

## Keynotes

- Peter Backhaus  
(WASEDA University, Tokyo):  
*Communication in institutional eldercare: A Japanese perspective*
- Harald Baayen  
(Universität Tübingen / University of Alberta, Edmonton), Susanne Gahl (University of California, Berkeley): *Twenty-eight years of vowels: An investigation of changes in vowel formants and vowel duration in the Up corpus*
- Heidi Hamilton  
(Georgetown University):  
*Language, dementia and meaning-making in art galleries and homes: Objects of joint attention as resources for transforming knowledge, building topics and lifting spirits*
- Yoshiko Matsumoto  
(Stanford University): *Being ordinary: A powerful narrative strategy when feeling vulnerable*
- Heather Harris Wright  
(East Carolina University):  
*Discourse Changes with Age: Considering microlinguistic and macrolinguistic processes*

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*LangAge*  
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# Encounters in Language and Aging Research

## International Conference CLARE3

FU Berlin, March 6–8, 2017



### CLARE Corpora for Language and Aging Research

#### *Encounters in Language and Aging Research*

- ❖ Pragmatic spaces
- ❖ Longitudinal studies
- ❖ Multiple identities and multilingualism in later life

#### Round table on methods and applied linguistics

- ❖ Healthcare (experts from research and practitioners)
- ❖ Methods in language and aging research



#### CLARE3

#### International Conference, March 6–8, 2017

Freie Universität Berlin  
Fabbeckstr. 23–25, "Holzlaube"  
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International Conference Corpora for Language and Aging Research (CLARe)

March 6–8, 2017, Fabeckstr. 23–25 (“Holzlaube”, 1.2009), FU Berlin

Dr. Catherine T. Bolly (Universität zu Köln) & Prof. Dr. Annette Gerstenberg (FU)

## Papers and Posters

- 1 Backhaus, Peter (Waseda University)  
*No time to care? Interactional hurriedness in Japanese eldercare*  
▪ hurriedness; interactional tempo; institutional eldercare; Japanese
- 2 Blondel, Marion<sup>1</sup> & Boutet, Dominique<sup>2</sup> & El Ayari, Sarra<sup>1</sup> & Coralie, Vincent<sup>1</sup> (<sup>1</sup>CNRS-Paris8, SFL; <sup>2</sup>Université de Rouen, Dylis)  
*LSF interactions in elderly signers: Insights from motion capture?*  
▪ LSF; sign languages; aging; motion capture
- 3 Bolly, Catherine T. (Universität zu Köln & UCLouvain)  
*Multimodal stance in later life*  
▪ pragmatic function; gesture; discourse marker; aging
- 4 Bolly, Catherine T.<sup>1</sup> & Sílvia Gabarró-López<sup>2</sup> & Laurence Meurant<sup>2</sup> (<sup>1</sup>Universität zu Köln & UCLouvain, <sup>2</sup>FNRS & University of Namur)  
*Signing and gesturing in later life. How to adapt bodily talk in context?*  
▪ multimodality; pragmatic gestures; older people; sign language; spoken language
- 5 Bowie, David (University of Alaska Anchorage)  
*The role of the individual in the development of the Western Vowel System in Utah*  
▪ aging; back vowels; vowel fronting; sociophonetics; Utah English
- 6 Buchstaller, Isabelle & Krause, Anne & Auer, Anja & Otte, Stefanie (Leipzig University)  
*The effect of the socioeconomic trajectory on longitudinal life-span change*  
▪ language change; change across the life-span; monophthongization; FACE vowel; Northern Englishes; levelling
- 7 Davis, Boyd H.<sup>1</sup> & Maclagan, Margaret<sup>2</sup> (<sup>1</sup>University of North Carolina-Charlotte, USA; <sup>2</sup>University of Canterbury, NZ)  
*The Carolinas Conversations Collection*  
▪ pragmatic spaces found in pauses; prepositions and reported speech
- 8 De Looze, Céline<sup>1</sup> & Kelly, Finnian<sup>1</sup> & Crosby, Lisa<sup>3</sup> & Vourdanou, Aisling<sup>1</sup> & Lawlor, Brian<sup>2/3</sup> & Reilly, Richard<sup>1/2</sup> (<sup>1</sup>Trinity Centre for Bioengineering, Trinity College Dublin <sup>2</sup>Institute of Neuroscience, Trinity College Dublin, <sup>3</sup>M.I.R.A., St James’s Hospital)  
*The SPEECHCOG project: Speech markers as an objective evaluation of cognitive impairment and related psychosocial outcomes in populations with Mild Cognitive Impairment and mild-to-moderate Alzheimer’s disease*  
▪ cognitive impairment; neuropsychology; speech prosody
- 9 Duboisdindien, Guillaume<sup>1</sup> & Bolly, Catherine<sup>2</sup> (<sup>1</sup>Université Paris-Ouest Nanterre La Défense; <sup>2</sup>Universität zu Köln)  
*Study of Pragmatic markers and narrative identity in ageing process.*  
▪ pragmatic markers; elderly; frailty; longitudinal approach; identity
- 10 Frankenberg, C.<sup>1</sup> & Degen, Ch.<sup>1</sup> & Tauber, B.<sup>2</sup> & Siebert, J. S.<sup>2</sup> & Wahl, H.-W.<sup>2</sup> & Schröder, J.<sup>1,2</sup> (<sup>1</sup>Section of Geriatric Psychiatry, Heidelberg University, <sup>2</sup>Institute of Psychology, Heidelberg University, <sup>3</sup>Institute of Gerontology, Heidelberg University)  
*Autobiographical memory at the beginning and in the course of dementia*  
▪ autobiographical memory; longitudinal study; cognitive impairment; linguistic analysis

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- 11 Fyndanis, Valantis & Ingeborg, Sophie Ribu (Center for Multilingualism in Society across the Lifespan, University of Oslo)  
*Tools and methods to investigate language and cognitive abilities in healthy and pathological aging*  
▪ eye tracking; time reference; lexicon; processing
- 12 Gahl, Susanne<sup>1</sup> & Baayen, Harald<sup>2</sup> (<sup>1</sup>UCBerkeley; <sup>2</sup>University of Tübingen)  
*28 years of vowels*  
▪ ageing; vowel formants; cognitive decline versus increasing articulatory skills; UP corpus
- 13 Gayraud, Frédérique<sup>1</sup> & Barkat-Defradas, Melissa<sup>2</sup> (<sup>1</sup>Laboratoire *Dynamique du Langage (DDL)* UMR5596 CNRS & Université de Lyon; <sup>2</sup>Institut *des Sciences de l'Evolution (ISE-M)* UMR5554 CNRS & Université de Montpellier)  
*Problems with assessing cognitive abilities in bilingual patients with Alzheimer's disease*  
▪ Alzheimer's disease; bilingualism; neuropsychological assessment
- 14 Gerstenberg, Annette (Freie Universität Berlin)  
*LangAge Corpora: A new platform for Language and Aging Research*  
▪ corpus; longitudinal studies; sociolinguistics
- 15 Hamilton, Heidi E. (Georgetown University)  
*Language, dementia and meaning-making in art galleries and homes: Objects of joint attention as resources for transforming knowledge, building topics and lifting spirits*  
▪ dementia; art gallery tours; objects of joint attention; knowledge management; identity construction
- 16 Hanulikova, Adriana & Müller-Feldmeth, Adriana & Ahnefeld, Katharina (Albert-Ludwigs-Universität Freiburg)  
*Self-paced reading and processing of gender stereotypes in dementia*  
▪ dementia; self-paced reading performance
- 17 Hekkel, Valerie (Freie Universität Berlin)  
*Micro-diachronic language change and its interaction with the age variable*  
▪ old age; causal marker; micro-diachrony; language change; apparent-time
- 18 Kairet, Julie Marie (Freie Universität Berlin)  
*Entendre le vieillissement langagier: études longitudinales de profils prosodiques*  
▪ longitudinal; case studies; perception; prosody
- 19 Lepeut, Alysson (F.R.S.-FNRS & University of Namur)  
*Analysis of interactive gestures, signs, and space among older Belgian French (BF) speakers and French Belgian Sign Language (LSFB) signers*  
▪ interactive gesture; sign language; space; multimodal corpus; aging
- 20 Kielkiewicz-Janowiak, Agnieszka (Adam Mickiewicz University in Poznań)  
*Narratives about life across generations: communicating generational intelligence*  
▪ narratives; generational identity; interview; interaction
- 21 Matsumoto, Yoshiko (Stanford University)  
*Being Ordinary: A powerful narrative strategy when feeling vulnerable*  
▪ stance; quotidian; frame; identity; discourse strategy
- 22 Moeller, Katrin<sup>1</sup> & Schmidt, Thomas<sup>2</sup> (<sup>1</sup>Martin-Luther-Universität Halle, <sup>2</sup>IdS Mannheim)  
*The Bonn Longitudinal Study on Ageing (BOLSA) as an interdisciplinary research resource*  
▪ longitudinal study; digitization; biographic interviews; audio data

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- 23 Parisot, Anne-Marie & Rinfret, Julie (Université de Québec, Montréal)  
*Intergenerational variation in the use of space in Langue des signes québécoise (LSQ): the case of verb agreement marking*  
  - grammatical use of space; senior signers; argument structure
- 24 Petré, Peter & Anthonissen, Lynn & Strik, Oscar (University of Antwerp)  
*Grammatical change in adults: cognitive and social mechanisms*  
  - lifelong learning; adult cognition; grammatical change; Early Modern English
- 25 Pot, Anna (University of Groningen)  
*The impact of (second) language ability on older Turkish migrants’ mental and social wellbeing*  
  - multilingualism; older migrants; wellbeing; SLA
- 26 Ratté, Sylvie<sup>1</sup> & Hernández-Domínguez, Laura<sup>1</sup> & Davis, Boyd<sup>2</sup> & Pope, Charlene<sup>3</sup> & Roche-Bergua, Andres<sup>4</sup> & Sierra-Martinez, Gerardo<sup>4</sup> (1<sup>École de technologie supérieure Montréal, Canada;</sup> 2<sup>University of North Carolina at Charlotte;</sup> 3<sup>Medical University of South Carolina;</sup> 4<sup>UNAM</sup>)  
*Cécilia Project: an international multidisciplinary collaboration on the study of language in later life*  
  - language in later life; corpus linguistics; dementia; communication; longitudinal study
- 27 Sachweh, Svenja (Talkcare Bochum)  
*As good as it (probably) gets – how living in a dementia housing project engenders animation and interactivity*  
  - dementia; motivation strategies; emotion-oriented communication
- 28 Schröder, Johannes<sup>1,2</sup> & Degen, Christina<sup>1</sup> & Frankenberg, Claudia<sup>1</sup> for the ILSE study group (1<sup>Section of Geriatric Psychiatry, Heidelberg University, Heidelberg;</sup> 2<sup>Germany Institute of Gerontology, Heidelberg University</sup>)  
*The ILSE Corpus: Results of the Interdisciplinary Longitudinal study on Adult Development and Aging*  
  - longitudinal study; aging; cognitive impairment; linguistic changing
- 29 Schuurman, Ineke & Sevens, Leen & Vandeghinste, Vincent (KU Leuven, Belgium)  
*You’re never too old for e-inclusion, are you?*  
  - social media; apps; simplifications; spelling correction
- 30 Svennevig, Jan & Landmark, Anne Marie & Lind, Marianne (University of Oslo)  
*Collaborative word searches in conversations involving bilingual speakers with dementia*  
  - dementia; conversation; word search; communication strategies; bilingualism
- 31 Van De Mierop, Dorien & Verhelst, Avril (KU Leuven)  
*Multilingualism in Flemish nursing homes: ‘overaccommodation’ versus ‘epistemic brokering’ in interpreters’ translations of caregivers’ questions*  
  - nursing home; multilingualism; interpreted interactions; ‘overaccommodation’; ‘epistemic brokering’
- 32 Wright, Heather Harris (East Carolina University)  
*Discourse Changes with Age: Considering Microlinguistic and Macrolinguistic Processes*  
  - narrative coherence; lexical diversity; discourse processing



