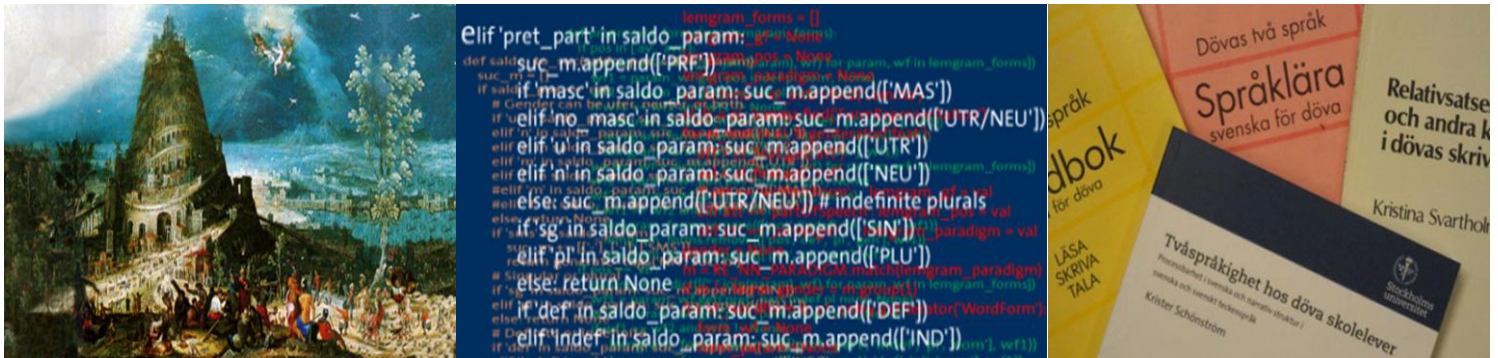




Stockholms universitet

Doctoral Festival 2013 at the Department of Linguistics

Programme and Booklet of abstracts



Doctoral Festival 2013

Programme

FRIDAY, April 26, 2013 in C397

1 0 : 2 5 - 1 0 : 3 0	Opening
1 0 : 3 0 - 1 1 : 2 0 Phonetics: Production and Perception	10 : 30 – 10 : 55 Hatice Zora <i>Neural correlates and temporal dynamics of spoken language processing: Evidence from EEG/ERP</i> 10 : 55 – 11 : 20 Ellen Marklund <i>MMN-responses to within-category vowel variations</i>
1 1 : 2 0 - 1 1 : 3 0	Break 10 min
1 1 : 3 0 - 1 2 : 2 0 Phonetics: Language acquisition	11 : 30 – 11 : 55 Lena Renner <i>The relationship between phonology and lexicon in terms of perception and production</i> 11 : 55 – 12 : 20 Catherine Smith <i>Phonological ‘Wildness’ in Early Language Development: Exploring the Role of Onomatopoeia</i>
1 2 : 2 0 - 1 3 : 2 0	Lunch break 1 hour
1 3 : 2 5 - 1 5 : 0 5 Sign Language Corpus Studies Computational Linguistics	13 : 25 – 13 : 50 Pia Simper-Allen <i>Depicting verbs in Swedish Sign Language</i> 13 : 50 – 14 : 15 Calle Börstell <i>The expression of transitive concepts in signed languages: A cross-linguistic study of three sign languages</i> 14 : 15 – 14 : 40 Susanne Vejdemo <i>Some factors affecting the rate of lexeme replacement in Indo-European</i> 14 : 40 – 15 : 05 Robert Östling <i>Adding meaning to form</i>
1 5 : 0 5 - 1 5 : 2 5	Break 20 min
1 5 : 2 5 - 1 7 : 0 5 Noun Classes Typology	15 : 25 – 15 : 50 Yvonne Agbetsoamedo <i>Noun class in Sɛlɛɛ</i> 15 : 50 – 16 : 15 Francesca Di Garbo <i>Mapping the relationship between gender and number in the languages of Africa</i> 16 : 15 – 16 : 40 Natalia Perkova <i>Comitative constructions and comitative markers in the Circum-Baltic languages</i> 16 : 40 – 17 : 05 Desalegn Hagos <i>Notes on converbs in Transversal South Ethiopic Languages</i>
1 7 : 0 5 - 1 7 : 1 5	Concluding remarks
1 7 : 3 0	Buffet in the department kitchen

