hm* ‘to roar’). The fully productive causative prefix *s-* (*ḏ* ‘to be glorious’ ≈ *s-ḏ* ‘to glorify’) has certain intransitive uses as a reflexive (*pr(i.)* ‘to come forth’ ≈ *s-pr* ‘to approach’ (< to make oneself move).

3. THE EVENTIVE-STATIVE ALTERNATION. Earlier Egyptian meets the syntactic profile Greenberg’s (1966:79) Sixth Universal, according to which “all languages with a dominant VSO order have SVO as an alternative”. This cannot be the whole story, however, since verb-initial and subject-initial clauses are not semantic paraphrases, but differ systematically from one another with respect to the aspectual viewpoint from which a particular situation is represented. As shown in (1), the VSO clausal pattern conveys an event-related meaning, describing the acquisition of some knowledge (Reintges 2005)

- (1) The dominant VSO pattern
- |                            |      |           |              |
|----------------------------|------|-----------|--------------|
| <b>j-rx</b>                | Pjpi | pn        | mwt-f        |
| AUG-learn <sub>EVENT</sub> | Pepi | this.SG.M | mother-3SG.M |
- “This (King) Pepi will learn about his mother.” (Pyramid Texts 910a/P)

By contrast, the SVO “alternative” in (2) is used for the descriptions of conditions and states that do not change over time, such as the possession of some knowledge.

(2) The “alternative” SVO pattern

n-ntt	Dfiwt(j)-nxt	pn	rx(-w)	rn	n(j)	wfiſ-w
Since	Thoth-nakht	this.SG.M	learn-3M <sub>STAT</sub>	name	of.SG.M	fowler-PL.M

“Since Thoth-nakht knows the names of the fowlers” (Coffin Texts VI 22o/B1Bo)

To distinguish event- and state-denoting verbs on a morphological basis, Earlier Egyptian makes productive use of verbal- inflectional paradigms, the Eventive and the Stative, e.g. *Eventive j-rx* ‘to learn about’ versus *Stative rx(-w)* ‘to know (through learning)’. Earlier Egyptian thus represents the typologically marked case of a language where a stative-resultative verb form cannot be derivationally related to a non-stative base form, but where the members of the opposition, stative and eventive, are encoded by different types of inflectional paradigms (Nedjalkov & Jaxontov 1988, 29). In Coptic, the Eventive-Stative alternation is marked by apohonic alternations in the verbal stem (*Eventive rike* ‘to bend, turn’ ≈ *Stative rake, rakte* ‘to be bent’), while there are no concomitant word order alternations. Moreover, while there transitive-active Statives in Earlier Egyptian, transitive-based Statives in Coptic are uniformly intransitive and have an adjectival passive reading.

4. MULTIPLE PASSIVES. Earlier Egyptian is a language with multiple passives (Keenan 1985, Siewierska 1984). The one-to-many relation between active and passive verb forms produces sentence pairs of the following kind The three morphological passives are glossed as PASS1, PASS2, and PASS3).

- (3) n nd<sup>3</sup>r-w ĩw ?kr-w  
 NEG grasp-PROS you.M.SG earth.demon-M.PL  
 ‘The earth demons will not grasp you’ (Pyramid Texts 2202c/N)
- (4) a. n nd<sup>3</sup>r(-w)-k (...) jn jr(y)-w pt ũ nb  
 NEG grasp-PASS1-2sm FocMinhabitant-pm heaven earth every  
 ‘You shall not be grasped (...) by any inhabitant of heaven and earth’ (Coffin Texts VI 84e/B3L)
- b. n nd<sup>3</sup>r-w-t(j) nfr-k?-rſ jn [?kr-w]  
 NEG grasp-PROS-PASS2 Nefer-ka-re FocM earth.demon-pm  
 ‘(King) Nefer-ka-Re shall not be grasped by the earth demons’ (Pyramid Texts 2205/N)
- c. n nd<sup>3</sup>r-r-k jn ?kr-w  
 NEG grasp-PASS3-2sm FocM earth.demon-pm  
 ‘You shall not be grasped by the earth demons’ (*Jbj* 533 [pl.11])

The sample sentences in (3a-c) illustrate what has been called the canonical passive construction. Notice, however, that the expression of the demoted agent is uncommon in Semitic, Berber and many other Afroasiatic languages. In Earlier Egyptian, by contrast, the demoted agent phrase is encoded as the sentence’s focus by means of the focus particle *jn*, which also appears in questions, emphatic assertions and cleft sentences. The verb forms in (3a-c) can be identified as passives not only in relational terms, but also in terms of morphological marking.

While the active is morphologically unmarked, there are three different markers for the formal expression of passive voice. Passive 1s like *nd<sup>3</sup>r(-w)-k* ‘you will be grasped’ in (3a) are apophonic passives, where the passive 1 formative *-w* represents the [+high,+back] vowel /u/ that is associated with the second vocalic slot of the verbal stem. Passive 2s like *nd<sup>3</sup>r-w-t(j)* ‘will be grasped’ in (3b) contain the monosyllabic affix *-t(j)*, which follows the verbal stem and any temporal or aspectual affixes, such as the prospective marker *-w*. While passive 1s and passive 2s involve the affixation of morphological material that is phonologically unrelated to the derivational base, passive 3s like *nd<sup>3</sup>r-r-k* ‘you will be grasped’ in (3c) are marked internally by the reduplication of the final root

consonant (Reintges 1997; 2003; 2004). The reduplicative passive in Earlier Egyptian provides counterevidence to Keenan's (1985, 251) typological generalization that reduplication and gemination are not possible morphological expressions of passive voice.