## Monday March 6

<p>Welcome addresses CLARe founders: Catherine T. Bolly, Annette Gerstenberg Prof. Dr. Peter Alt, President of Freie Universität Berlin Prof. Dr. Nina Knoll, FocusArea DynAge, Freie Universität Berlin Prof. Dr. Clemens Tesch-Römer, Deutsches Zentrum für Altersfragen</p> <p>14:00 Plenary Talk: Hamilton, Heidi (Georgetown University): <i>Language, dementia and meaning-making in art galleries and homes: Objects of joint attention as resources for transforming knowledge, building topics and lifting spirits</i></p> <p>15:00 Ratté, Sylvie (ETS Montréal): <i>Cécilia Project: An international multidisciplinary collaboration on the study of language in later life</i></p> <p>15:30 <i>Coffee break</i></p> <p>16:00 Schroder, Johannes (University of Heidelberg): <i>ILSE Corpus: Results from the longitudinal study</i></p> <p>16:30 Moeller, Katrin (University of Halle); Schmidt, Thomas (IdS Mannheim): <i>The Bonn Longitudinal Study on Ageing (BOLSA) as an interdisciplinary research resource</i></p> <p>17:00 Poster Presentations <i>PhD projects</i> Duboisindien, Guillaume (University of Paris X, Modyco) Frankenberg, Claudia (University of Heidelberg) Hekkel, Valerie (FU Berlin) Kairat, Julie (FU Berlin) Lepeut, Alysson (F.R.S.-FNRS &amp; University of Namur) Pot, Anna (University of Groningen) Corpus projects Davis, Boyd (University of North Carolina); MacLagan, Margaret (University of Canterbury, NZ); <i>The Carolina Conversation Collection</i> Bolly, Catherine T.; Gabarró-López, Silvia; Meurant, Laurence (University of Namur): <i>Signing and gesturing in later life. How to adapt bodily talk in context?</i></p> <p>18:00 <i>Apéritif &amp; Poster Session</i></p>
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## Tuesday March 7

<p>09:00 Plenary: Gahl, Susanne (UCBerkeley); Baayen, Harald (University of Tübingen): <i>Twenty-eight years of vowels: An investigation of changes in vowel formants and vowel duration in the Up corpus</i></p> <p>10:00 Buchstaller, Isabelle; Krause, Anne; Auer, Anja; Otte, Stefanie (University of Leipzig): <i>The effect of the socio-economic trajectory on longitudinal life-span change</i></p> <p>10:30 <i>Coffee break</i></p> <p>11:00 Petré, Peter; Anthonissen, Lynn; Strik, Oscar; Manjavacas, Enrique; Budts, Sara (University of Antwerp): <i>Grammatical change in adults: Cognitive and social mechanisms</i></p> <p>11:30 Bowie, David (University of Anchorage, Alaska): <i>The role of the individual in the development of the Western Vowel System in Utah</i></p> <p>12:00 Bolly, Catherine (University of Cologne): <i>Multimodal stance in later life</i></p> <p>12:30 <i>Lunch</i></p> <p>13:30 Plenary: Matsumoto, Yoshiko (Stanford University): <i>Being ordinary: A powerful narrative strategy when feeling vulnerable</i></p> <p>14:30 Svennevig, Jan (University of Oslo): <i>Collaborative word searches in conversations involving bilingual speakers with dementia</i></p> <p>15:00 Van de Mierop, Dorien; Verheist, Avriël (KU Leuven): <i>Multilingualism in Flemish nursing homes: 'Overaccommodation' versus 'epistemic brokering' in interpreters' translations of caregivers' questions</i></p> <p>15:30 <i>Coffee break</i></p> <p>16:00 Plenary: Backhaus, Peter (WASEDA University, Tokyo): <i>Communication in institutional eldercare: A Japanese perspective</i></p> <p>17:00 Round Table I: Healthcare: Experts from research and practitioners Chair: Lindholm, Camilla (University of Helsinki) Input: Sachweh, Svenja (TalkCare, Bochum): <i>As good as it (probably) gets – how living in a dementia housing project engenders animation and interactivity</i></p> <p>20:00 <i>Conference dinner</i></p>
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## Wednesday March 8

<p>09:30 Parisot, Anne-Marie; Rinfret, Julie (University of Québec, Montréal): <i>Intergenerational variation in the use of space in Langue des Signes Québécoise (LSQ): The case of verb agreement marking</i></p> <p>10:00 Blondel, Marion; Boutet Dominique; El Ayari, Saira; Vincent, Coralie (CNRS): <i>LSF interactions in older signers: Which insights from motion capture?</i></p> <p>10:30 <i>Coffee break</i></p> <p>11:00 Gayraud, Frédérique (University of Lyon 2/CNRS); Melissa Barkat-Defradas (ISE-M CNRS UMR5554/University of Montpellier): <i>Problems with assessing cognitive abilities in bilingual patients with Alzheimer's disease</i></p> <p>11:30 De Looze, Céline (University of Dublin): <i>Speech markers as an objective evaluation of cognitive impairment and related psychosocial outcomes in populations with Mild-Cognitive Impairment and mild-to-moderate Alzheimer's disease</i></p> <p>12:00 <i>Lunch</i></p> <p>13:00 Plenary: Wright, Heather (East Carolina University): <i>Discourse changes with age: Considering microlinguistic and macrolinguistic processes</i></p> <p>14:00 Kielkiewicz-Janowiak, Agnieszka (University of Poznan): <i>Narratives about life across generations: Communicating generational intelligence</i></p> <p>14:30 Schuurman, Ineke (KU Leuven): <i>You're never too old for E-inclusion, are you?</i></p> <p>15:00 <i>Coffee break</i></p> <p>15:30 Hanulíkova, Adriana (University of Freiburg): <i>Self-paced reading and processing of gender stereotypes in dementia</i></p> <p>16:00 Fyndanis, Valantis; Ribu, Ingeborg (University of Oslo): <i>Tools and methods to investigate language and cognitive abilities in healthy and pathological aging</i></p> <p>16:30 Round Table II: Methods in language and aging research Chair: Ratté, Sylvie (ETS Montréal)</p> <p>17:15 <i>Concluding remarks</i></p>
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1 **Backhaus, Peter (Waseda University)**

## No time to care? Interactional hurriedness in Japanese eldercare

- *hurriedness; interactional tempo; institutional eldercare; Japanese*

The research presented in this paper is based on audio-recordings made in a Japanese eldercare facility at the northern outskirts of the Tokyo metropolitan region. The data consist of 107 mostly dyadic interactions between care workers and residents during the morning care. The main activities performed during the recordings consist of waking up the residents and getting them out of bed, dressing them, helping them with going to the toilet, and accompanying them to the dayroom for breakfast.

In this paper I focus on interactional tempo differences between the two groups of participants and how these can be read as indications of hurriedness. My analysis concentrates on two interrelated phenomena, both of which pertain to most basic principles of the turn taking system: (1) overlaps, or the interactional problem of “more than one at a time”, and (2) turn repetitions in reaction to pauses, or the problem of “less than one at a time” (Schegloff, 2000: 2).

With respect to the first phenomenon, I explore one common type of overlap that frequently occurs in the setting under observation. I show that these overlaps result from clashes of a resident’s “delayed” second pair part (SPP) of an adjacency pair with a care worker’s new first pair part (FPP) or sequence closing third (SCT). For example, a resident’s reply to a care worker’s greeting FPP (*ohayoo* “Good morning”) may collide with a care worker’s subsequent inquiry about getting up (*nanji ni okiteru?* “When are you getting up?”), as shown in Excerpt 1 (lines 4 and 5):

Excerpt 1

- 2 CW *Ebisawa-san ohayoo*  
 Ms. Ebisawa, good morning
- 3 (0.8)
- 4 Res *o[hayoo*  
 Good morning.
- 5 CW [*nanji ni okiteru?*  
 What time are you getting up?

My analysis of turn repetitions applies Davidson’s (1984) concept of “subsequent versions” to examine how care workers recycle a previous FPP (e.g., *okimasu ka* “Are you getting up?”) to mark a resident’s pending SPP as missing, in an attempt to speed up its delivery. Similar observations have been made by Posenau (2014: 79–80) in a recent study in a German dementia care setting, and by Akiya (2008: 62–64) in a study on resident–staff interaction in a Japanese day care centre.

As exemplified in Excerpt 2, subsequent versions of this type may occur more than once in succession, in which case they tend to get shortened (e.g., *okimasu ka* “Are you getting up?” => *okimasu:?* “You’re getting up?” => *okiru?* “Get up?”) and are delivered with increasingly shorter pauses in between.

A closer quantitative look at the relevant cases reveals that in a sizable number of subsequent versions a resident’s SPP has in fact already been delivered, but for some reason went unnoticed by the busy care worker. It is not *missing*, but has been *missed*. The resulting repair sequence shows that hurriedness does not necessarily translate into a quicker performance of the care tasks, but may have quite opposite effects.

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Excerpt 2

- 5 CW okimasu ka?  
 Are you getting up?  
 6 (1.5)  
 7 okimasu:?  
 You're getting up?  
 8 (1.0)  
 9 okiru?  
 Get up?  
 10 (0.4)  
 11 Res okiru=  
 Get up.

Based on findings from a most insightful study on interaction in Japanese dementia care (Naitō 2006), I speculate on the staff's likely reasons for doing 'being in a hurry'. I argue that these may stem more from perceived than from real time pressures. In fact, the care workers in my study usually manage to complete all morning care activities well in advance of breakfast time, resulting in a longer waiting period in the dayroom without any specific activities.

Irrespective of whether or not hurriedness may help to save time, my main conclusion is that it has some considerably harmful effects on the overall quality of communication in eldercare settings. I conclude with a few general observations about the pragmatics of hurriedness and its interactional properties.

**References**

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**Bio-note**

**Peter Backhaus** is Associate Professor at Waseda University, Tokyo. His main research interests are sociolinguistics, pragmatics, and writing and orthography. He first got in touch with the topic of institutional eldercare after graduation from high school, when he did a 15 months period of “civil service” in a German care facility. His publications include *Social Aging and Language* (*International Journal of the Sociology of Language* 200, ed. with Florian Coulmas, 2009), *Communication in Elderly Care: Cross-cultural Perspectives* (ed., Continuum, 2011), and *Care communication: Making a home in a Japanese eldercare facility* (Routledge, 2017).

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- 2 **Blondel, Marion<sup>1</sup> & Boutet, Dominique<sup>2</sup> & El Ayari, Sarra<sup>1</sup> & Coralie, Vincent<sup>1</sup>**  
(<sup>1</sup>CNRS-Paris8, SFL; <sup>2</sup>Université de Rouen, Dylis)

## **LSF interactions in elderly signers: Insights from motion capture?**

- *LSF; sign languages; aging; motion capture*

Leduc & Grenier (2015) examine the question of technology in relation to representations associated with deafness and aging. Their research contributes to challenging both the view of aging as a synonym for dependence or decline and the view of deafness as a disability. Their data include interviews with deaf seniors in Quebec Sign Language (LSQ) and in American Sign Language (ASL) (see <http://actproject.ca/act/les-aines-sourds-et-la-technologie/>).

