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Final report – NetWordsS Short Visit grant

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Purpose of the visit

The short visit was conceived as part of the umbrella theme “Variation and competition in plural formation” (coordinator: Prof. Wolfgang U. Dressler, University of Vienna).¹

The 10 days *short visit* took place in the period 10. – 19. July 2012.

The aim of the *short visit* concerned the topic of the emergence of noun plurals in children acquiring Danish and (Austrian) German as their first language. We wanted to expand our earlier study (Laaha, Kjærbæk, Basbøll & Dressler, 2012) and further compare our large amount of data (both quantitative and qualitative) and discuss variation and competition in the course of Danish noun plural acquisition comparing it with (Austrian) German.

The aim of our study is to compare children’s production of noun plurals in two different tasks: Task 1) elicited natural speech; and Task 2) a classical experimental task. We will depart from the three-level classification of stem change properties according to sound structure presented in Laaha et al. 2012.

We hypothesize that the choice of methodological setting has an impact on the amount of correct vs. incorrect plural forms as well as on the nature of stem changes produced by children. Furthermore we hypothesize that sound structure and input frequency have impact on the acquisition of noun plurals.

It is a great advantage for this study that both the Danish and the Austrian group have much experience in corpus linguistics. The Danish group has furthermore gained much experience on phonological and morphological analyses, e.g. through work on the OLAM-system (coding and analysis system for Danish), also used in our study on Danish noun plurals from a sound perspective, a type of analysis which has never been done before (Basbøll, Kjærbæk & Lambertsen, 2012). Furthermore the Danish group has studied sound structure, variation and input-output relations in Danish children and their caregivers.

¹ The research institution that I was meant to visit according to my application for the NetWordsS *short visit* programme, was the Department of Linguistics and Communication Research, Austrian Academy of Sciences. But due to restructuring, the department was transferred to the University of Vienna earlier this year.

The project should not only contribute to an understanding of the acquisition of morphology in a sound perspective, it should also contribute to an understanding of the connection between sound structure and grammar and the role of input frequency in the acquisition of inflectional morphology. Furthermore the project should give us more knowledge about methodological aspects since we use and compare different methods.

Description of the work carried out during the visit

During my visit in Vienna I mainly worked together with Dr. Sabine Laaha and held meetings with Prof. Wolfgang U. Dressler at the University of Vienna. We worked on preparing a cross linguistic study on the development of noun plurals in Danish and German-speaking children, focussing on stem change.

Before hand we had collected data from Danish-speaking and German-speaking children in two different tasks: 1) a plural elicitation task; 2) semi-structured interviews. 140 Danish-speaking and 140 German-speaking children in the age of 3-9 years participated in Task 1, and 80 Danish-speaking and 80 German-speaking children in the age groups 3, 5, 7 and 9 years participated in Task 2.

Both Danish and German data from Task 1 and Task 2 were video-/audio-recorded, transcribed in standard orthography and coded morphologically. Furthermore all plural forms were transcribed phonemically.

During the visit we worked hard on making our data for Task 2 comparable (data from Task 1 was already made comparable in connection to the work on our earlier joined study). The adjustments consisted of making sure that we had an equal number of children in each language and age group, which required that the recording of one Danish child had to be 1) transcribed in standard orthography; 2) coded morphologically and 3) plural forms had to be transcribed phonemically. The adjustments furthermore consisted in making a few adjustments in the orthographic transcriptions, morphological codings and the phonemic transcriptions. Furthermore we had to decide which specific research questions we wanted to answer in our study and what criteria we should base our coding of correct vs. incorrect plural forms on.

We decided to focus on stem change in plural formation in Danish and German and we agreed on 5 predictions:

P1. Task 2 has a more naturalistic setting than Task 1 and we therefore predict a lower percentage of incorrectly produced plural forms in Task 2 than in Task 1.

P2. Since children learn language based on the input they hear and since Task 2 is a semi-naturalistic task with focus on familiar routines, we expect the distribution of the plural lexicon produced by the children to be similar to the one found in CDS with regard to degree of stem change.

P3. Stem change causes opacity which makes acquisition more difficult. We therefore predict the highest frequency of correct plural forms in the no change category, lower frequency in the weak change category and the lowest frequency

in the strong change category in both tasks and both languages. Moreover we predict the stem change error direction going from strong change to no change rather than the opposite direction.

P4. Since weak stem changes in Danish are prosodic, they should be easier to acquire than their German segmental counterparts. Moreover, weak changes have a higher type frequency in Danish than in German and thus should be easier to acquire in Danish. Therefore we predict that the German-speaking children produce more incorrect plural forms in the weak change category than the Danish-speaking children in both tasks.

P5. Since strong stem change in German is more homogeneous and has higher type frequency than in Danish we predict the Danish children to produce more incorrect plural forms in the strong change category than the German-speaking children in both tasks.