5. PASSIVE EQUIVALENTS. Coptic Egyptian is a language without morphological passives. There is, however, an impersonal active construction, which is used as a functional equivalent of eventive passives (Reintges 2004). The impersonal active construction is compatible with a demoted agent phrase:

- (5) kan eštše **nt-a-u-aikhmalɔtize** mmo-s hitn {n}n-barbaros  
 or if REL-PERF-3PL-enslave PREP-3F.SG through the.PL-barbarian  
 "or whether she has been enslaved by the barbarians" (Hilaria 7, 31)

The auxiliary verb *tš* 'take' may impose a passive interpretation on its subject:

- (6) e-f-e- **tši-epitima** kata ne.u-kanon  
 REL-3M.SG-PREP-take-punishment according.to the.pl.3pl-rule  
 "He should be reprimanded according to their rules." (Praec. et instit. Pachom. no.17)

In Coptic, the Stative of transitive verbs has a resultative passive interpretation:

- (7) se-**showoret** awɔ se-showoret an  
 (PRES-)3PL-curse<sub>STAT</sub> and (PRES-)3PL-curse<sub>STAT</sub> not  
 "They are cursed and they are not cursed." (Shenoute III 154, 3)

The Stative passive is not attested with a demoted agent phrase, suggesting that stative formation is a detransitivisation process that eliminates the A argument and maps the P argument on the subject position.

5. THE 'ANTIPASSIVE' CONSTRUCTION. While the passive promotes the direct object (O) to the subject position, the corresponding antipassive puts it into a peripheral function (Dixon 1994, 146ff.). In Earlier Egyptian, the antipassive is characterized by degrading the object to a locative function (marked by *m* 'in').

- (8) sč-č bʔ-j m rmč-w jm(-y)-w jw nsrsr  
 beget-IMPF<sub>EV</sub> soul-1SG in man-M.PL in-NOMINAL-M.PL island flame  
 sč-č-j dʕs-j m nčr-wt  
 beget-IMPF-1SG self-1SG in goddess-F.PL  
 "My soul begets the people, who are in the island of the flame, (and) I myself beget the goddesses." (Coffin Texts I 364b-365b)

The antipassive can undergo (impersonal passivisation):

- (9) **jn-n-tw** m ʕq-w wn ʔhw  
 bring-IMPF-PASS2in friend-M.PL be mourning  
 "One brings friends whenever there is mourning." (Ptahhotep 349)

In Coptic Egyptian, the antipassive construct has been fully grammaticalized. It functions as an objective case pattern, with the same locative preposition *m* 'in' being used:

- (10) e-tetn-tši m-pej-rɔme e-tɔn  
 REL(-PRES)-2PL-take in-this.SG.M-man to-where  
 "Where do you take this man to?" (Mena, Mirc., 24<sup>b</sup>:1-6)

As an objective case pattern, the Coptic anti-passive has aspectual implications: it indicates that the P argument is not entirely affected by the verbal action. In other words, it is associated with an atelic

interpretation. The corresponding construct state *tšj-pej-rəme* 'take this man' is not be selected in present tense sentence like (10), because it indicates that the P argument is totally affected by the verbal action and hence, conveys a telic interpretation. Such a telic interpretation is incompatible with the imperfective aspect of the present tense, which entails that the verbal action is continuing and has not reached its endpoint.

7. DIACHRONIC TENDENCIES. I will explore two hypothesis for the general decline of diathesis (at least in the morphological sense): (i) the Eventive verbal stems in Coptic are less "finite" than in the earlier stages; i.e. it has acquired nominal features, which is traditional analyzed as being infinitives. Infinitives are, however, not differentiated with respect to valence and voice in the language, and (ii) Coptic shows features of a pronominal argument language, in which full noun phrase appear in the left or the right periphery of the clause (Baker 1996). Since left- and right-dislocation indicate the topic or focus status of the A or S argument, the subject position is no longer suitable as a target for valence operations like the passive, which are also related or have an impact on the information structure of the clause.

## 17. On the Development of Voice and Valency-Changing Affixes in Malay -Indonesian

Uri Tadmor, Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany

Malay-Indonesian is first recorded in a number of inscriptions dating from the 7<sup>th</sup> century, making it the second-earliest attested Austronesian language. The language of these inscriptions-referred to by linguists as Old Malay-is replete with Sanskrit loanwords, but its grammar is distinctly Austronesian. Today, Malay-Indonesian is the national language of Indonesia, Malaysia, Singapore, and Brunei, and is spoken by about 250 million people.

Old Malay had several verbal affixes, including the passivizing prefix *ni-* (examples 1-2), the causative prefix *maka-* (example 3), and the transitivity suffix *-i* (examples 4-5):

- (1) sa-wanyak-nya yang **ni**-ta:nam di sini  
 as-many-3 REL PASS-plant LOC here  
 “all those (trees) that are planted here”
- (2) yang ka:yu **ni**-ma:kan wuah-nya  
 REL tree PASS-eat fruit-3  
 “trees whose fruit are eaten [=fruit trees]”
- (3) yang wuat-nya ja:hat, **maka**-langit urang, **maka**-sa:kit, **maka**-gi:la  
 REL do-3 evil CAUS-tricked person CAUS-sick CAUS-mad  
 “(those) whose deeds are evil, who trick people, make (them) sick, make (them) mad”
- (4) yang ma-nyuruh mar-jjaha:t-**i** yang mar-jjaha:t-**i** yang wa:tu ni-pratistha ini  
 REL ACT-order ACT-evil-TR REL ACT-evil-TR REL stone PASS-erect this  
 “those who order (others) to destroy or destroy the stone erected here”
- (5) mang-uja:r-**i** drohaka, ni-uja:r-**i** drohaka  
 ACT-talk-TR insurgent PASS-talk-TR insurgent  
 “(those who) talk to insurgents (or) listen [lit., are talked to by] insurgents”

In modern Malay-Indonesian, the passive prefix *ni-* has disappeared, and its place has been taken by *di-* (examples 6-7); the causative prefix *maka-* has developed into a free morpheme that introduces sequential or causal clauses (examples 8-9); and the transitivity suffix *-i* has continued with virtually unchanged function and syntax (examples 10-11).