Booklet
of
Abstracts

Yvonne Agbetsoamedo

yvonne.agbetsoamedo@ling.su.se

Noun class in Sɛlɛɛ

This paper investigates the semantics of noun classification and its associated agreement patterns in Sɛlɛɛ, a Niger-Congo language of the Kwa group, spoken in Ghana. Sɛlɛɛ belongs to a group of languages referred to as the Ghana Togo Mountain Languages, which are versatile in their noun class system as compared to their neighboring languages such as Ewe and Akan where only remnants of the system survive. Sɛlɛɛ has a set of four singular noun prefixes and a set of five plural noun prefixes. Most noun stems can be found with two these prefixes, forming a singular-plural pair. Few noun stems occur with only one prefix and these are mostly abstract and mass nouns. Nouns show agreement with other modifiers - demonstrative, cardinals numbering one to nine and interrogatives- in a noun phrase, except adjectives which do not show any agreement with the noun.

Calle Börstell

calle@ling.su.se

The expression of transitive concepts in signed languages: A cross-linguistic study of three sign languages

Sign language research has previously shown that there are various ways to reduce the number of overt arguments in a clause, either by verb agreement (cf. Padden 1988; Meir 2002), or by using classifiers (cf. Schembri 2003; Benedicto & Brentari 2004). Other studies have investigated the use of perspective shifts and detransitivization as connected to grammatical voice (Janzen et al. 2001). For spoken language, it has been claimed that there is a preference towards only having one *lexical* argument per clause in discourse, which in turn could be a motivation for an ergative system to arise (Du Bois, Kumpf & Ashby 2003). For sign languages, there is a lack of research on the potential differences between clausal constructions in isolated sentences vs. longer discourse, which is one of the aims of my own project.

The aim of my project is to describe the expression of semantically transitive concepts in three different sign languages: Al-Sayyid Bedouin Sign Language (ABSL); Israeli Sign Language (ISL); and Swedish Sign Language (SSL). These three languages differ in four important aspects: *age* (where SSL is ~200 years old; ABSL and ISL ~80 years old); *language type* (where SSL and ISL are national, urban sign languages; ABSL is a village sign language used in a single village); *geography* (where SSL is geographically separated from the other two); and *genealogy* (with no genealogical bonds between any of the languages). These aspects will be considered when analyzing potential similarities or differences between the languages. Different types of data will be used, spanning from short elicited sentences to longer spontaneous narratives—this to investigate potential differences in clausal construction depending on the type of discourse.

This talk describes the underlying questions of my dissertation project, putting the planned work in its relevant research context. As such, this talk will focus more on previous work and the motivation and methodology for my project, rather than discussing any results or conclusions.

References

- Benedicto, Elena, and Diane Brentari. 2004. Where did all the arguments go? Argument-changing properties of classifiers in ASL. *Natural Language & Linguistic Theory*, 22(4): 743–810.
- Du Bois, John W., Lorraine E. Kumpf, and William J. Ashby, eds. 2003. *Preferred argument structure: grammar as architecture for function*. Amsterdam/Philadelphia, PA: John Benjamins.
- Janzen, Terry, Barbara O’Dea, and Barbara Shaffer. 2001. The construal of events: Passives in American Sign Language. *Sign Language Studies*, 1(3): 281–310.
- Meir, Irit. 2002. A cross-modality perspective on verb agreement. *Natural Language & Linguistic Theory*, 20: 413–450.
- Padden, Carol. 1988. *Interaction of morphology and syntax in American Sign Language*. Outstanding Dissertations in Linguistics, Series IV. New York, NY: Garland Press.
- Schembri, Adam. 2003. Rethinking “classifiers” in signed languages. In *Perspectives on Classifiers in Sign Languages*. Edited by Karen Emmorey, 3–34. Mahwah, NJ: Lawrence Erlbaum.

Elisabet Eir Cortes

elisabet.cortes@ling.su.se

Speech motor control: A balance between perceptual and articulatory factors. An update on methodology

I have chosen the limited subject of jaw movements in loud speech, although I anticipate the results to be generally applicable. My results will tell me something about compensation, i.e. the speaker tries her/his best to give the listener what she/he wants, at the same time hopefully revealing how the motor skills are captured in their own limitations.