In parallel, the CLARe network proposes to contrast different approaches to the language of the elderly (Whitehouse 2013; Van der Linden & Juillerat Van der Linden 2014). Linguistic description, based on corpora of semi-guided interviews, focuses on the markers of typical aging and the compensatory and adaptive strategies used to achieve successful interactions (Bolly & Boutet to appear; Bolly & Thomas 2015). This approach takes into account the pragmatic dimension, including the multimodality of French, therefore considering a spoken language as an embodied language. Like Grenier and Leduc, this approach contests the view of aging as a decline (Baltes & Lindenberg 1997; Duboisdindien 2017).

Work on sign languages was integrated into the data session of the 2nd CLARe workshop (Louvain), in connection with recently established corpora of LSF (the sign language of French-speaking Belgium) and LSQ – both of which include data from elderly signers (Meurant 2015; Parisot & Rinfret 2015; Luna 2015).

The SignAge project aims to create a corpus of interactions between elderly deaf signers (> 65 y.o) in French Sign Language (LSF) on the themes of the evolution of transport, access to care, culture and new technologies. As part of this project, we aim to test motion capture systems to complement analysis on the basis of video recordings. We expect motion capture to give us additional kinesiological information, allowing for articulatory measurements to study the use of space and the signers' prosody, especially in interaction patterns.

The literature indicates that the elderly use gestures with reduced amplitude (Carmeli, et al., 2003). We will also consider eye and hand coordination, which appears to be deficient for the elderly, as well as the forms of manual configurations. We will examine a possible link with peripheral dysarthria for co-verbal gestures or dyspraxia. Does reduced amplitude of gestures change their meaning?

In the longer term, our aim is a more general study of (i) the linguistic specificities of LSF with respect to age in the productions collected in interaction (speech turn, signing space, lexical and morphosyntactic variations, prosody in LSF), (ii) the possible markers of aging, whether ordinary or disturbed, in connection with existing studies on the articulatory manifestations of language or cognitive disorders (Tyrone & Woll 2008; Tyrone 2014) and (iii) adaptive strategies of elderly signers.

We follow some of the steps from the methodological protocol developed in the European project CorpAGEst (<http://corpagest.org/>): collection and processing of audiovisual data of the sample, annotation of segmental and suprasegmental markers (via the ELAN annotation software <http://www.lat-mpi.eu/tools/elan>), experimental study based on motion capture, functional linguistic interpretation of the results obtained. We had to adapt some of the recommendations to deafness. In the longer term, consideration will be given to adapting psychometric tests to deaf signers in order to diagnose participants' risk of developing some cognitive impairment involving communication.



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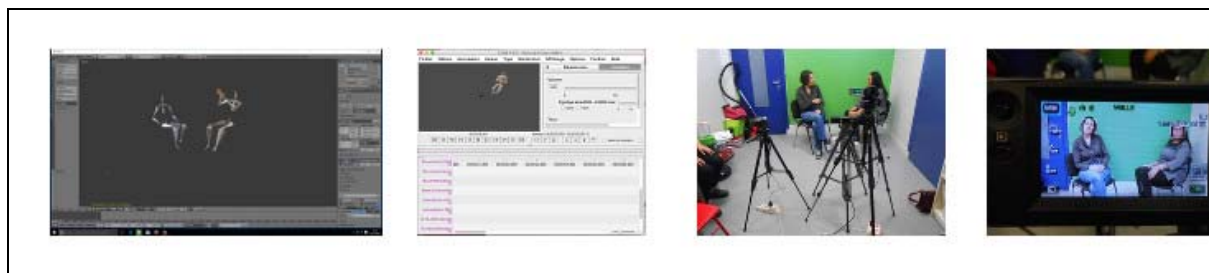


Figure 1: Testing device for collection and annotation, Dec. 2016, Rouen

We will present (i) our methodology and initial data (collected with two digital video cameras and a kinect, Figure1) and (ii) our adaptation of the original protocol to our research conditions (deaf participants) and the experimental issues. We also plan complementary tests with other types of sensors, such as accelerometers or digital gloves. We would like to take the opportunity of CLARe3 to submit these experimental tracks to the interdisciplinary expertise of the network members.

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Dr. Catherine T. Bolly (Universität zu Köln) & Prof. Dr. Annette Gerstenberg (FU)

#### **Bio-note**

**Marion Blondel** is a researcher at the Centre National de la Recherche Scientifique (CNRS-Paris8) in France. She is a linguist in the domain of Sign Languages, and more generally Language and Deafness. Her research focuses on poetic register, signed prosody, bilingual bimodal acquisition, ‘deaf writing’ and more recently on LSF and aging. She has contributed to recent overviews on LSF linguistics and corpora in Braffort (2016) or Bakken et al. (2015). <http://www.sfl.cnrs.fr/marion-blondel>

**Dominique Boutet** is an associate professor at the University of Rouen Normandie in France. He is a linguist of sign languages and gestures. His research focuses on kinesiology, gesture/sign interface, sign language transcription system, and more recently on motion capture.

**Sarra El Ayari** is a research engineer at the Centre National de la Recherche Scientifique (CNRS-Paris8) in France. She works mainly on visualisation and exploration of linguistics corpora. Her research focuses on developing games for language acquisition and question-answering topics in sign languages. <http://www.sfl.cnrs.fr/sarra-el-ayari>

**Coralie Vincent** is an experimental engineer at the Centre National de la Recherche Scientifique (CNRS-Paris8) in France. She is the Head of the platform for experiments in psycholinguistics in the SFL lab and an expert in acquisition of eye-tracking, motion capture and behavioral data. She contributes to the exploitation of the gathered data (formatting and analysis) and to the dissemination of research results (Renna et al. 2015; Catteau et al. 2015 among others, for motion capture and sign languages). <http://www.sfl.cnrs.fr/coralie-vincent>

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### **3 Bolly, Catherine T. (Universität zu Köln & UCLouvain)**

## **Multimodal stance in later life**

- *pragmatic function; gesture; discourse marker; aging*

The field of pragmatics is a multidisciplinary domain that explores the underlying processes and realization of meaning in use, taking into account available evidence provided by the context within which the interaction takes place. Aiming at understanding language in the most integrative way possible, the CorpAGEst project (Bolly & Boutet, forthc.) strives to establish the verbal and gestural profile of very old people, looking at their pragmatic competence in interaction, that is, at their ability to use language resources in a contextually appropriate manner (Kasper & Rose, 2002). To reach this goal, a multimodal corpus of audio- and video-recorded interactions was created in order to test several hypotheses: (i) discourse markers (e.g., *tu sais/vous savez* ‘you know’) and pragmatic gestures (e.g., an exaggerated opening of the eyes) are relevant indicators of the overall pragmatic competence of the aging subject; (ii) a change in the concurrent use of these (non)verbal pragmatic cues (incl. speech, facial expression, eye gaze, hand gesture, and body gesture) could be an indicator of an adaptive strategy used, with advancing age, to reduce the cost of language production during interaction. Contextual independent variables were also included in the corpus design, such as the environment type (private vs. residential home), the social tie between the participants (familiar vs. unknown interviewer) and the task type (focusing on past events vs. present-day life).

As recently stated by Keisanen & Kärkkäinen (2014), stance taking in the embodied interaction is concerned with the study of multimodal practices (including language, prosody, gesture, body posture, as well as sequential position and timing, activity and situation settings). In this talk, particular attention will be paid to pragmatic markers of stance in speech and gesture, in order to shed some light on pragmatic cues which are specific to one or the other modality and, most importantly, on the pragmatic functions and/or forms possibly shared by the concurrent systems. After an introduction of the general basics and assumptions that are at the core of the project, the annotation principles adopted to analyze the functions of pragmatic markers in speech and gesture (Bolly & Crible, 2015) will be presented.

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### **Bio-note**

**C. T. Bolly** is a research associate in linguistics at Cologne University and scientific collaborator at the Université catholique de Louvain. Her current research interests lie in the study of language in later life from a pragmatic angle, by adopting corpus-based approaches to language in use. The focus is on adaptive potential and aging well of the older person, with a particular attention paid to the expression of affective and cognitive stance as key notions in discursive pragmatics. The conventionalization process of (non)verbal pragmatic units (e.g., discourse markers, pragmatic gestures) is also explored, based on inspiring frameworks such as phraseology, grammaticalization, and construction grammar. She is the co-founder of the CLARe network, the leader of the CorpAGEst project and also a member of the Louvain4Ageing Consortium.

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- 4 **Bolly, Catherine T.<sup>1</sup> & Sílvia Gabarró-López<sup>2</sup> & Laurence Meurant<sup>2</sup> (1Universität zu Köln & UCLouvain, 2FNRS & University of Namur)**

## **Signing and gesturing in later life. How to adapt bodily talk in context?**

- *multimodality; pragmatic gestures; older people; sign language; spoken language*

It is now assumed that both speakers and signers use gestures in language interaction as these units are an integral part of linguistic communication (Sweetser, 2009) and window onto the speaker's mind (Goldin-Meadow & Alibali, 2013). It is also admitted that sign languages (SLs) offer the unique property to grammaticalize both manual and nonmanual gestures (Herrmann & Steinbach, 2013). This poster aims to foster the knowledge on these issues by studying the palm-up gesture (Kendon, 2004; Müller, 2004) in combination with nonmanuals (including facial displays, gaze, head and shoulders' moves), comparing their more or less pragmaticalized use (Degand & Evers-Vermeul, 2015) by older locutors in Belgian spoken French and French Belgian Sign Language (LSFB).

This study follows from a corpus-based method of video data analysis (using the ELAN software) and a form-based approach to gesture and sign. The corpus data comprise four samples of video data (duration: approx. 15 min.) that are made up of interviews with two hearing French-speaking women (75 and 84 y. old; CorpAGEst corpus) and two deaf LSFB-signing men (75 and 84 y. old; LSFB corpus).

Similarly to pragmatic markers (Aijmer & Simon-Vandenberg, 2011), palm-ups are said to be multifunctional (Ferré, 2011) and can cover a wide range of pragmatic functions (e.g. expression of modality, backchannel signal, turn initiating or ending, or pause filler) (see McKee & Wallingford [2011] and van Loon [2012] among other taxonomies in SLs). Taking for granted that there is an increasing need for a certain gestural economy with advancing age (Feyereisen & Havard, 1999) and a high individual variability in old age (Valdois *et al.*, 1990), we investigated the nonmanuals that are layered with palm-ups to see the functions that such combinations fulfill in each language.

So far results show that the four informants vary in their way of producing palm-ups. In French spoken language (SpL), the younger speaker produces much more palm-ups than the older one (10.5/min vs. 0.5/min), whereas the LSFB signers produce a similar number (8/min vs. 6/min). Even though mainly falling within the expressive domain (*viz.* conveying the speaker's attitude, emotions, judgments, or stance), the most frequent functions vary from one language to the other. Notably, nonmanuals layered with palm-ups for attitude are expressed in SL by means of two-handed palm-ups combined with a non-addressed gaze and closed mouth (if no other parallel function), while in SpL they can be one-handed or two-handed, and mostly combine with back-and-forth gazing (with a not addressed piek), eye-closing, eyebrow raising, and head turns. Furthermore, the use of nonmanuals layered with palm-ups appeared to be more standardized in signers than in speakers.