- (6) 1.500 Pohon **Di**-tanam di Sempadan Sungai Cisadane  
 1,500 tree PASS-plant LOC border river Cisadane  
 “1,500 trees have been planted on the banks of the Cisadane River.”
- (7) Tanam-an itu dapat **di**-makan buah-nya  
 plant-NOM that can PASS-eat fruit-3  
 “The fruit of that plant can be eaten.”

- (8) Kalau itu memang, **maka** ya kita kasih betul-kan saja.  
if that indeed then yes we give correct-CAUS just  
“If that’s indeed the case, then we’ll simply correct the situation.”
- (9) Saya shopping, **maka** saya ada  
1SG shop then 1SG exist  
“I shop, therefore I am.”
- (10) Bandung Me-masuk-**i** Musim Kemarau  
Bandung ACT-come.in-TR season dry  
“Bandung is entering the dry season”
- (11) TKI Mula-**i** mendatang-**i** Nunukan  
Indonesian.workers.abroad start-TR ACT-come-TR Nunukan  
“Indonesian workers have started arriving in Nunukan”

In addition to the historical transitivizing suffix *-i*, modern Malay-Indonesian has another, more productive transitivizing suffix, *-kan*. This suffix is used primarily to derive causative verbs. as can be seen in examples 12-13.

- (12) Me-masuk-**kan** hutan ke dalam agenda global  
ACT-come.in-CAUS forest to inside agenda global  
“Bringing forests into the global agenda”
- (13) Klik Bisa Men-datang-**kan** Dollar  
click can ACT-come-CAUS dollar  
“Clicking can bring in dollars.”

The development of the newer affixes-passive *di-*, causative *-kan*-is clearly related to the disappearance (in the case of *ni-*) or functional and syntactic change (in the case of *maka-*) of their predecessors. Yet the question remains-where did *di-* and *-kan* come from? And how did they develop into valency-changing affixes? As will be discussed in the paper, the prefix *di-* probably developed from a locative preposition, an unusual etymology for a passivizing affix. As for the causative *-kan*, it developed (more recently and more expectedly) from an earlier preposition, *akan*, still used in literary Malay-Indonesian and some outlying dialects. Finally, some of the affixes discussed in this paper are polyfunctional; for example, the transitivizing suffix *-i* may also have the additional meaning of ‘iterative’ or ‘intensive’, while the primarily causative suffix *-kan* is also used to derive benefactive verbs. These developments and phenomena will be explored using the guidelines presented in the questionnaire prepared for this workshop.

## 18. Transitivity as a trigger element in valency change in Indo-European

*Junichi Toyota, University of Lund, Sweden*

In this paper, the developmental path of valency alternation in Indo-European (IE) languages is analysed, particularly focusing on the alignment change and the emergence of the transitivity and its impact on the reorganisation of grammatical system. It is argued here that the alignment change triggered the emergence of transitivity, and varying degrees of integration of transitivity into the grammatical system of each language can indicate a type of alignment change and voice system each language has.

The distinction of the grammatical voice and the way it is grammatically expressed vary from language to language even within the IE languages. Celtic languages, for instance, have a very poor distinction, consisting of only the active and the middle (which is often considered the impersonal passive). Some Germanic languages such as German have the distinction between the active, the reflexive-middle and arguably the passive. Historically speaking, the voice distinction in Proto-Indo-European (PIE) was binary between the active and the middle. So the distinction found in the Celtic languages preserve old characteristics, and the one in languages like German is ternary, which clearly shows the change into a much more complex system. However, languages like English once had a ternary distinction like German (i.e. Old English), but later developed a binary distinction between the active and the passive. The binary system itself resembles the PIE voice system, but the middle is replaced by the passive.

This developmental path is closely related to the reorganisation of the grammar in general, triggered by the alignment change from active one (PIE) to accusative one. The most crucial factor relating to the change in the voice system is the emergence of transitivity. The variety among different languages is triggered by the way the transitivity is expressed. Some languages, such as Slavic, use the semantic-based one, i.e. transfer of energy from actor to undergoer is poorly encoded into their syntactic system, and the use of cases often helps to identify the direction of transfer. Other languages, such as English and Swedish, have encoded the transfer of energy into their structure and the transitivity can be expressed without any overt marking of cases. In these languages, the transitivity is syntactic. The direction of change concerning transitivity is from semantic one to syntactic one. So the grammaticalisation of transitivity into syntactic structure seems to influence the development of valency alternation.

The syntactic transitivity is mainly concerned with the number of arguments. Languages that do not allow the passivisation of monovalent verbs like *go*, *run*, etc. normally have the syntactic transitivity. These languages require the presence of the direct object in the active clause in order to form the passive. This system poses problems over the way the perception/mental verbs or the middle-related constructions are expressed. These verbs normally have two arguments. So they are syntactically transitive, but semantically intransitive (i.e. there is no transfer of energy). In English, for instance, these constructions (such as labile verbs, adjectival passive, constructions like *This TV needs fixing*, *This idea is incomprehensible*, *This book sells well*, *The book is printing*, etc.) are pushed aside into a marginal category. This awkwardness of distinction can be considered the source of the labile verbs. Since the transition from semantic transitivity to syntactic one is a gradual process and it has not been fully completed, one can observe varying types of voice distinction. In general, languages

with syntactic transitivity have a rigid passive voice, and the middle-related constructions in these languages are losing their ground (e.g. English). Those which still preserve the semantic-based transitivity often lack the labile verb (e.g. Celtic languages). Other language families, such as Slavic, form varying intermediate stages.

So the alignment change triggered various reorganisation of the grammatical system, ranging from the gender system to the word order, and the voice distinction is also one of them. Due to the emergence of transitivity, languages started to develop the passive, and the middle-related constructions such as labile verbs are pushed into a marginal category. The change into the accusative alignment, however, has not been completed and various residues can be found. This makes the pattern of valency alternation very diverse across the IE languages.