Loud speech has higher intensity (dB), shows raised F0, and has more open jaw position in vowels. If loud speech lowers the jaw, this should have significant consequences for the output, i.e. it should affect formant patterns drastically. Indeed, it does so; formant measurements from real speech as well as articulatory models, such as APEX (Stark et al. 1996) and Maeda’s (1990) model, show us that this is the case. Moving only the jaw parameter makes the formants go haywire and sends the vowel quality down the drain. Studying loud speech is one way of studying speech from another perspective.

My research questions and the goals set up to seek answers to these questions are as follows:

Q1: Do speakers compensate for the lower jaw?

Goal#1a: Replicate Schulman (1989)

Goal#1b: Compare formant patterns for Normal and Loud voice

Q2: Loud movements = Scaled variants of normal movements?

Goal#2: Test Hogan’s hypothesis (about movement in general), (Hogan 1984)

Q3: Phonetic/articulatory correlates to vowel adherence? Implication for phonology?

Goal#3: Describe jaw positions for consonants, relate the results to Bengt Sigurd’s (1965) vowel adherence notion.

My presentation this year will consist of an update of where I stand right now in relation to these goals and what lies ahead. My work this past year has been concentrated on preparing the high quality recordings and analysis methods that are necessary in order to reach the goals set up. I'll share with you some examples of the methods for formant frequency estimations, which entail inverse filtering of the speech recordings with the aid of a simultaneously recorded EGG-signal.

References

- Hogan, N. 1984. An organizing principle for a class of voluntary movements. *J. Neurosci*, 4(11), 2745-2754.
- Maeda, S. 1990. Compensatory articulations during speech: Evidence from the analysis and synthesis of vocal-tract shapes using an articulatory model. In W.J. Hardcastle and A. Marchal (eds). *Speech Production and Speech Modelling*. Dordrecht (The Netherlands), Kluwer Academic Publishers, 131-149.
- Schulman, R. 1989. Articulatory dynamics of loud and normal speech. *J. Acoust. Soc. Am.*, 85(1), 295-312.
- Sigurd, Bengt. 1965. *Phonotactic structures in Swedish*. (PhD Doctoral Dissertation), Lund University, Lund.
- Stark, J., Lindblom, B. & Sundberg, J. 1996. APEX an articulatory synthesis model for experimental and computational studies of speech production, *TMH-QPSR*, 37(2), 45-48.

Francesca Di Garbo

francesca@ling.su.se

Mapping the relationship between gender and number in the languages of Africa

In their study of Africa as a morphosyntactic area, Creissels *et al.* (2007, p. 119) claim that, in the languages of the African macro-area, the overt coding of nominal plurality is conditioned by the presence or absence of grammatical gender in the following ways:

1. Languages without grammatical gender tend to have one plural marker. This is not obligatory and is only used when the overt coding of plurality is particularly relevant in the discourse. In all the other cases, it is context which leads speakers to understand the number value of a noun.
2. Languages with grammatical gender tend to have rather morphologically complex systems of number marking, where number and gender are marked cumulatively by the same morpheme. In these languages, gender and number distinctions are overtly coded on nouns and generally trigger agreement. Also, the marking of plurality is obligatory with nearly all nouns.

In my thesis, the generalizations drawn by Creissels *et al.* (2007) are tested on a sample of 70 African languages selected from the following genealogical groupings (the number of languages per group is noted in brackets): Atlantic (10), Bantu (23), Berber (6), Cushitic (13), Ju⁺Hoan (1), Khoe-Kwadi (5),

Eastern Nilotic (3), Western Nilotic (6), Tuu (1), Hadza (Isolate), Sandawe (Isolate). All the languages of the sample but the Western Nilotic have grammatical gender.

The interaction between gender and number within the individual genealogical groupings is investigated by mainly looking at two aspects of the morpho-syntactic encoding of gender and number: *cumulation* and *syncretism*. The presence or absence of cumulative encoding of gender and number is also used as the overarching criterion for the classification of the types of languages which are attested in the sample.