This research has been presented at the ISGS (International Society for Gesture Studies) conference in 2016. It is the first crosslinguistic study on the use of palm-ups and nonmanuals between a SpL and a SL in later life, also presenting a refined, interoperable model for the annotation of pragmatic gestures and their functions at the gesture-sign interface.

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### **Bio-note**

**Dr. Catherine T. Bolly** is a research associate at the University of Cologne. She is also scientific collaborator at the University of Louvain for several years (Valibel – Discours & Variation; Louvain4Ageing consortium). Catherine T. Bolly is the co-founder of the CLARe network (Corpora for Language and Aging Research) and the main investigator of the CorpAGEst Marie Curie project (FP7/PIEF-GA-2012-328282; 2013-2015). Her current interests lie in the study of language in later life from a socio-pragmatic angle. Adopting a corpus-based methodology, the focus is on discourse markers and pragmatic gestures which help in structuring discourse, as in expressing emotion and stance. She wrote several publications in the field of discourse, phraseology and grammaticalization, among others one major monograph (*Phraséologie et collocations. Approche sur corpus en français L1 et L2*, P.I.E. Peter Lang, 2011).

**Sílvia Gabarró-López** is a research fellow for the F.R.S.-FNRS at the University of Namur. She started her PhD thesis on “Buys and discourse markers in French Belgian Sign Language (LSFB) and Catalan Sign Language (LSC)” in 2012 and from then has actively participated in several international conferences. Her research interests include discourse analysis, sign language linguistics, corpus linguistics and sign language interpreting. She has been involved in the LSFB Corpus project as a scientific collaborator and as a translator of the video-data from LSFB to French. In addition to her scientific activities, she has also worked as English teacher for deaf students (2012-2015) in the “co-enrolment” bilingual project set in Namur (Sainte-Marie School).

**Dr. Laurence Meurant** is a research associate for the F.R.S.-FNRS at the University of Namur, head of the French Belgian Sign Language Lab (LSFB-Lab) and a NAMur Research College (NARC) fellow. She is partner of the “co-enrolment” bilingual program for deaf pupils set in Namur (Sainte-Marie School). Her interests lie in the study of French Belgian Sign Language (LSFB) discourse. After several publications dedicated to the role of gaze in LSFB grammar and discourse (*Le regard en langue des signes. Anaphore en langue des signes française de Belgique (LSFB): Morphologie, syntaxe, énonciation*, Presses universitaires de Rennes, 2008), she was in charge of collecting the first large-scale digital corpus of LSFB and initiated the first corpus-based studies on LSFB.

**5 Bowie, David (University of Alaska Anchorage)**

## **The role of the individual in the development of the Western Vowel System in Utah**

- *aging; back vowels; vowel fronting; sociophonetics; Utah English*

This study investigates a subset of the vowels that define the Western Vowel System (also known as the California Shift and Third Dialect Shift, among other labels) as found in the western United States, as produced by individuals from the Wasatch Front region of the state of Utah. While earlier work has evidence for the Western Vowel Shift in the Wasatch Front community as a whole (Di, Paolo 1992; Reeves 2009; Bowie, forthcoming), none have looked at the ways individuals have behaved over time as the system changed around them.

To observe such behavior, all that is necessary is to obtain recordings of individuals at different points of time. To do this, an archive not originally created for linguistic analysis was used: A collection of religious sermons publicly broadcast from Salt Lake City (which is located roughly in the middle of the Wasatch Front), sampled every five years from 1940 to 2010. The same individuals appear repeatedly in the archive, so even setting conservative limits by excluding anyone who did not grow up along the Wasatch Front, did not appear in at least five consecutive sampling point (i.e., a span covering twenty years), or experienced any sort of disorder or trauma affecting speech production, twelve individuals (with years of birth ranging from 1871 to 1927) met the criteria for inclusion in the study.

The Western Vowel System involves several changes (for a summary, see Eckert 2004), not all of which appear in every participating community. To simplify somewhat, however, the system generally involves the lowering of the non-low front lax vowels (i.e., BIT and BET), the retraction of BAT, the merger (or at least near merger) of BOT and BOUGHT, and the fronting of the non-low back vowels (i.e., BOOT, BOOK, BOAT, and BUT). The first effective English-language settlement of the Wasatch Front region began in 1847, and previous apparent time work has found that most of the system already appears in the speech of the first generations of Wasatch Front speakers (Bowie forthcoming); therefore, this study focuses on the one part that shows robust changes since initial English-language settlement of the region: the non-low back vowels.

Every instance of the twelve speakers' non-low back vowels (excluding those preceding //) was collected, which provided at least thirty tokens of the analyzed vowels for each speaker in each year sampled except, in some cases, for the BOOK vowel. In addition, at least twenty instances of the BEET and BOT vowels (limited to pre-obstruent and word-final environments, which are not involved in any changes in the local variety) were collected for each speaker in each year sampled to provide anchor points at opposite corners of the vowel space. First and second formant values were then collected for each vowel, which allowed the plotting of vowels for each speaker (with an example shown for reference in Figure 1), which allowed for simple comparison of each speaker's production from year to year.

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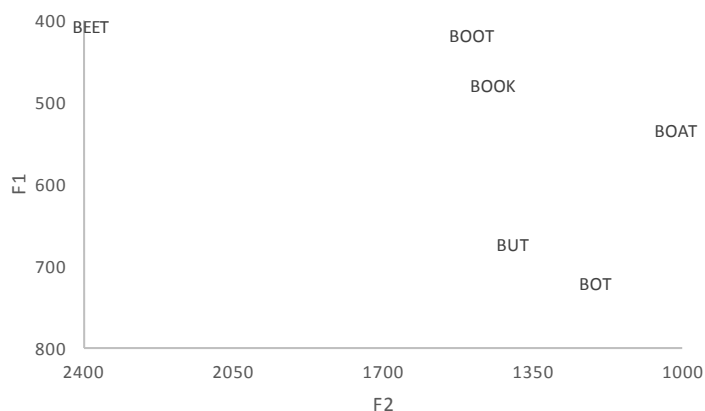


Fig. 1 1940 vowel means for JRC (born 1871)

As other studies have found when tracking individuals’ linguistic production across the adult lifespan (among several others, Nahkola & Saanilahti 2004, Sankoff & Blondeau, 2007; Bowie 2015), statistical analyses of each speakers’ production showed a great deal of intraindividual variation—some showed stability, while others showed significant changes year to year. However, among those who showed changes, two generalizations can be drawn: First, speakers who shift generally shift in the direction of the changes occurring in the community (as found, for different communities and variables, by Nahkola & Saanilahti, 2004 and Sankoff & Blondeau, 2007), and second, there is a tendency for speakers to vary more later in adulthood than earlier, leading to the conclusion that speakers’ envelope of variation is increasing as they age.

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Sankoff, G. & H. Blondeau. 2007. Language change across the lifespan: /r/ in Montreal French. *Language* 83, 560–588.

**Bio-note**

**David Bowie** holds a PhD in Linguistics from the University of Pennsylvania, and is now an Associate Professor of English and Linguistics at the University of Alaska Anchorage, where his research centers primarily on linguistic behavior across the adult lifespan, and on linguistic correlates of religious identity. He has recently published articles in *Language and Cognition*, *Language and Communication*, and the *Journal of Cognitive Psychology*, as well as a chapter in the *Oxford Handbook of Historical Phonology*, and he also has a chapter in an upcoming volume of the *Publication of the American Dialect Society* series.

**6 Buchstaller, Isabelle & Krause, Anne & Auer, Anja & Otte, Stefanie (Leipzig University)**

## **The effect of the socioeconomic trajectory on longitudinal life-span change**

- *language change; change across the life-span; monophthongization; FACE vowel; Northern Englishes; levelling*

This paper reports on a small panel sample of 6 speakers who were recorded in the North East of England in 1971 and again 42 years later, in 2013. We will focus on changes in the Tyneside FACE vowel, which is the site of two intersecting community-wide changes: Levelling towards the supra-northern monophthong as well as the gradual incursion of the southern standard closing diphthong. Sociophonetic research has revealed that the turnover in the FACE variable is conditioned by a complex system of constraints including the preceding and following environment, the socio-demographic characteristics of the speaker, as well as stylistic and ideological factors (Watt 2002; Haddican et al. 2013). But we know very little about the extent to which the internal grammar which conditions variant choice is amenable to change across the life-span of the individual (Sankoff and Blondeau 2008). This is because analyses of intra-speaker malleability have primarily focused on age-related shifts in proportional frequencies of individual variants. To date, there is very little research which explores the repercussions of ongoing change on the malleability of the constraint system that governs the use of variants within the individual speaker. In this paper, we investigate whether the factors that condition the realization of the FACE vowel have significantly altered within the grammar of the individual speaker (see Blondeau et al. 2002).

We appeal to evidence gleaned from in-depth sociolinguistic interviews as well as long-term community-based research. Thick ethnographic information (Geertz 1973) allows us to operationalise speakers’ socio-economic trajectories and their life histories as explanatory factors for their longitudinal linguistic choices. Notably, the Tyneside community has undergone dramatic socio-economic changes across the 42 years that divide the two panel recordings, moving from an industry relying on coal mining and shipbuilding to an “eds and meds” economy (Beal 2009). Whereas linguists often consider social upheavals in the speech community as problematic and seek to observe highly controlled longitudinal datasets, our study considers changes in the social landscape as an opportunity to examine the relationship between the community and the individual over time. Indeed, the socio-demographic trajectories of the speakers in our panel sample epitomize the changes in social demographic make-up that define the North East. Our small sample thus allows us examine the correspondences between a speaker’s situatedness in socioeconomic structure and their linguistic behaviour across the lifespan (Bowie and Yaeger-Dror 2016, Wagner and Sankoff 2011). Our research is guided by the following questions:

- To which extent are speaker grammars malleable across the life-span?
- Do our 6 panel speakers go along with the community-wide changes in the FACE vowel?
- Do they restructure their FACE vowel according to the tendencies reported in the literature?
- Can we describe the malleability across the life-span of the individual by appealing to socio-demographic, speaker-specific, linguistic, ideological and stylistic considerations?
- How do speakers’ social trajectories and life histories affect their (non)adoption of ongoing changes across the life course?

Overall, our data allows us to show that an individual’s positionality in socioeconomic structure, their trajectory as well as a range of speaker-based factors such as their contact with children



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and their stance towards changes more generally influence speakers’ behaviour across the life-span (see Buchstaller 2015). We will also illustrate the way in which an individual’s change in terms of net variant production goes hand in hand with the restructuring of their internal grammar. The article contributes to the growing body of panel research that aims to “determine the scope and limitations of speakers’ abilities to change their speech” across their life histories (Bowie & Yaeger-Dror 2016).

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#### **Bio-note**

**Isabelle Buchstaller** is professor for varieties of English at Leipzig University. Her main research interests are language variation and change, including the role of contact in ongoing linguistic change. She has published widely on ongoing changes in the area of morpho-syntax, including her monograph “Quotative: New trends and sociolinguistic implications” published by Wiley Blackwell in 2014. Her ERC-funded research project (Buchstaller 2013-2017) investigates the mechanisms of intra-speaker instability with an eye on the range and the determinants of linguistic malleability across the life-span of the individual.