## 19. “Middle” forms in Ancient Greek

Liana Tronci, *Università per Stranieri di Siena, Spain.*

This paper deals with a much debated topic in Indo-European studies, namely the complex interaction between forms and functions in the domain of “middle” syntactic structures. In particular, the research takes into account the employ of Ancient Greek present and aorist forms, in a *corpus* consisting of the Homeric poems and hymns, Hesiod’s poems and Herodotus *Histories*.

A variety of different aorist forms characterize “middle” structures: not only forms with middle endings – which occur in the present too – but also forms with -η- or -θη- (and active endings). As regards their distribution, -η-/-θη-forms and forms with middle endings sometimes overlap, sometimes are complementary. Interestingly, a subclass of middle structures is characterized by middle endings but never by -η-/-θη-, whereas another one is characterized by -η-/-θη- and only rarely by middle endings. So, -η-/-θη- and middle endings – both related to “middle” syntactic domain – don’t show the same distribution.

In particular, aorists with middle endings occur in different types of middle structures (even if they are very rare in some structures, like the passive), whereas -η-/-θη-forms cover a narrower functional domain. The function of -η-/-θη-forms is still a controversial issue (cf. Jasanoff 1978, 2003; Di Giovine 1996: 262-267; Harðarson 1998). Two different functions are traditionally assumed to coexist in the class: a passive one (ex. 1) and a second one (ex. 2), which is clearly more difficult to define (differently labelled as “medial”, “intransitive”, “fientive”).

(1) HOM. II. XV 636-8

[...] ὡς τότε Ἀχαιοὶ  
θεσπεσίως ἐφόβηθεν ὑφ’ Ἑκτορι καὶ Διὶ πατρὶ  
πάντες [...]  
‘even so were the Achaeans utterly panic-stricken by Hector and father Zeus’

(2) HOM. II. XXIV 785

ἀλλ’ ὅτε δὴ δεκάτη ἐφάνη φαισίμβροτος ἠώς  
‘but when the tenth Dawn arose, giving light unto mortals’

A close investigation of the distribution of -η-/-θη-forms leads to discovering a common feature to the passive and non-passive employ and drawing an overall picture of the relationship between -η-/-θη- and middle endings inside the “middle” functional domain both in a synchronic and in a diachronic perspective.

### REFERENCES

- Di Giovine P. (1996), *Studio sul perfetto indoeuropeo. Parte II, Il Calamo*, Roma.  
 Harðarson J. A. (1998), *Mit dem Suffix \*-eh<sub>1</sub>- bzw. \*(e)h<sub>1</sub>-i-e/o- gebildete Verbalstämme im Indogermanischen*, in W. Meid (ed.), *Sprache und Kultur der Indogermanen. Akten der X. Fachtagung der Indogermanischen Gesellschaft* (Innsbruck, 22.-28. September 1996), Institut für Sprachwissenschaft der Universität Innsbruck, Innsbruck, p. 323-339.  
 Jasanoff J. H. (1978), *Stative and middle in Indo-European*, Institut für Sprachwissenschaft der Universität Innsbruck, Innsbruck.  
 Jasanoff J. H. (2003), *Hittite and the Indo-European Verb*, Oxford University Press, Oxford.

## *Workshop II: “Context Effects in Spatial Language”*

**Organizers:** *Prof. Mila Dimitrova-Vulchanova, Norwegian University of Science and Technology, Norway, and prof. Emile van der Zee, University of Lincoln, UK.*

### *Workshop description*

Spatial Language refers to any linguistic element that is able to encode spatial properties, such as spatial prepositions ('above'), spatial verbs ('to crawl') and spatial adjectives ('round'). The conceptual/semantic properties of Spatial Language have been shown to derive from syntax, language specific semantic properties, the categorisation of space, and the interface with spatial representation (van der Zee & Nikanne, 2001). When considering the conceptual/semantic properties of Spatial Language not only spatial features (van der Zee Slack, 2003), but also features relation to, e.g., object function (Carlson & van der Zee, 2005; Coventry & Garrod, 2004) have been shown to play a role. This workshop investigates to what extent the linguistic or spatial context in a reference situation contributes to the meaning of Spatial Language. The workshop addresses such questions as 'Are features derived from a linguistic or spatial context by definition extra-lexical? Do they only play a role in processing, or are structural notions in the lexicon necessary to capture their influence? How do contextual features interact with spatial features, functional features or other features to represent the conceptual/semantic properties of Spatial Language?

Selected papers from the workshop will be published in an edited volume (working title Context Effects in Spatial Language) in the Oxford University Press Language and Space series.

### **References**

- Carlson, L. A. & van der Zee, E. (2005). Functional features in Language and Space. Oxford: Oxford University Press.
- Coventry, K. R. & Garrod, S.C, (2004). Saying, seeing and acting. The psychological semantics of spatial prepositions. Psychology Press. Hove and New York.
- van der Zee, E. & Slack, J. (2003). Representing direction in Language and Space. Oxford: Oxford University Press.
- van der Zee, E & Nikanne, U. (2001). Cognitive interfaces. Constraints on linking cognitive information. Oxford: Oxford University Press.

### **Important dates**

Manuscripts: September 21st, 2006: 6-8 page submissions. For submission requirements, please contact Emile van der Zee ([evanderzee@lincoln.ac.uk](mailto:evanderzee@lincoln.ac.uk)). Notification of acceptance of Manuscript: December 21st, 2006.

## **Invited Speakers**

### **1. Context and Spatial language: Multiple Constraints, Modalities and Meaning**

*Kenny Coventry, University of Northumbria, UK*

## 2. Force dynamics and the semantics of causal verbs

*Phil Wolff, Emory University, Atlanta GA, USA.*

The *dynamics model*, which is based on Talmy's (1988) theory of *force dynamics*, characterizes causation as a pattern of forces and a position vector. In contrast to counterfactual and probabilistic models, the dynamics model naturally distinguishes between different cause-related concepts. In this talk, I show how it specifies the system of meanings encoded by the verb *cause* and related verbs (e.g., *cause*, *make*, *let*, *enable* and *prevent*), often called periphrastic causatives.