During the short visit we also started the writing process, and reached our first preliminary results, which we also began to analyse and discuss.

During my visit in Vienna, I also visited the Institute for Corpus Linguistics and Text Technology of the Austrian Academy of Sciences where Karlheinz Mörth introduced me to the data linguistic corpora and corpus linguistics as practised at the Academy. Furthermore I introduced him to our OLAM-system, which is our data linguistic coding system for Danish as well as to our Danish speech corpora.

Description of the main results obtained

i) The Danish Task 2 and the German Task 2 are now comparable (Task 1 was made comparable before the *short visit*); ii) We discussed and agreed on methodological issues; iii) We discussed and agreed on 5 predictions for our joined paper; vi) We reached preliminary results on the development of noun plurals in Danish-speaking and German-speaking children, focussing on stem change; v) We got started with the writing process (of a joined article), analysis and discussions.

Theoretical implications

If the results of our study ends up supporting our five predictions, there is evidence that: 1) methodological setting has an impact on the amount of correct vs. incorrect plural forms as well as on the nature of stem changes produced by children, thus it is important to compare results from different data types (both naturalistic and experimental) in order to get a clearer and more accurate picture of children's acquisition of noun plurals (and inflectional morphology in general) (cf. Kjærbaek & Basbøll, ms.); 2) sound structure has an impact on the acquisition of noun plurals (and inflectional morphology in general), which indicates that different languages offer children different challenges (see also e.g. Bleses, Basbøll & Vach 2011; Bleses & Basbøll 2004; Ragnarsdóttir, Simonsen & Bleses 1998). This yields for more cross-linguistic studies on children's acquisition of inflectional morphology; 3) input frequency (both token, type and

lemma frequencies) plays an important role in the acquisition of noun plurals (and inflectional morphology in general) (see also e.g. Bybee 1995; Gagarina & Voeikova 2009; Dabrowska & Szczerbinski 2006).

Further collaboration with host institution

In the near future we expect to finish our joined article on stem change in noun plural formation, which we worked on during my *short visit*.

Within the next year we have planned to continue our collaboration by a study, which compares the acquisition of plural suffix in Danish-speaking and German-speaking children, and also the interaction between stem change and plural suffix.

Furthermore we will explore the possibility for collaboration between our research group at the University of Southern Denmark and the Austrian Academy of Sciences in developing a coding and analyses-system for (Austrian) German as the one we have developed for Danish (OLAM).

Publications to result from the grant

We are working on a joined article: Laila Kjærbaek, Sabine Laaha, Wolfgang U. Dressler & Hans Basbøll (ms.). "The development of the noun plural category in Danish-speaking and German-speaking children focussing on stem change – using two different elicitation tasks [working title]".

References

- Basbøll, H., L. Kjærbaek & C. Lambertsen (2012). "The Danish noun plural landscape". *Acta Linguistica Hafniensia* 43, 2. [published online 28 June 2012].
- Bleses, D. & H. Basbøll (2004). "The Danish sound structure – Implications for language acquisition in normal and hearing impaired populations". In Schmidt, Mikkelsen, Post, Simonsen & Fruensgaard (eds.), *Brain Hearing and Learning. 20th Danavox Symposium 2003*, 165-190.
- Bleses, D., H. Basbøll & W. Vach (2011). "Is Danish difficult to acquire? Evidence from Scandinavian past tense studies". *Language and Cognitive Processes* 26, 1193-1231.
- Bybee, Joan L. (1995). "Regular morphology and the lexicon". *Language and Cognitive Processes* 10, 423-455.
- Dabrowska, E. & M. Szczerbinski (2006). "Polish children's productivity with case marking: the role of regularity, type frequency, and phonological diversity". *Journal of Child Language* 33, 559-597.
- Gagarina, N. & M. Voeikova (2009). "Acquisition of case and number in Russian". In Stephany & Voeikova (eds.) *Development of nominal inflection in first language acquisition: A cross-linguistic perspective*. Berlin: Mouton de Gruyter, 179-215.
- Kjærbaek & Basbøll (ms.). "Noun plural development in monolingual Danish children – a multi method study focussing upon general trends and patterns of (ir)regularization". To be submitted to *Journal of Child Language*.
- Laaha, S., L. Kjærbaek, H. Basbøll & W.U. Dressler (2012). "The impact of sound structure on morphology – an experimental study on children's acquisition of

German and Danish noun plurals focussing on stem change. *Acta Linguistica Hafniensia* 43, 2. [published online 04 July 2012].

Ragnarsdóttir, H., H.G. Simonsen & D. Bleses (1998). "Experimental evidence on the acquisition of past tense inflection in Danish, Icelandic and Norwegian children. In Bleses & Wagner (eds.) *Papers in First Language Acquisition*, 23-42.