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- 7 **Davis, Boyd H.<sup>1</sup> & Maclagan, Margaret<sup>2</sup>** (<sup>1</sup>University of North Carolina-Charlotte, USA; <sup>2</sup>University of Canterbury, NZ)

**The Carolinas Conversations Collection**

- *pragmatic spaces found in pauses; prepositions and reported speech*

The initial development of the *Carolinas Conversations Collection (CCC)* was supported by the National Library of Medicine from 2008-2011 (<http://carolinaconversations.musc.edu>). The core of this password-protected digital corpus presents audio, video and transcripts of men and women over 60 with and without dementia, talking about daily living, health and well being. The CCC portal allows access and retrieval of recordings in WAV or MP3, transcripts without visible markup, and many audio-synchronized transcripts which are web-browsable for online search, retrieval and analysis from word to sound signal.

Initially, the CCC held 80 transcripts of persons with dementia (PWD) with 33 involved in multiple conversational interviews. Donations made to this cohort are on-going: from 2008-13, an additional 315 conversations with PWD were collected and partially transcribed and another 120 donated since 2014. Currently, the central corpus has 875,739 words, and 692 transcripts with just over 800 hours of transcribed recordings, or 48,000 minutes. The CCC now also includes several associated corpora: Ratté’s Mexican and Ecuadorean Spanish conversations with PWD, van Ravenstein’s collection from low-income citizens aging in place and Wright’s multi-faceted corpus of normally-aging persons, aged 30-90.

Maintaining speaker identity and increasing social interaction are both dependent on language used by and to older speakers. The length and frequency of pausing plays a key part in how a person’s fluency is perceived. Linguistic features such as pauses (see Davis and Maclagan, 2009) and prepositions contribute to our understanding of planning and of spatial and temporal concepts and usage, which are often linked to formulaic language used as pragmatic compensation and interaction maintenance. Such features require more systematic comparisons and investigations of patterns to identify their relevance to language use in aging and classification of particular impairments.

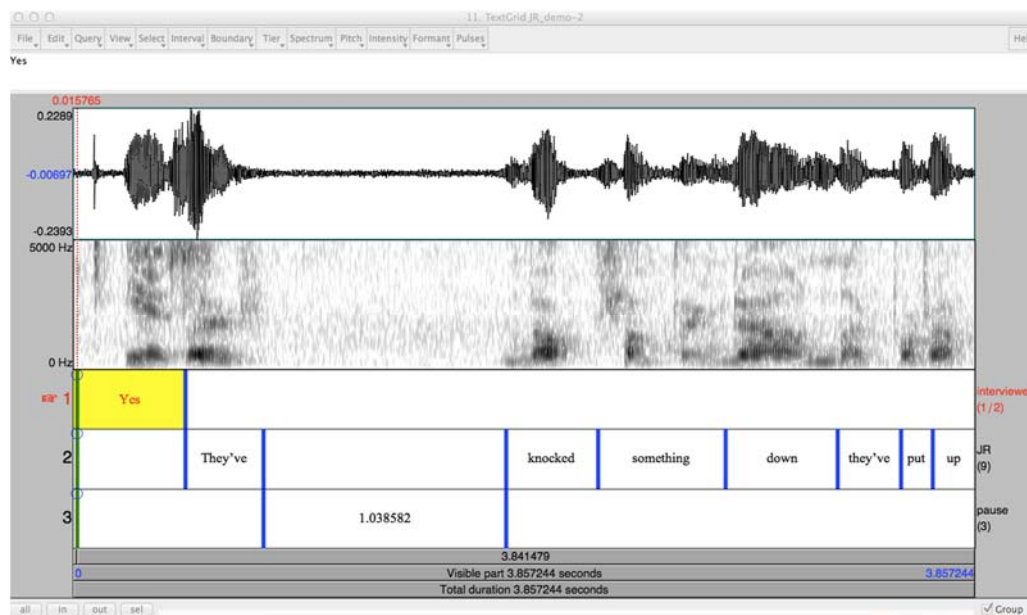


Fig. 1 Praat analysis of speaker JR’s pauses (Boersma and Weenink, 2009)

Guinn et al. (2014) sampled 80 CCC conversations between 31 PWD and 57 unimpaired partners. They found that features such as POS tags and measures of lexical diversity were

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less useful than measuring filled pauses, repetitions, and incomplete words, and achieved best accuracy of 79.5%. Pause length discriminated between persons with and without dementia in a walking-talking study focusing on question types (Davis et al 2011). Figure 2 represents simple and complex prepositions as compared with types, tokens and multiword expression across conversations across 3 successive years (n=11) with one woman as she aged from 85 to 88 and progressed from mild to mild-moderate dementia. Note that her 2011 conversation was commensurate with her production in 2009 for word types, complex prepositions and increased number of simple prepositions and multi-word expressions, suggesting an increase in compensatory strategies connected to a decrease in her ability either to retrieve story chunks, gist, or words.

Our current investigation of reported speech in dementia conversation finds that it primarily occurs in scaffolded (Hydén & Orulv 2010) narratives as opposed to four other types of narrative format we identify as retained in early moderate dementia (Davis & Maclagan 2017). The collection invites your use: there is so much more to find.

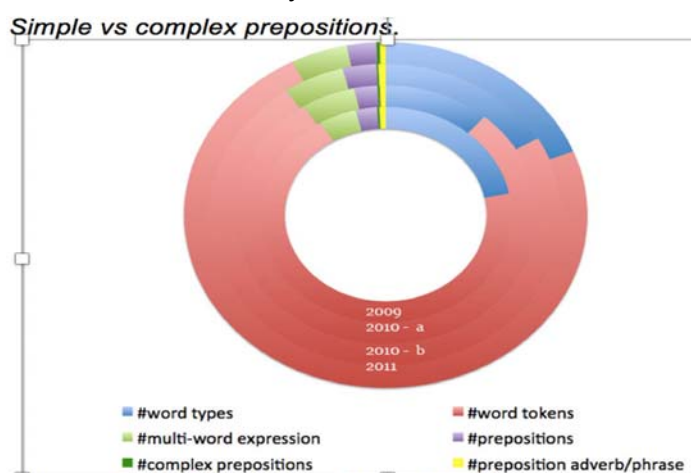


Figure 2. One Speaker's Prepositions

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### Bio-note

**Boyd Davis**, PhD, sociohistorical and sociopragmatic linguistics, language change over time, Co-editor, *Pragmatics in dementia discourse* (2014); *Fillers, Pauses and Placeholders* (2010); editor, *Alzheimer talk, text and context* (2005;2008).

**Margaret Maclagan**, PhD, articulatory and acoustic phonetics, language change over time; Māori, MAONZE Project; sociolinguistics, Alzheimer discourse. Co-author/co-editor of *New Zealand English* (2008); *Fillers, Pauses and Placeholders* (2010).

- 8 **De Looze, Céline<sup>1</sup> & Kelly, Finnian<sup>1</sup> & Crosby, Lisa<sup>3</sup> & Vourdanou, Aisling<sup>1</sup> & Lawlor, Brian<sup>2/3</sup> & Reilly, Richard<sup>1/2</sup> (1<sup>Trinity Centre for Bioengineering, Trinity College Dublin</sup> 2<sup>Institute of Neuroscience, Trinity College Dublin</sup> , 3<sup>M.I.R.A., St James’s Hospital</sup>)**

## **The SPEECHCOG project: Speech markers as an objective evaluation of cognitive impairment and related psychosocial outcomes in populations with Mild Cognitive Impairment and mild-to-moderate Alzheimer’s disease**

- *cognitive impairment; neuropsychology; speech prosody*

Population ageing worldwide has considerable consequences for healthy living and public services. Among these, mental and neurological conditions, such as dementia, represent a particular burden on the older person as they may have significant impact on their quality of life and that of their family (Cahill et al, 2012). Day-to-day interactions with a person with dementia can be particularly challenging. They may experience difficulties in speaking (e.g. aphasia) and/or an alteration in their behaviour (e.g. apathy), which may disrupt their ability to communicate. Similarly, the communication strategies used by caregivers (e.g. nurse, family member) to overcome these difficulties, if not effective, may negatively affect a patient’s self-esteem and result in social-withdrawal and/or depression (Cowdell et al, 2010; Lubinski et al, 2000; Williams et al, 2009).

Around 35 million people live with cognitive impairment and 4 million cases are annually expected. Achieving earlier diagnosis and establishing appropriate and effective healthcare services are crucial to develop better treatment and prevention and to improve the mental state and quality of life of older people (Cahill et al, 2012).

Current diagnoses include neuropsychological (e.g. MMSE) and neurophysiological (e.g. fMRI) examinations. These tests can be invasive, expensive or may lack objectivity (Laske et al, 2015). We propose that speech-based technologies could provide additional predictive information to current evaluations and be used to facilitate screening in a cost-effective, computerized, and non-invasive manner.

Interpersonal communication can have a considerable impact on patients’ well-being and caregivers’ emotional distress. To date, the effectiveness of caregivers’ strategies to communicate with a person with dementia is not clearly supported by empirical evidence. Our research will contribute to provide recommendations of evidence-based communication practices that can improve patients’ and caregivers’ well-being.

In this talk, we will present the methods and tools developed for the collection and automated analysis of read data and conversational interactions between patients with Mild Cognitive Impairment or mild-to-moderate Alzheimer’s disease and their caregivers.

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**Bio-Note**

**Dr. Céline De Looze** is a speech scientist, expert in speech prosody and interpersonal communication in social interaction. Her scientific approach combines knowledge from clinical linguistics, phonetics and neuropsychology with methods and technologies from social signal processing and human factors engineering. Her work aims to provide objective evaluation of interpersonal communication strategies and their impact on performance and psychosocial outcomes in health care and high-stress environments.

**9 Duboisdindien, Guillaume<sup>1</sup> & Bolly, Catherine<sup>2</sup>**  
(<sup>1</sup>Université Paris-Ouest Nanterre La Défense; <sup>2</sup>Universität zu Köln)

## **Study of Pragmatic markers and narrative identity in ageing process.**

- *pragmatic markers; elderly; frailty; longitudinal approach; identity*

It is now recognized that Pragmatic Markers (henceforth, PMs) can contribute to the cohesion and coherence of speech by revealing expressivity and stance and regulating intersubjective processes (Fitzmaurice, 2004). By their indexical and metalinguistic dimension, they help the speakers to co-build a contextualized representation of the ongoing discourse (Aijmer & Simon-Vanderbergen, 2011: 224). By contrast, we still know very little about how PMs can also be manifested by gestural and prosodic features (Fernandez, 1994).