Not surprisingly, the distribution of the different language types is generally genealogically skewed, in the sense that languages from the same genealogical subdivision tend to show rather similar patterns of

interaction between gender and number. Nevertheless, phenomena of areal convergence across different – and unrelated – genealogical groupings are also found. In addition, patterns of convergence across unrelated genealogical groupings emerge when looking at the interaction between gender and number from a diachronic point of view. Each of these dimensions – intra-genealogical, areal, and diachronic – will be examined in details during the presentation.

The results of my investigation are only partially in line with the generalizations made by Creissels *et al.* (2007). In a number of relevant cases, the complexity of the number system of a language does not seem to directly correlate with the presence or absence of grammatical gender, at least not in the way which is stated in (1) and (2). A thorough examination of the patterns of interaction between gender and number in the languages of the African sample suggests that the understanding of the phenomenon depends on a more fine-grained set of mutually interacting semantic, functional, morpho-syntactic, and even sociolinguistic factors. This presentation aims at providing an inventory of such factors. These might be further on tested with analogous methods on other macro-areas of the world.

References

Creissels Denis, Gerrit J. Dimmendaal, Zygmunt Frajzyngier and Christa König (2007). Africa as a morphosyntactic area. In Bernd Heine & Robert Botne (Eds.) *A linguistic geography of Africa* (pp. 85-150). Cambridge: Cambridge University Press.

Desalegn Hagos

desa@ling.su.se

Notes on converbs in Transversal South Ethiopic Languages

In this presentation, I give an overview of some previous works on converbs in the Semitic languages Amharic, Argobba, Harari, Zay, Wolane, and Selt'í (Transversal South Ethiopic Languages). I discuss issues like the diachronic origin, form, type, specification (for various verbal categories) of the converbs, and their relation with a principal verb (e.g. agreement in aspect, coordination/subordination/co-subordination).

Selected references

Gutt, E. A. (1997). "Concise Grammar of Silt'e". In: E.H.M Gutt and Hussein M. Silt'e– Amharic–English Dictionary (with a Concise Grammar by E-A Gutt), 895–960. Addis Ababa: Addis Ababa University Press.

Hetzron, R. (1972) Ethiopian Semitic: Studies in Classification. Manchester: Manchester University Press.

Kapeliuk, O. (1997) "Reflections on the Ethio-Semitic Gerund". Proceedings of the 13th International Conference of Ethiopian Studies. I, 492- 498.

Leslau, W. (1995) Reference Grammar of Amharic. Wiesbaden: Harrassowitz Verlag.

----- (1997) Ethiopic Documents: Argobba: Grammar and Dictionary. Wiesbaden: Harrassowitz Verlag.

----- (1999). Zway Ethiopic Documents: Grammar and Dictionary. Wiesbaden: Harrassowitz Verlag.

Meyer, R. (2006) Wolane: Descriptive Grammar of an East Gurage Language (Ethiosemitic). Köln: Rüdiger Köppe Verlag.

Richter, R. (1997) "Some Linguistic Peculiarities of Old Amharic Texts". Proceedings of the 13th International Conference of Ethiopian Studies. I, 543- 551.

Ellen Marklund

ellen@ling.su.se

MMN-responses to within-category vowel variations

I will present my current experiment, investigating adults' mismatch negativity (MMN) response to within-category vowel changes. I'm using an oddball paradigm with a synthesized /i/ as standard stimulus, and different exemplars of the same vowel as deviant stimuli. The deviants differ from the standard either in fundamental frequency (f0), the value of the first formant (F1), or in the second formant value (F2). The primary focus of the study is to find out how the amplitude of the MMN-response differs for different deviant types, and a secondary goal involves investigating if (and how) the MMN-amplitude is influenced by the relative salience of multiple deviants in a single block. Before comparisons can be made, however, the MMN-response has to be established for each deviant and block condition. Preliminary results from the first ten participants (one of which is excluded from the analysis due to technical failure during data acquisition) show that a significant MMN-response is elicited only for the f0- and F2-deviants in the single-deviant block conditions. Data collection is still ongoing, with an additional ten participants planned.

Natalia Perkova

natalia@ling.su.se

Comitative constructions and comitative markers in the Circum-Baltic languages

As my PhD project is concerned with the properties of comitative constructions in the languages spoken in the Circum-Baltic area, in my talk, I'm going to discuss some of the phenomena attested in these languages from the typological perspective.