According to the *dynamics model*, periphrastic causative verbs based on the concepts CAUSE, ENABLE, and PREVENT can be captured in terms of three dimensions: 1) the *tendency* of the patient for the endstate, 2) the presence or absence of *concordance* between the affector and the patient, and 3) progress toward *an endstate*. CAUSE and ENABLE verbs both involve the occurrence of a result; CAUSE and PREVENT both involve a lack of concordance between the affector and the patient; and ENABLE and PREVENT involve patients that lack a tendency for the endstate. Since each type of verb shares one feature in common with each other type of verb, the dynamics model predicts that verbs encoding CAUSE, ENABLE, and PREVENT should be equally similar in meaning. If we were to plot the verbs in a similarity space, we should find three main clusters residing roughly equidistant from one another. This prediction was confirmed in a series of multi-dimensional scaling studies in which participants sorted sentences from the British National Corpus that contained periphrastic causative verbs (Wolff & Song, 2003).

By analyzing the concept of CAUSE into patterns of forces, the dynamics model also specifies how the concept of CAUSE might be grounded in physical quantities in the world. To test this aspect of the model, participants watched 3D animations of realistically rendered objects with trajectories that were wholly determined by the force vectors entered into a physics simulator. In these experiments, the very same physical forces used to generate physical scenes were used as inputs into a computer model to predict how those scenes would be described. Participants' linguistic descriptions of the animations were closely matched by those predicted by the model (Wolff, 2006; Wolff & Zettergren, 2002).

Finally, the dynamics model specifies units of cognition that can be linked together to form causal chains by using the resultants of one configuration of force as the affector in the next configuration of force. I will discuss how this approach allows for the representation of complex causal predicates, such as LET and certain senses of CAUSE and PREVENT.

## Abstracts

### **3. Perspective selection in giving on-line directions: the impact of Figure features, direction of motion, addressee feedback, and gender**

*Emile van der Zee (Department of Psychology, University of Lincoln), Laura Daley (Department of Psychology, University of Lincoln) and Shaun Lawson (Department of Computing and Informatics, University of Lincoln)*

Most studies on navigation descriptions have analyzed linguistic output with respect to perspective use in terms of route and survey perspectives. This study also considered gaze perspective. In an on-line task a speaker directed the experimenter through a maze, without landmarks, on a computer screen. The experimenter made no mistakes, one mistake, or two mistakes. An analysis of the participants' descriptions revealed that speakers mainly used a route perspective, followed by a gaze perspective, and finally a survey perspective. There is no difference between perspective uses at path points where the path changes direction. As predicted a moving Figure with eye-and-nose features increased the use of route perspective compared to a featureless Figure, gender did not have an influence on perspective selection, mistakes by the experimenter increased the use of a survey perspective, and this effect was not sustained. These results fit Schober's (1995) minimum effort hypothesis, and Pickering and Garrod's (2004) alignment model in relation to perspective use. We claim that the co-composition of a directional term (e.g., "left") with a matrix verb either results in the activation of a reference frame for describing object location (for BE verbs), or a perspective for object motion (for GO verbs). Examples for such co-composition phenomena are given.

#### **4. Effects of distance, function and distractor on the terms near and far.**

*Adams Karen. M. & Emile van der Zee, University of Lincoln, Lincoln, UK*

The spatial template theory (Logan & Sadler, 1996) proposes that distance should not have a detrimental effect when apprehending spatial relations and a preference of the term *near* over *far* has been found when locating a target (Mainwaring, Tversky, Ohgishi & Schiano, 2003). Functional relationships have also been found to play a critical role in describing an object's spatial location (Carlson-Radvansky, Covey & Lattanzi, 1999). Further research has reported a negative influence of distractors on spatial prepositions (Carlson & Logan, 2001). These experiments examine the effect that the following four factors have on judgements of near and far; preposition (*near* and *far*), distance (NEAR and FAR), function, and distractor.

Participants viewed one of four conditions: functionally related objects, functionally unrelated objects, related objects with a distractor, and unrelated objects with a distractor. Objects were always presented in pairs with a descriptive statement and projected onto a wall for participants to view. In each condition the distance between objects and the term were manipulated. Participants rated how appropriately the statement described the image using a 7-point Likert scale.

Analysis using a four-way (distance x term x function x distractor) mixed repeated measures ANOVA was conducted on the mean appropriateness ratings. A significant main effect of distance and term was found with *near* being rated more appropriately in both cases. A two-way interaction between function and distance revealed that at the FAR distance functionally related object pairs were rated as less appropriate than the unrelated object pairs. A three-way interaction was shown between term, function and distractor; the main finding being that both functionally related and unrelated objects were rated as less appropriate with the term *far* regardless of distractor presence. With the term *near*, ratings became significantly more appropriate when a distractor was present.

Although the observed distance effect provided no support for the spatial template theory (Logan & Sadler, 1996) it could have been due to either, differences in visual angles between the two experiments or the different experimental methods employed (reaction times vs. rating scales). The preposition *near* was rated as more appropriate than *far* which supports the suggestion of Mainwaring et al (2003) that *near* is preferred as it is more informative. Functionally related objects were rated less appropriately than unrelated objects at the FAR distance suggesting that functional relationships made objects appear closer. This supports Carlson-Radvansky et al (1999) who claim that function has a role when describing objects' spatial locations. Distractor presence made ratings more appropriate with the term *near* when objects were unrelated but had no impact when objects were related. This finding suggests that functional relationship was perceived as more salient than the distractor. In conclusion it has been found that distance, function and distractor impact on how appropriate the terms *near* and *far* are rated, but these effects are variable and interact with the presence of the other factors.

#### **References:**

Carlson, L. A. & Logan, G. D. (2001). Using spatial terms to select an object. *Memory and Cognition*, 29, 6, 883-892.