Early psychosocial and therapeutic support for old people in situation of cognitive frailty (Rockwood, 1994) requires the ability to decipher their pragmatic, emotional and conversational abilities to ensure individual care (Duboisdindien, Bolly & Lacheret, 2016). Studies in applied linguistics have shown that frail older people develop compensatory strategies to maintain their involvement in the exchange (Davis, Maclagan & Cook, 2013; Tacconat & Lemaire, 2014) as well as their psychological identity, by using verbal and gestural PMs (either together or separately) that could inform about their cognitive resources. With respect to Halliday’s threefold categorization (1970), PMs are thought to be used by older people (i) to organize their speech and structure the information conveyed (structuring function), (ii) to express their views and feelings as to preserve their identity through narration (expressive function), and also (iii) to optimize the interaction between speakers (interactive function). We assume that the use and combination of PMs in various communication modes can provide relevant information about methods to appropriately preserve identity, empathic and conversational abilities in late life. It can also give useful insight into the preferential strategies used by the aging person as cognitive deterioration develops, depending on the discursive task at stake. Our study is based on the CorpAGEst protocol (Bolly & Boutet, to appear), which includes a multimodal tool (Allwood, 2008) designed to analyze the verbal and nonverbal behavior of very old people (75 y. old and more) in their natural environment. We also choose sensory reminiscence activities as the least invasive method to make autobiographical discourse easier for the elderly in an ecological perspective. These tasks generate the emergence of past memories and take the elderly person back to a time or even a moment that they hold dear, in accordance with clinical care. The same phenomenon has been observed with people with Alzheimer’s disease (Baines, 1987). Telling stories about past events appears to be a universal human activity that begins in early life. Rimé (2010) and before him, Wetherell and Maybin (1996: 258) suggest that narratives are widely used by elderly to create and interpret the self in face to face interactions. The longitudinal corpus includes: 20 hours of audio and video recordings, corresponding to 36 interviews in French-French (9 old speakers; mean age: 83; sex: 9 F; average MoCA-Test score: 20/30). The present study focuses on the comprehensive analysis of 15 video samples per subcorpus (total duration: 1h15.). The data under investigation correspond to video samples from reminiscence tasks based on a visual, olfactive and sound stimuli (*old speaker 1*: Constance, 86 y. old, MoCA 17/30; *old speaker 2*: Tristane, 81 y. old, MoCA 21/30; *old speaker 3*: Séraphine, 87 y. old, MoCA 20/30; *old speaker 4*: Mathilde, 78 y. old, MoCA 22/30; *old speaker 5*: Fleur, 91 y. old 15/30). Among the physiological articulators involved in the interaction, we will examine hand gestures and head movements produced by the old speakers to uncover how these nonverbal cues combine with speech, and especially with discourse markers. Preliminary results emerged from two exploratory studies with Constance and Tristane. The analysis of a 10 min. samples among the longitudinal data indicated functional patterns in the use of PMs and an increase over time in their use and combinations of verbal and gestural markers. These

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results tend to confirm the hypothesized role of PMs used by the frail old speaker to compensate for cognitive decline, in order to remain involved in conversation.

This functional approach to PMs in very old people’s speech, as well as approaches induced by linguistics and specifically pragmatics, undoubtedly contribute to the urgent need for non-medicinal and psychosocial methods (Van der Linden & Juillerat Van der Linden, 2014). We also believe that such evidence-based methods will contribute, in the end, to ensure older people’s well-being by answering more closely to their ‘real’ needs with respect to their ‘real’ behavior in ‘real’-world settings.

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### **Bio-note**

**Guillaume Duboisdindien** is a speech therapist (Faculty of Medicine of Lille-France) and joined the MoDyCo team in October 2014 thanks to a PhD grant from the University of Paris-Ouest Nanterre. The topic of his thesis concerns a longitudinal study of the continuum between normal and pathological ageing from a multimodal perspective (Verbal, Prosody, Gestural features). Pragmatic Markers and their intersubjective relations are the anchor point of this analysis in order to identify early markers of dementia. This doctoral thesis is supervised by Anne Lacheret (University of Paris-Ouest Nanterre) and Catherine Bolly (University of Cologne and scientific researcher at the University of Louvain la Neuve).

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- 10 **Frankenberg, C.<sup>1</sup> & Degen, Ch.<sup>1</sup> & Tauber, B.<sup>2</sup> & Siebert, J. S.<sup>2</sup> & Wahl, H.-W.<sup>2</sup> & Schröder, J.<sup>1,2</sup>** (<sup>1</sup>Section of Geriatric Psychiatry, Heidelberg University, <sup>2</sup>Institute of Psychology, Heidelberg University, <sup>3</sup>Institute of Gerontology, Heidelberg University)

## **Autobiographical memory at the beginning and in the course of dementia**

- *autobiographical memory; longitudinal study; cognitive impairment; linguistic analysis*

**INTRODUCTION:** The relevance of autobiographical memory (AM) is particularly evident in terms of the effects of the loss of AM and the identification and presentation of identity in illness. Impairments of declarative memory performance - already in preclinical and early stages of Alzheimer's dementia (AD) - are associated with changes in AM, spoken speech and autobiographical narrative. It is the aim of our ongoing work to analyse the development of AM in old age and in the course of pathological memory disease.

**METHOD:** The Interdisciplinary Longitudinal Study of Adulthood (ILSE) is a population-based study, which included 1002 participants at baseline, who were derived from two birth cohorts (from 1930 to 1932: C30 and 1950 to 1952: C50) and two research centers (Leipzig and Heidelberg). AM was measured at the third and fourth examination waves ranging over more than seven years using a semi-structured interview, the *Bielefelder Autobiographical memory inventory* (BAGI). Semantic autobiographical knowledge and internal pictorial representation, emotional and contextual aspects of episodic AM were recorded over three phases of life: *primary school, young adulthood and past five years*. The recollected episodes were classified according to the degree of specificity and detailedness as lifetime, general or event-specific autobiographical knowledge. Repeated measures ANOVAs were subsequently used to examine differences in AM performance for participants with mild cognitive impairment (MCI), AD and a cognitively healthy group.

**RESULTS:** Within this seven-year measurement interval, preliminary results indicate a significant deterioration in AM performance during healthy aging as well as differences between the two birth-cohorts. The respective deterioration coincides with measures of neuropsychological functioning – verbal rather than visuo-spatial or abstracting capacities. The decline of episodic AM is marked especially in C30 compared to C50. Additionally, persons with MCI or AD recalled fewer details regarding semantic and episodic memories than the healthy control group.

**DISCUSSION:** Our results bear important implications for establishing potential demarcation criteria in healthy aging and the development of MCI/AD as AM performance was sensitive to age and clinical diagnoses in our sample. These results can be used as a starting point for linguistic analyses, as the decline of AM is also reflected in spoken language. The ILSE contains a large corpus of semi-structured interviews of spoken speech on voice recording, which allow for an in depth analysis of linguistic features of autobiographical narratives and even re-narration. The analyses of detailed recordings of AM based on grammatical, lexical and stylistic phenomena could help to identify early signs of MCI and AD and thus foster the development of measures, diagnostics, therapy and prevention.

### **Bio-note**

**Claudia Frankenberg** M. A. has studied Philosophy and Linguistics at the University of Mannheim and Heidelberg. Since 2014 she works as a Doctoral Researcher at the university hospital of Heidelberg. The autobiographical memory represents her main field of interest.



**11 Fyndanis, Valantis & Ingeborg, Sophie Ribu (Center for Multilingualism in Society across the Lifespan, University of Oslo)**

## **Tools and methods to investigate language and cognitive abilities in healthy and pathological aging**

- *eye tracking; time reference; lexicon; processing*

**Introduction:** In this talk we will present experimental techniques and tasks we have been using in order to investigate the language and cognitive abilities of neurologically healthy and impaired younger and older adults. These techniques and tasks can be used (or are already being used) in a large array of studies on healthy and pathological aging.

**Language battery:** Our linguistic investigations cover the lexical, morphosyntactic and syntactic domains. We will briefly present the following tasks:

**Timed Confrontation Naming task:** Participants are presented with pictures of objects and actions and required to name them providing the correct noun and verb, respectively. In the task we have developed, the two conditions (nouns and verbs) are matched on subjective age of acquisition (AoA), frequency and imageability.

**Timed Word-Picture Verification task:** The same pictures/target words included in the previous task have been used to develop a timed word-picture verification task, which investigates participants' ability to comprehend nouns and verbs.

**Visual world eye-tracking experiment:** Sentence processing and comprehension is tested with an eye-tracking experiment which employs the visual-world paradigm. The participant is presented with a panel of four pictures, and (s)he concurrently hears a sentence. Each panel consists of a target picture, which matches the sentence, and three distractors. We track gaze patterns and measure proportions of fixations to the target, for all participants. Sentences of varying complexity are included in this task: (a) sentences with one proposition (one finite verb) and canonical word order (SVO) (actives); (b) sentences with one proposition and non-canonical word order (passives); (c) sentences with two propositions (two finite verbs) and canonical word order (sentences with a subject-extracted relative clause); and (d) sentences with two propositions and non-canonical word order (sentences with an object-extracted relative clause).

**Timed Sentence Completion task:** To investigate the ability of our Norwegian-speaking participants to refer to different time frames by means of morphosyntax, we have developed a timed transformational sentence completion task. This task includes two conditions: past reference and future reference.

**Cognitive battery:** Our cognitive tasks measure short-term memory, verbal working memory, inhibition, set-shifting (switching), speed of processing and attention, among other cognitive domains. We will briefly present only part of our cognitive battery with a focus on tasks measuring short-term memory, working memory, inhibition, shifting and speed of processing. In particular we will present the Digit Forward and Digit Backward Span tasks, the Digit Ordering Span task, the Stroop task, the Flanker task, the Plus-Minus task, the Trail Making task, the Letter Comparison task and the Box Completion task.

### **Bionote**

**Valantis Fyndanis** holds a PhD in Psycholinguistics (Aristotle University of Thessaloniki, Greece). Currently, he is a postdoctoral research fellow at MultiLing, University of Oslo. Before joining MultiLing, he was a Marie Curie fellow at the University of Potsdam. His research focuses on (morpho)syntactic, lexical, and cognitive impairments in monolingual and bilingual aphasia, Alzheimer's disease, and healthy aging.

Major publications

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**Ingeborg Sophie Ribu** holds a MA degree in linguistics, and is currently a PhD fellow in clinical linguistics at the University of Oslo. She has been investigating lexical and grammatical processing in Norwegian-speaking individuals with dementia. She has also worked as a Research Assistant on neuropsychological and neuroscientific projects at the University of Oslo.

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**12 Gahl, Susanne<sup>1</sup> & Baayen, Harald<sup>2</sup> (1UCBerkeley; 2University of Tübingen)**

### **28 years of vowels**

- *ageing; vowel formants; cognitive decline versus increasing articulatory skills; UP corpus*

A common assumption in psycholinguistic research is that the adult language processing system remains fairly stable until about age 70. Accordingly, the available experiment-based literature on age-related changes in speech has primarily focused on comparing “young and middle age” adults (18–50 years of age) to “elderly” adults (75+ years). And yet, listeners are able to guess talker age far more accurately than a binary distinction would imply. Clearly, acoustic characteristics of speech must change continually and gradually throughout adulthood. Indeed, several previous corpus-based studies provide evidence for such gradual changes. Here, we examine acoustic properties of vowels - the first two resonant frequencies (F1 and F2), and vowel duration - that have been at the center of psycholinguistic research on pronunciation variation. We analyzed speech samples from a documentary series (the ‘Up’ series directed by Michael Apted) tracking eleven individuals over a period of 28 years, from ages 21 to 49. Previous research on vocal aging suggests that (a) speaking rate decreases and that (b) the resonant frequencies of vowels change in a manner suggesting that articulatory movements (especially tongue and jaw movement) come to be reduced as talkers age, causing peripheral vowels such as [i, u, æ, ε] to be more ‘centralized’ or ‘schwa-like’. Contrary to this, we hypothesized that such vowels should come to be more peripheral during the part of adulthood covered by our corpus. The results are consistent with our hypothesis. Based on mixed-effects linear regression models, we show that peripheral vowels are increasingly peripheral as talkers age, and that this shift is not fully attributable to changes in vowel duration or segmental context. Our findings have methodological and theoretical implications for research on aging, corpus-design, and psycholinguistic models of language development and language production.

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#### **Bio-note**

**Susanne Gahl** is Associate Professor in the Department of Linguistics and the Program in Cognitive Science at the University of California at Berkeley. Previously, she held appointments as lecturer and postdoctoral researcher at Harvard University and the University of Illinois. Her papers have appeared in leading journals, including *Language*, *Journal of Memory and Language*, *Cognition*, and *Journal of Phonetics*. Her work focuses on the interplay between the physical realization of speech or written texts and the processes underlying language production, comprehension, learning, and loss. Most of her work is based on naturalistic speech or text corpora.