First, I would like to concentrate on types of comitative constructions and the distribution of comitative markers across these types. For example, Finnic languages, along with Latvian, tend to use special markers for rendering such meanings as in 'X went to the shop. Y *went with him*.' Another interesting perspective lies in the analysis of relation between comitative markers and markers found in sociative, assistive, coordinating and other types of semantically close constructions. Finally, I'm going to address the diachronic development of comitative markers and speak about possible motivations underlying grammaticalization of these elements (e.g., why in Swedish we have both *medarbetare* and *samarbetare* and how are they related to *med* and *samt*).

Lena Renner

[lena.renner@ling.su.se](mailto:lenna.renner@ling.su.se)

The relationship between phonology and lexicon in terms of perception and production

Research on first language acquisition is typically focused on three general factors: the infant's environment, their perceptual knowledge or their productive knowledge. Beyond these factors different linguistic domains are investigated. The phonology, the lexicon, the syntax or the morphology are, for the most, investigated independently (Stoel-Gammon, 2011). Thus, some researchers focus on phonology others on the lexicon. The relationship between those and the connection to perceptual and productive knowledge has so far received little attention. Consequently, there is not much information about the relationship between the lexicon and the phonology in first language acquisition. Moreover, most of the research in both domains focuses on perception (for a review see Werker & Yeung, 2005). Earlier studies on perception investigate the lexicon and the phonology with electroencephalography (EEG) or eye-tracking (ET). In the first part of the presentation I will talk about earlier studies with infants with these two methods. In the second part of my talk I will present my current experiment which combines these two methods to investigate the relationship between phonological and lexical acquisition. The children look at different objects and listen either to novel words or to common words that are known to be acquired early. These are either correctly pronounced (C) or with different degrees of mispronunciations; slightly mispronounced with phonological changes which are common in early child language acquisition (M1) or words characterized by several changes according to phonological processes that are not expected at 24 months (M2). In EEG trials only one familiar object is shown. In ET trials the children look at two objects, one unfamiliar, abstract object and one familiar object. The perceptual reactions in EEG and ET are related to the child's own production of the words which were collected in audio recordings and related to parental reports of vocabulary size.

References

- Stoel-Gammon, C. (2011). Relationships between lexical and phonological development in young children. *Journal of Child Language*, 38(01), 1-34. doi: 10.1017/S0305000910000425
- Werker, J. F., & Yeung, H. H. (2005). Infant speech perception bootstraps word learning. *Trends in Cognitive Sciences*, 9(11), 519-527. doi: 10.1016/j.tics.2005.09.003

Pia Simper-Allen

pia@ling.su.se

Depicting verbs in Swedish Sign Language

Catherine Smith

cs524@york.ac.uk

Department of Language and Linguistic Science, University of York, Heslington, York, YO10 5DD

Phonological ‘Wildness’ in Early Language Development: Exploring the Role of Onomatopoeia

Onomatopoeic forms are often disregarded from the phonological analysis of infant data (e.g., Fikkert & Levelt (2008)), seen as a temporary and irrelevant aspect of the developing lexicon which is superfluous to the adult speech model of Indo-European languages. However, synesthetic forms known as mimetics are abundant in languages such as Japanese, and have been found to facilitate novel-verb learning in Japanese amongst infants acquiring either Japanese or English as a first language (Kantartzis et al. (2011)). Onomatopoeic forms often constitute an important portion of infants’ earliest word forms in a range of languages (Menn & Vihman (2011)) despite their limited role in most adult lexica. These are thought to provide a linguistic scaffold in language development through the perception of phonologically ‘wild’ segments (Rhodes (1994)): wildness in the input, whereby the vocal tract’s full capacity is used in order to approximate sounds of non-human origin, is found to serve as an attention-marker, as well as aiding phonological recall in production.