- Carlson-Radvansky, L. A., Covey, E. S. & Lattanzi, K. M. (1999). "What" effects on "where": Functional influences on spatial relationships. *Psychological Science*, 10, 6, 516-521.
- Logan, G. D. & Sadler, D. D. (1996). A computational analysis of the apprehension of spatial relations. In P. Bloom, M. A. Peterson, L. Nadel & M. F. Garrett (Eds). *Language and Space*. Cambridge, MA: MIT Press.
- Mainwaring, S., Tversky, B., Ohgishi, M. & Schiano, D. (2003). Description of simple spatial scenes in English and Japanese. *Spatial Cognition and Computation*, 3, 3-42.

## 5. Concept, Context and beyond: Manner of motion verbs encoding, and relevant bits of information

*Mila Dimitrova-Vulchanova and Matthias Weisgerber, Norwegian University of Science and Technology, Norway, and University of Konstanz, Germany.*

In this paper we offer a formalization of which kind of factors enter into utterance interpretation in the case of (manner of -) motion verb encoding.

### 1 The Problem

What is ‘context’? In a very wide sense, context could be defined as knowledge available in the same place and time as an event. Compare three common definitions (which we will call narrow- / mid- and wide-focus):

1. Narrow-focus definition: Context is what is simply co-occurring in the string (string adjacency).
2. Mid-focus definition: Context is “discourse that surrounds a language unit and helps to determine its interpretation [syn: linguistic context, context of use] (Source: WordNet (r) 1.7)”
3. Wide-focus definition: Context is “the set of facts or circumstances that surround a situation or event.; ex. ‘the historical context’ [syn: circumstance] (Source: WordNet (r) 1.7)”

The first definition is close to Pustejovsky’s (1995) notion of *co-composition*, a process of unifying information where both items contribute to each other’s interpretation. Both definitions 1 and 2 do not target using all kinds of information that can be subsumed as ‘conceptual knowledge’ – since only parts of the language string in 1, and only parts of the discourse in 2, are the material from which con-textual knowledge is derived. Definition 3, while much wider, seems to address an infinitely huge and unsorted set of information (‘facts and circumstances’), which is not directly usable as a source of information while modeling.

Let us assume that context is more than suggested in definitions 1 and 2 above. Let us define context in a broad way as ‘*relevant bits of knowledge* available in the same place and time as an event.’ To get a formal finite set of knowledge, ready to be taken into account in a specific modeling situation, however, we will have to answer the question ‘Which bits of the information available are relevant?’ We will come to the conclusion that it is the model itself that has to decide which units of conceptual knowledge and world knowledge (which, in the case of motion verbs, comprises physical as well as spatial knowledge and reasoning) have to be taken into account in a specific situation.

### 2 Comparing Models

Although our argumentation may be seen as similar to Relevance Theory (Wilson and Sperber (2004)), we do not find formal answers there. Also to be mentioned is lexical pragmatics: here the aim is to derive a more complex utterance interpretation taking semantic content as the basis and mapping word semantic content onto larger units of complex meaning (cf. Blutner (1998), among others, for lexical pragmatics, and Wilson (2004) for a link between relevance and lexical pragmatics).

When formalizing *conceptual* knowledge, one has to establish a definitional border between conceptual knowledge and a type of knowledge that is ‘world knowledge’. In other words, which conceptual constituents are relevant in a situation

and thus enter into situation modeling? We will discuss this issue comparing current formal theories of conceptual knowledge, and then offer an illustration based in cases from the domain of motion verbs, a central example of a domain where semantic content (richly) interacts with conceptual knowledge and spatial representation (see Weisgerber (forthcoming) for an elaboration of a 3-level architecture).

The conceptions of conceptual knowledge that have been proposed can be roughly divided in (1) theories that differentiate between a semantic and a conceptual component (cf. the treatment of motion in Kaufmann (1995), and cf. Bierwisch and Lang's (1989) two-level semantics), often treating the latter as 'all remaining information that is not semantics and therefore not formalized' (as is done, for example, in model-theoretic semantics), (2) cognitivist theories that assign all the modeling work to a non-formal representation level, cf. Lakoff (1987), and (3) theories that focus on explicitly modeling the interplay between semantic and conceptual structure. Such frameworks are, among others, Jackendoff's Conceptual Semantics (cf. Jackendoff (1983, 1987, 1990), who maintains the idea of an indirect linking of spatial cognition to language via conceptual structure which is seen as an interface between both), Pustejovsky's (1995) Generative Lexicon, and Barsalou et al's (1992, 1993) frame theory.

Theories of the latter kind require a more formal view of what conceptual knowledge is. We will evaluate these frameworks with respect to how conceptual (and thus, contextual) knowledge is integrated in modeling processes, and how suitable they are for modeling manner of motion.

### 3 Example case: motion situation encoding

With these quite general considerations in mind, we will now narrow down onto the domain of 'motion verb encoding'. On the basis of relevant empirical evidence, we will finally propose our own model. We consider 'run' as an example.<sup>3</sup> Our goal is to show how and to what extent information about aspects of manner and path should be allowed to enter into linguistic situation modeling.

#### 3.1 Lexically encoded Parameters

Dimitrova-Vulchanova (1999) argues that for lexical items (e. g. verbs) there is a distinction between two types of lexically encoded information: *fixed parameters* and *specifiable parameters*.

– *fixed parameters*, in the domain of motion verbs, usually concern trajectory- and path orientation (which conforms with a basic axial-direction system, cf. Landau (2003)), less commonly they concern path origin and -end. For an illustration, in 'fall' we find the parameters [fixed / vertical downward & bounded path (initial bound)]. We find supportive evidence in the Brown Corpus where 35% 'fall' occurrences are in the context of 'into' / 'down' / 'to' PPs vs. an equal percentage of 'PP-bare' occurrences. These findings are similar to Tortora's (1998) Further Specification Constraint (only resultative XPs compatible with the kind of result inherent in the verb are grammatical in the context of verbs like 'arrive', 'go').