**Harald Baayen** studied general linguistics with Geert Booij in Amsterdam, and obtained his PhD degree in 1989 with a quantitative study on morphological productivity. From 1990 to 1998 he was a researcher at the Max Planck Institute for Psycholinguistics in Nijmegen, The Netherlands. In 1998, upon receiving a career advancement award from the Dutch Science Foundation, he became associate professor at the Radboud University in Nijmegen, thanks to a Muller chair supported by the Dutch Academy of Sciences. In 2007 he took up a full professorship at the University of Alberta, Edmonton, Canada. In 2011 he received an Alexander von Humboldt research award from Germany, which brought him to the University of Tübingen. Harald Baayen has published widely in international journals, including *Psychological Review*, *Language*, *Journal of Memory and Language*, *Cognition*, *PLoS ONE*, and the *Journal of the Acoustical Society of America*. He published a monograph on word frequency distributions with Kluwer, and an introductory textbook on statistical analysis (with R) for the language sciences with Cambridge University Press.

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- 13 **Gayraud, Frédérique<sup>1</sup> & Barkat-Defradas, Melissa<sup>2</sup> (<sup>1</sup>Laboratoire *Dynamique du Langage (DDL)* UMR5596 CNRS & Université de Lyon; <sup>2</sup>Institut *des Sciences de l'Evolution (ISE-M)* UMR5554 CNRS & Université de Montpellier)**

## **Problems with assessing cognitive abilities in bilingual patients with Alzheimer's disease**

- *Alzheimer's disease; bilingualism; neuropsychological assessment*

Language decline in Alzheimer's patients are now well documented (Barkat-Defradas et al., 2008). Nevertheless, most of the research focuses on monolingual patient while in our societies, aging bilingual populations grow. For instance, a recent estimate reported 765,000 immigrants over 65 years-old in France. As a consequence, there is an increasing need for neuropsychological measures that are appropriate for assessing these populations characterized by a low educational background and late bilingualism. Procedures commonly used for assessing cognitive function in people with suspected dementia are of questionable validity in second language settings because of possible linguistic and cultural inappropriateness. Indeed, an increasing number of studies have shown that bilingual demented patients tend to show asymmetrical language impairment with preferential preservation and use of the first acquired language L1 (Ardila & Ramos, 2008 ; Barkat-Defradas & Gayraud, 2013). This is in line with the retrogenesis hypothesis according to which recently learned information is retained the least and older, more remote information is often relatively preserved (Reisberg, 2002). In this study, two groups of Arabic-French bilinguals (normal aging and suspected dementia participants) were tested in both L1 (Arabic) and L2 (French) using adapted versions of the MMSE (Folstein & Folstein, 1975), Sub-tests of the BAT: linguistic history and syntactic comprehension (Paradis, 1987), a naming task of the Screening BAT (Gomez et al., 2013), and a narrative task (Paradis, 1987). One goal of the study was to evaluate the relevance of the use of the BAT (originally designed for aphasic patients) for this population. As predicted by the neurogenesis hypothesis, our results indicate better performances in the patient's L1, Arabic, which suggests that they are under-evaluated when they are tested in French. Our findings also indicate that only some of the sub-tests discriminate between normal elderly participants and demented patients, and that some other subtests show a difference in French (L2) only.

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### **Bio-notes**

**Frédérique Gayraud** is Professor of Psycholinguistics at Lyon University. Her main research interests include early language acquisition and language decline in Alzheimer's disease in a lifespan perspective. More specifically, the goal is to compare acquisition and desacquisition processes in order to test the retrogenesis hypothesis according to which degenerative mechanism reverse the order of acquisition in normal development. Another research interest focuses on bilingualism in normal and pathological aging.





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**Melissa Barkat-Defradas** holds a PhD in Linguistics and is a scientific researcher at the Institute of Evolutionary Sciences (ISE-M CNRS UMR5554 & University of Montpellier, France). Trained in Arabic dialectology and Experimental Phonetics, she started working in clinical linguistics in 2008 by studying in particular the linguistic regression of L2 experienced by old immigrants suffering from AD. Together with F. Gayraud she works at developing diagnosis tools that are adapted to these bilingual illiterate patients.

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#### **14 Gerstenberg, Annette (Freie Universität Berlin)**

### **LangAge Corpora: A new platform for Language and Aging Research**

- *corpus; longitudinal studies; sociolinguistics*

Started in 2005, the LangAge corpus consists of three sets of biographical interviews recorded in Orléans, France, focusing on people in older age. The first set contains interviews with 56 participants, among which 48 were at the age of 70 or older. Aiming at reaching an intra-generational comparability, metadata concerning age, sex, education, profession, place of residence, place of birth, and civil status have been collected for each participant. For the second data set, collected in 2012, 35 of the 56 participants included in the first set were interviewed again. Another set of interviews collected in 2015/16 introduced a new design including meta data associated with major character traits, called the “Big Five”: openness to experience, conscientiousness, extraversion, agreeableness, neuroticism. This makes it possible for us to analyse new topics, such as linguistic attitudes (Hirsh & Peterson 2009). 22 of the 40 participants in this set had already been interviewed in 2005. Altogether, the corpus consists of 131 biographical interviews.

The interviews are transcribed within the Transcriber (1.5.1.) software, the transcription following an orthographic guideline. Every transcription is corrected repeatedly by native speakers. The goal of the underlying transcription standard is to enable statistical analysis of a variety of linguistic phenomena and its correlation with the sociolinguistic information mentioned above. Apart from the pure text, pauses, metalinguistic comments (for example *direct speech*) and extralinguistic events, such as coughing, are also included in the transcription. The text and the audio are aligned, which allows access to an extract on both levels at the same time. The segmentation is based on syntactic units.

Since 2016, moca.3 (Daniel Alcón/Stefan Pfänder, Université de Freiburg [i.B.]) has been used to give access to the corpus. Different degrees of authorization control the level of access conceded to the users. The files are processed automatically by the Praat script provided by Daniel Hirst, also anonymizing the passages containing proper nouns or other personally related information.

The developments and the enrichment of the corpus can open up new perspectives for transversal and longitudinal studies focusing on communication in old age (Hamilton & Hamaguchi 2015). In addition to the previously described project of archiving and publishing the corpus, the researchers working on LangAge also conduct their proper research based on the corpus. The configuration of the corpus promotes longitudinal studies (Sankoff 2013), for example the analysis of the development of lexical richness.

The LangAge corpus promotes a diversified approach to the sociolinguistics of old age. It provides authentic data for an age range that is hardly present in the panorama of French corpora of spoken language.

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Corpus LangAge: <<http://userpage.fu-berlin.de/langage/>>

moca.3 : Multimodal Oral Corpora Administration ; resp. Daniel Alcón, Stefan Pfänder. Freiburg [i. B.] , Albert-Ludwigs-Universität, 2016– <http://www.hpsl.uni-freiburg.de/>

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#### **Bio-note**

**Annette Gerstenberg** is professor of Romance linguistics at Freie Universität Berlin since 2013. She is interested in research that elaborates a sociolinguistic perspective on language use in later life, focusing on the development of linguistic features in a longitudinal perspective.

Gerstenberg, A. 2009. The Multifaceted Category of 'Generation': Elderly French Men and Women Talking about May '68. *International Journal of the Sociology of Language* 200, 153–170.

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**15 Hamilton, Heidi E. (Georgetown University)**

**Language, dementia and meaning-making in art galleries and homes: Objects of joint attention as resources for transforming knowledge, building topics and lifting spirits**

- *dementia; art gallery tours; objects of joint attention; knowledge management; identity construction*

Multidisciplinary efforts have highlighted the connections between cognitive changes that accompany dementia and an individual’s sense of self (Davis, 2005; Hamilton, 1996; Kitwood, 1997; Ramanathan, 1997; and Sabat & Harré, 1992). Intersecting this line of scholarship is a robust movement in the arts that claims that multisensory experiences can promote the social, emotional and creative wellbeing of persons with dementia (Basting, 2009). Linguistic analyses of language used by participants as they engage in such artistic programs may help us understand and extend these programs’ therapeutic effects, although research investigating this connection has been minimal to date.

In this talk, I explore language used in video-recorded specially designed art gallery tours for groups of individuals with dementia and their companions, as these participants focus their joint attention (Tomasello, 2008) on a small number of paintings. Tour guides were trained to shift their focus from teaching about the artwork to “encourag[ing] the participants to express what they see and feel about the art” (Zeisel, 2009: 98). These speech events provided important opportunities for participants to move from the thought processes of the single mind to “making thinking visible” (Perkins, 2003) through extended discussion and sharing of ideas and opinions. From a linguistic point of view, this shift from thought to speech within a small group was methodologically useful in that extensive turns-at-talk (in contrast with minimal responses, such as *yes* or *I agree*) provided linguistic clues regarding possible effects of the art program on its participants.

Examination of recorded discourse indicated that these gallery visitors selected from among a large repertoire of appropriate responses when they engaged with art objects of joint attention, including: describing, evaluating, interpreting, reacting viscerally, arguing a point of view, connecting to other works of art, recalling cultural practices, and recounting personal experience narratives. Happily, this range of responses allowed for individuals with different levels of severity of dementia to participate actively *in different ways* in these tours. For example, individuals who had more extensive memory loss and were more bound to the ‘here-and-now’ participated by describing what they saw in the work of art or commenting on how it made them feel. Others at earlier stages of dementia whose long-term episodic memory was relatively more intact connected personal and/or general memories to aspects of the works of art, allowing for the kind of rich identity construction through storytelling described by Schiffrin (1996) and other narrative scholars.

On occasion the turn-exchange among these gallery visitors became especially lively, showing what is possible when well-trained guides move away from institutional question-answer sequences to nurture what Leinhart & Crowley (2002) call ‘conversational elaboration’ in which “greater detail, connections and explanations emerge in the group talk of visitors as a result of their experience in the museum” (Ritchhart, 2007: 148). Other researchers (Lazarus & Smith, 1988) have used the term ‘hot cognition’ (Abelson, 1963) to characterize this energetic discursive exchange of ideas that combines emotion with cognition and contrasts markedly with more subdued passive ‘reception’ of knowledge typical of much institutional discourse.

Building on these art gallery findings, I then turn in the talk to an exploration of everyday conversations between individuals with dementia and visitors to their apartments in assisted living facilities, focusing on communication centered on objects of joint attention found in these home environments (e.g., family photographs, pieces of jewelry, and collectibles). In the most successful of these conversations, I identified many instances where a focus on resources in



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the ‘here-and-now’ was able to accentuate relative strengths of the individual with dementia while deemphasizing relative weaknesses in word-finding and episodic memory.

The high levels of personal control, positive emotions, and claims of rights to knowledge displayed in these interactions in art galleries and at home contrast sharply with public perceptions of reduced control, negative emotions (e.g., embarrassment, frustration, and anger) and problems with knowledge and memory that are more generally associated with individuals with dementia. These findings illuminate the complex and nuanced contextual relationships at the intersection of language use, dementia, institutions and the arts, while recommending steps toward making better use of an enhanced physical environment with the aim of enriching everyday lives of persons with dementia and their carers.