This study uses eye-tracking to explore the role that onomatopoeia play in language development. Infants are presented with recordings of onomatopoeic forms produced in familiar and unfamiliar languages. Forms are presented in a phonologically ‘wild’ or ‘tame’ manner, and infants’ response times and eye movements are measured. It is hypothesised that ‘wild’ onomatopoeic forms in both familiar and unfamiliar languages will elicit a quicker looking time and more accurate response than ‘tame’ forms in familiar and unfamiliar languages. Results reflect the role that onomatopoeia play in early language development: cross-linguistic similarities in the prosody of onomatopoeic forms may prompt understanding and early word production, driving the infant towards further phonological development. Furthermore, the ‘wild’ versus ‘tame’ paradigm highlights the contrast between prosodic and phonological learning, reflecting which of the input’s linguistic queues are most relevant in early language development.

References

- FIKKERT, P. & LEVELT, C. 2008. How Does Place Fall into Place? In P. Avery, B. Elan Dresher & K. Rice (eds.) *Contrast in Phonology*. Berlin: Mouton de Gruyter.
- KANTARTZIS, K., IMAI, M. & KITA, S. 2011. Japanese Sound-Symbolism Facilitates Word Learning in English-Speaking Children. *Cognitive Science*, 35, 575-586.
- MENN, L. & VIHMAN, M. 2011. Features in child phonology: inherent, emergent, or artefacts of analysis? In N. Clements & R. Ridouane (eds.), *Where Do Phonological Features Come From? The nature and sources of phonological primitives*. (Language Faculty and Beyond 6.) Amsterdam: John Benjamins.
- RHODES, R. 1994. Aural Images. In J. Ohala, L. Hinton, and J. Nichols (eds.) *Sound Symbolism*. Cambridge, UK: Cambridge University Press.
-

Susanne Vejdemo

susanne@ling.su.se

Some factors affecting the rate of lexeme replacement in Indo-European

Why are certain lexemes replaced at a faster rate cross-linguistically than others?

There is no single, overriding factor that on its own determines why lexeme A is likely to be replaced quicker than lexeme B. Among the many proposed factors, some are measurable.

This talk will showcase some of the quantitative results I have from trying to measure the relative impact of these factors on the rate of lexical replacement. I will discuss how the frequency factor (measured as occurrences in corpora), the semantic density factor (measured by the size of the synonym network) and the level of emotional charge or taboo (measured by semantic differential experiments) interact and how they, to a certain degree, predict the rate of lexeme replacement across languages.

Hatice Zora

hatice@ling.su.se

Neural correlates and temporal dynamics of spoken language processing: Evidence from EEG/ERP

My research is concerned with the interplay between acoustic-phonetic input and word recognition-sentence processing. I use electro-encephalography (EEG) and event-related brain potential (ERP) techniques to investigate the effects of segmental as well as suprasegmental features on spoken language processing.

To this end, I have carried out an EEG experiment investigating the effects of suprasegmental features on the processing of isolated spoken English words. By examining the ERP component called mismatch negativity (MMN), the study confirmed the brain's automatic reaction to prosodic changes in the auditory sensory input. However it provided no evidence that prior knowledge of prosodic structure can facilitate word identification. I am currently re-analyzing the experimental data from this study and plan to expand it to include also segmental features in order to establish their role in automatic word processing. My PhD project aims to add to the findings of these studies by exploring neural correlates of language-specific memory traces for speech segmentation as indexed by ERPs. By comparing speakers from different languages, the project attempts to detect language-specific rhythm-based segmentation strategies and jointly examine the potential age effects on the adaptation of a non-native language segmentation strategy.

Robert Östling

robert@ling.su.se

Adding meaning to form

Constructions are generally viewed as form-meaning pairs, but many computational approaches to finding construction have focused exclusively on the form part, essentially making a list of recurring patterns of words.

I am trying to bring some meaning into these patterns by using distributional semantics. The foundation of this approach is the distributional hypothesis, which states that linguistic symbols that tend to occur in the same contexts have similar meanings, and has proved useful to approximate the semantics of individual words.

This approximation of meaning is rough, but at least it provides an approximation of constructions as form-meaning pairs, rather than an unorganized set of patterns.

I present preliminary results on distributional semantics of constructions applied to different languages, and discuss possible ways forward. What can we learn from these (approximate) constructions? What can they be used for in linguistics and natural language processing?

Stockholm University
SE-106 91 Stockholm
Telefon/Phone: 08 - 16 20 00
www.su.se



Stockholms
universitet