– *specifiable parameters*, again in the domain of motion verbs, include parameters like path beginning and -end, among several others. Unlike fixed parameters, specifiable parameters are open to interpretation and can be filled out on demand (role of co-context). We will illustrate both on the example of 'run'.

<sup>3</sup> Bartsch (1984) models the variants of 'run' as a polysemic complex with core meaning. We will briefly discuss this and show why this is not the way we are proceeding. Cf. also Geuder and Weisgerber (2001) for a short remark on 'run' in terms of polysemy and the role of manner.

Thus, it seems that an enriched representation of the lexical item (with information from other relevant modalities, e.g. visual perception, spatial structure, cf. Barsalou's distributed circuits (2005)) is its own context (a preliminary conclusion in line with our concluding definition of context below). No more is needed then, if parameters from this representation can be activated upon each instance of interpretation.

This is indeed confirmed in our pilot study (Dimitrova-Vulchanova and Martinez, forthcoming) of English, Norwegian and Bulgarian, whereby subjects used the expected non-prefixed biological motion verbs in the absence of any superimposed context (e.g. landmarks present). In contrast, when shown short videos including the respective landmarks (a boy going out of a house, a bird flying into a place etc.) subjects used prefixed verbs, as Shull (2003) showed in a recent study for Russian and Czech.

### 3.2 Towards a model: Modular Conceptual Spaces framework

Based on the theoretical investigation of 'Conceptual Spaces' in Gärdenfors (2000), Geuder and Weisgeber (2006) propose *Modular Conceptual Spaces* as a powerful means of modeling concepts both keeping the advantage of domain-specific architecture and achieving an overall structure for communication between distinct conceptual modules. Applied to our example case, this leads to a modular representation where each module is responsible for one of the concepts involved in representation. It is a substantial feature of the modules' design that they allow for hierarchical structures (and even enforce them), since they are independent entities which are only connected to each other via a well-defined communication structure.

We propose that it is exactly this architecture that determines which kind of contextual knowledge that may interfere with the concept modules involved. (To give it in even more detail, Geuder and Weisgerber differentiate between 'modules', which is the architectural term for 'domains'; and domains (modules) may be made up from 'dimensions'. A similar framework is Hellan and Dimitrova-Vulchanova (1995), where dimensions' are the central architectural entities. (However, whether we call these 'concept modules' or 'dimensions' does not matter theoretically, given the respective definitions and the suitable framework.)

In the case of motion concepts, the involved modules (domains) and their dimensions are (at least) the following:

- Path
  - (vector) orientation
  - points in the path (beginning, end, via)
  - path shape (global (e.g. 'curve') and local (e.g. 'zig-zag'))
  - $\pm$  ground-support (e.g. whether there is a light stage or it is supported motion: cf. 'y' vs. 'walk' vs. 'run' / 'jump').
- Velocity (rate of displacement: time and path)
- motion cycle constitution (complex or simplex: 'run' (complex by definition) vs. 'jump' (simplex in the delimiting case))
- Intention (goal of the mover): psychological factors, control etc.

Only these modules and dimensions allow well-defined interaction with exactly identical (corresponding) bits of further situation knowledge that is located on the same dimensions. For our example this implies: all kinds of forces 'affecting' or interfering with the course of the pattern and all that is known about points on the path, physical make-up of the ground, obstacles on the way or about the presence of contact in the Path module; factors affecting speed (such as environmental forces: weather, clouds

etc.; buoyancy, as well as the moving objects physical constitution) interact in the velocity module; and so forth.

Finally, we will give our definition, which we will also formalize: “Context is the relevant subset of knowledge that is located on the conceptual dimensions established by the event.”

### References:

- Barsalou, L. W.: 1992, Frames, concepts, and conceptual fields, in E. F. Kittay and A. Lehrer (eds), *Frames, Fields, and Contrasts: New Essays in Lexical and Semantic Organization*, Erlbaum, Hillsdale, NJ, pp. 21–74.
- Barsalou, L. W.: 2005, Continuity of the conceptual system across species, *Trends in Cognitive Science* 9(7), 309–311.
- Barsalou, L. W. and Hale, C.: 1993, Components of conceptual representation: From feature lists to recursive frames, in I. V. Mechelen, J. Hampton, R. S. Michalski and P. Theuns (eds), *Categories and Concepts: Theoretical Views and inductive Data Analysis*, Academic Press, London, pp. 97–144.
- Bartsch, R.: 1984, The structure of word meanings: Polysemy, metaphor, metonymy, in Landman and Veltman (eds), *Varieties of Formal Semantics. Proceedings of the 4th Amsterdam Colloquium, September 1982*, Foris, Dordrecht, pp. 25–54.
- Bierwisch, M. and Lang, E. (eds): 1989, *Dimensional Adjectives: Grammatical Structure and Conceptual Interpretation*, Akademie-Verlag, Berlin, Heidelberg.
- Blutner, R.: 1998, Lexical pragmatics, *Journal of Semantics* 15, 115–162.
- Dimitrova-Vulchanova, M.: 1999, *Verb Semantics, Diathesis and Aspect*, Theoretical Linguistics series, Lincom, München, Newcastle. A revised version of Doctoral diss. 1996, NTNU, Trondheim.
- Dimitrova-Vulchanova, M. and Martinez, L.: forthcoming, Motion naming in three satellite-framed languages: A pilot study, in M. Dimitrova-Vulchanova and E. van der Zee (eds), *Motion encoding in Language*, Oxford University Press, Oxford, p. ?
- Gärdenfors, P.: 2000, *Conceptual Spaces: the geometry of thought*, MIT press, Cambridge, Mass.
- Geuder, W. and Weisgerber, M.: 2006, On the Geometrical Representation of Concepts. Reactions on Peter Gärdenfors (2000): *Conceptual Spaces*, under revision for: *Linguistics and Philosophy*, pp. ??–??
- Geuder, W. and Weisgerber, M.: 2001, Zur konzeptuellen Representation polysemer Verben, in J. Dölling and T. Zybatow (eds), *Linguistische Arbeitsberichte*, number 76 in *Linguistische Arbeitsberichte*, Institut für Linguistik, Universität Leipzig, Leipzig, pp. 221–250.
- Hellan, L. and Dimitrova-Vulchanova, M.: 1995, *A theory of the lexical sign*. Ms. Trondheim University.
- Jackendoff, R. S.: 1983, *Semantics and Cognition*, number 8 in *Current studies in linguistics series*, MIT press, Cambridge (Mass.) / London.
- Jackendoff, R. S.: 1987, *Consciousness and the computational mind*, number 3 in *Explorations in cognitive science*, MIT Press, Cambridge, Mass.
- Jackendoff, R. S.: 1990, *Semantic structures*, number 18 in *Current studies in linguistics series*, MIT Press, Cambridge, Mass.
- Kaufmann, I.: 1995, *Konzeptuelle Grundlagen semantischer Dekompositionsstrukturen. Die Kombinatorik lokaler Verben und prädikativer Komplemente*, Niemeyer, Tübingen.
- Lakoff, G.: 1987, *Women, Fire and Dangerous Things. What Categories Reveal about the Mind.*, University of Chicago Press, Chicago/London.

- Landau, B.: 2003, Axes and direction in spatial language and spatial cognition, in E. van der Zee and J. Slack (eds), *Representing Direction in Language and Space*, Oxford University Press, Oxford, pp. 18–38.
- Pustejovsky, J.: 1995, *The generative lexicon*, MIT Press, Cambridge, Mass.
- Shull, S.: 2003, *The Experience of Space*, Verlag Otto Sagner, München.
- Tortora, C.: 1998, Verbs of inherently directed motion are comparable with resultative phrases, *LI*, squibs and discussion pp. 338–345.
- Wilson, D.: 2004, Relevance and lexical pragmatics, in WHO (ed.), *BOOKTITLE*, Vol. 16 of UCL working papers in linguistics, Department of Phonetics and Linguistics, University College London, London, pp. 343–360.
- Wilson, D. and Sperber, D.: 2004, Relevance theory, in G. Ward and L. Horn (eds), *Handbook of Pragmatics*, Vol. 16 of Blackwell handbooks in linguistics, Blackwell, Oxford, pp. 607–632.

## 6. Context and the use of spatial prepositions: does Levelt's Principle of Canonical Orientation affect choice?

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Directional prepositions such as left, right, above, below, in front of, or behind a given object [Ground] depend on the use of reference frames (Jackendoff, 1996; Levinson, 1996, 2003; van der Zee & Slack, 2003). However Levelt's (1984, 1996) Principle of Canonical Orientation (POCO) proposes a constraint upon the use of the intrinsic frame which inhibits its use under certain conditions. This Principle proposes that for the intrinsic system to refer to a related object's [Figure] intrinsic dimension then 'that dimension must be in a canonical position with respect to the perceptual frame of orientation of the referent' (Levelt, 1996:92). This research investigated the role of context on the operation of Levelt's (1984; 1996) Principle of Canonical Orientation in the description of spatial relationships.

Participants were asked to describe the location of a figure in relation to a ground object using a forced choice of six spatial prepositions, left, right, above, below, in front of, and behind. In all trials the located figure was a ball, the ground being either a helicopter or a ball. The stimuli were presented in four conditions; vertical and horizontal screen with and without context. Of the 52 trials presented in each condition, answers from two correct alternative single frames, deictic and intrinsic, were analysed (40 trials). Analysis of 'mean percentage use' revealed the intrinsic frame of reference was employed approximately 30% of the time.

Data was analysed with reference to the location of the figure in respect to the ground, relative to the participant in the left/right dimension (LOCATION), and by the term used; 'left', 'right', 'in front of', and 'behind' (TERM). Initial results for intrinsic frame use, context and no context, analysed by frame choice x LOCATION found a non significant effect for POCO; a non significant interaction between POCO and context/no context; a non significant interaction between POCO and screen orientation and a non significant interaction between POCO and LOCATION. There was a significant interaction between LOCATION and context/no context.

When analysed for TERM there was a non significant effect for POCO; a non significant interaction between POCO and context/no context; a non significant interaction between POCO and screen orientation, and a non significant interaction between POCO and TERM. There was a significant main effect for TERM between the use of 'left /right' and 'in front of /behind'.

The data appears to offer no evidence to support the operation of POCO. Both the main effect for POCO and its interaction with TERM, LOCATION, screen orientation and context/no context were non significant. One potential explanation for the findings is that it is not possible to define a perceptual frame of reference or alternatively, that accessing its representation is not achievable, possibly due to stimulus configuration, as Carlson-Radvansky & Irwin (1993) consider that factors such as distance between figure and ground may have an impact on reference frame use.

### References:

Carlson-Radvansky, L. A. and Irwin, D. E. (1993). Frames of reference in vision and language: Where is above? *Cognition*, 46, 223-244.

- Jackendoff, R. (1996). The architecture of the linguistic-spatial interface. In P. Bloom, M. A. Peterson, L. Nadel, and M. F. Garrett (Eds), *Language and Space* (p1-30). Cambridge, MA: MIT Press.
- Levelt, W. J. M. (1984). Some perceptual limitation on talking about space. In A. van Doorn, W. van de Grind, and J. Koenderink (Eds), *Limits of perception: Essays in honour of Maarten A. Bouman* (p323-358). Utrecht: VNU Science Press.
- Levelt, W. J. M. (1996). Perspective taking and ellipsis in spatial descriptions. In P. Bloom, M. A. Peterson, L. Nadel, and M. Garrett (Eds), *Language and Space* (p77-107). Cambridge: MIT Press.