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#### **Bio-note**

**Heidi E. Hamilton** is Professor in the Department of Linguistics, Georgetown University where she has taught courses in discourse analysis and applications of interactional sociolinguistics since 1990. Her research and consulting interests focus on issues of language and dementia, language and aging, institutional discourse, and health communication. Her books include *Conversations with an Alzheimer’s Patient; Language and Communication in Old Age: Multidisciplinary Perspectives; Wiley Blackwell Handbook of Discourse Analysis* (with Tannen & Schiffrin), *Linguistics, Language, and the Professions* (with Alatis & Tan); *Doing Foreign Language* (with Crane & Bartoshesky); and the *Routledge Handbook of Language and Health Communication* (with Chou).

**16 Hanulikova, Adriana & Müller-Feldmeth, Adriana & Ahnefeld, Katharina (Albert-Ludwigs-Universität Freiburg)**

## **Self-paced reading and processing of gender stereotypes in dementia**

▪ *dementia; self-paced reading performance*

Language comprehension involves the integration of rich knowledge resources including linguistic and world knowledge. Here we examine age-related changes in the activation and integration of gender stereotypes. The formation of probabilistic stereotypical inferences may result from world knowledge as well as from repeated exposure to lexemes in gender-specific contexts. It is well known that world knowledge increases with age, and it has been suggested that older adults are more likely than younger adults to rely on stereotypes and prejudice in general (von Hippel et al., 2000). However, it remains poorly understood how the use of stereotypes during language processing changes in older adults (e.g., Siyanova-Chanturia et al., 2015). Previous research with young adults shows an immediate activation of gender stereotypes upon presentation of a gender-role noun (e.g., *doctor* is usually associated with the male gender; Kennison & Trofe, 2003, Garnham et al., 2002) or a verb (e.g., *to knit* is usually associated with the female gender, Hanulikova & Silveira, 2016). One recent study suggests that older adults are more likely to maintain stereotypical inferences than younger adults while reading narrative texts including profession stereotypes (e.g., *The babysitter was a young boy/girl*, Radvansky et al., 2010). Using self-paced reading, the aim of this study was to examine whether stereotypical associations with verbs are activated during linguistic processing in dementia patients and healthy older adults.

Dementia refers to a decline of cognitive abilities, including memory failures, reduced attention, and language impairments that affect distinct aspects of linguistic processing. While syntactic processing may remain intact, semantic capacities are often affected at the onset of dementia (e.g., Clark-Cotton et al., 2007). Gender stereotypes as a component of semantic representations or general world knowledge may thus not be immediately accessible during language comprehension in dementia. To examine this issue, we analyzed self-paced sentence reading in dementia patients and healthy control older adults. Both groups of participants read simple sentences ( $n = 16$ ) in which the sentence subject's gender either matched or mismatched the stereotypical gender connotation of a verb (e.g., *The craftsman knits a sweater and gives it to his grandmother*). Hanulikova & Silveira (2016) found that young adults readily access stereotypical verb associations as shown by increased reading times in the region following a verb. To examine whether verb-specific gender stereotypes are accessed and slow down reading in older adults, we measured reading times (RTs) per word as well as the accuracy in answering yes/no-questions after each sentence. In addition, we measured working memory capacities using a digit-span test.

Preliminary results from patients ( $n = 6$ , average age 89.2) and controls ( $n = 10$ , average age 81.5) show that despite comparable working memory scores between the two groups, the reading times for the dementia group are substantially slower and comprehension scores less accurate compared to the control group. For both groups, there was a positive correlation between working memory and reading times. Analysis of RTs using mixed-effect model statistics revealed no effect of stereotypical meaning on sentence processing in neither of the two groups. These preliminary results may suggest that older adults compared to younger adults have greater difficulty accessing and integrating stereotypical connotations when reading verbs in a sentence. We will discuss these preliminary results as well as individual variation in self-paced reading performance.

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### **Bio-note**

**Adriana Hanulikova:** Since 2013 assistant professor at the university in Freiburg. Postdoc at the MPI for Psycholinguistics in Nijmegen, postdoc at the BCBL in San Sebastian. Research interests in speech and language processing across the life span, accented speech, social aspects of language processing, stereotypes, neurolinguistics.

#### Selected publications

- Hanulikova, A., Van Alphen, P. M., Van Goch, M., & Weber, A. (2012). When one person's mistake is another's standard usage: The effect of foreign accent on syntactic processing. *Journal of Cognitive Neuroscience* 24 (4), 878-887. doi:10.1162/jocn\_a\_00103.
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**Daniel Müller-Feldmeth:** PhD in Cognitive Science in Freiburg, postdoctoral researcher in several projects in Freiburg, research interests in human language processing, reading, dynamical system approaches to human cognition, Connectionist models of cognition and language processing, embodied cognition and embodied sentence processing.

#### Selected publications

- Daniel Müller-Feldmeth and Lars Konieczny (2013). Frequenzeffekte in der Satzverarbeitung. Wie Erfahrung den Erwerb und die Verarbeitung von Sprache beeinflusst. *Zeitschrift für Literaturwissenschaft und Linguistik*, 43(169) 97-121.
- Daniel Müller-Feldmeth et al. (in press). Investigating Comprehensibility of German Popular Science Writing.

**Katharina Ahnefeld:** Master student in German Linguistics

**17 Hekkel, Valerie (Freie Universität Berlin)**

## **Micro-diachronic language change and its interaction with the age variable**

- *old age; causal marker; micro-diachrony; language change; apparent-time*

The ongoing research aims at providing a differentiated perspective on the interaction of old age and language change. While a significant number of (neuro-)linguistic studies focus on the effects of related cognitive transformation processes on the language competence in old age (see e.g. Burke/Shafto 2008 for a brief summary), little is known about the speakers' language use from a sociolinguistic point of view.

Nonetheless, the age variable seems to have an important role for language change studies, as we know from Labov's (e.g. 1994) apparent time hypothesis, which includes the idea of conservative language use in older age (Ager 1990: 118). Although this raises interest for older age in sociolinguistics, related research very often fails to consider sufficiently the influence of the individuality of biographies on language change. Relevant topics in this regard are the role of the language use in young age, the educational factors, physical and mental conditions in old age, and also particular characteristics of a specific generation. In other words: Is the language use in old age effectively a window on the generation's language use in young age? And if it is not, what other influencing factors do we have to account for?

The present research tries to answer these questions by comparing the heterogeneous use of the French *parce que* (Debaisieux 2002, Deulofeu & Debaisieux 2009), for which a functional change is repeatedly hinted at (Sanders & Stukker 2012: 134-135, Fagard & Degand 2008: 220) in the diachronically distinct corpora ESLO1, ESLO2 (Abouda & Baude 2007) and LangAge (Gerstenberg 2011), which were compiled respectively in 1968-1974, 2008- and 2007-. The combination of the ESLO corpora and LangAge offer the very rare possibility for spoken language of analysing both real time and apparent time variation for the same data set, allowing compare synchronic apparent-time variation to patterns emerging in real-time data.

A balanced sample of interviews has been extracted from the corpora and annotated on the basis of the features described by Debaisieux (2002), which mark non-subordinating instances of the causal connector. By drawing a profile of the use of the French *parce que* in synchrony and diachrony, this approach facilitates a selective look at the interaction of the use of *parce que* and the extralinguistic attributes of the users, such as age, sex and socio-professional category. This study can thus adopt a reciprocal perspective, by asking on the one hand, what the linguistic use of older people can tell us about language change, and on the other hand, in what way knowing the underlying change can contribute to the understanding of particular features in the language use of older people.

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#### **Bio-note**

**Valerie Hekkel** is a Ph.D. student and research assistant at the Free University Berlin conducting research on micro-diachrony and sociolinguistics under the supervision of Annette Gerstenberg. She completed a Master's degree in French and Italian Philology at the Ruhr-University Bochum with a thesis on lexical semantics (“Über die Austauschbarkeit von *personne*, *être humain* und *quelqu'un* in diversen Relativkonstruktionen”).

**18 Kairet, Julie Marie (Freie Universität Berlin)**

## **Entendre le vieillissement langagier: études longitudinales de profils prosodiques**

- *longitudinal; case studies; perception; prosody*

How do older people talk and how is it perceived by non-linguist listeners? This seems to be an easy question, yet only a handful of researchers have been interested in the subject. Thus, our thesis will, firstly, tackle the issue of a precise description of the prosody of older speakers speech and, secondly, the perception of not linguistically trained listeners of it.

The focus will be on the longitudinal evolution of prosody by older people and especially, in the first steps, on their use of pauses, tempo and intonation. The perception of older peoples' speech by non-linguists will also be a part of the project. The thesis will count two facets: firstly, a deep analysis of samples extracted from the LangAge corpora and, secondly, a perception survey which will evaluate the perception of the older peoples' speech by non-linguists. Our approach will be data-driven. Thus, the research question and our hypothesis will evolve during the completion of our project. Methodology: The starting point of the thesis is an in-depth qualitative analysis of a sample of speech data. The samples will be chosen carefully within the LangAge Corpora. The main features identified in this sample will be perceptively tested in the second part. The small-scale aspect of our approach permits a fine grained analysis of the phenomena studied and allows to respect the personality and individuality of the speakers: “Case studies and small-scale studies are seen as being able to investigate in a more in-depth fashion the interrelationships among a variety of communicative behaviours or factors, leading to a well-grounded research questions and methodologies that can be used in subsequent large-scale studies.” (Hamilton, 1999: 8) In other words, our goal is to construct a corpus with sociolinguistic significance and a detailed annotation scheme applied. Because some studies reveal that “From a large number of previous studies concerning perception of speaker-age, we have learned that (1) human listeners are fairly good at estimating the age of an unknown (and unseen) speaker, (2) perceptual clues to speaker age include variation in pitch, speech rate, voice quality, articulation and phrasing, and (3) several non-phonetic factors influence listener’s judgements.” (Schötz, 2006: 46) We will firstly focus on pauses, tempo and intonation. The second aspect of the thesis consists in a perception survey. Our purpose is to focus on the perception of non-linguistically trained hearers: what do they take into account when they have to assess the speech of the elderly? As seen previously (cf. 2.1), the human perception of age is “good” but what happens when they have to evaluate the same speaker at different stages of his/her life? What do they consider to be a clue of an older speakers' speech? The final step of the thesis will be the comparison of the results of an objective linguistic annotation with what the laymen consider as salient when it comes to the perception of speech of old people.

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### **Bio-note**

**Julie Kairet** graduated in Linguistics (orientation: Linguistics and its Applications for a Multilingual Society) in September 2015. Her master thesis investigates the links between the interaction context and temporal features such as overlap and extended silences (“Les influences de la situation de production sur les chevauchements et les silences prolongés Étude de cas: analyses de quatre interviews de Fabrice Luchini”). After an internship supervised by Catherine Bolly in the framework of the project CorpAGest, she is now a PhD student and a research assistant working under the direction of Annette Gerstenberg at the Freie Universität Berlin.

19 Lepeut, Alysso (F.R.S.-FNRS & University of Namur)

## **Analysis of interactive gestures, signs, and space among older Belgian French (BF) speakers and French Belgian Sign Language (LSFB) signers**

- *interactive gesture; sign language; space; multimodal corpus; aging*

Sign Language (SL) linguistics is a young discipline which established itself in the 60s (Stokoe, 1960). Similarly, only recently modern gesture research has emerged as a relevant topic in linguistic research (McNeill, 1992). Since then, several linguistic works (Bolly *et al.*, 2015; Vermeerbergen & Demey, 2007) have been conducted to find the similar and distinct properties between SLs and Spoken Languages (SpLs), including the presence of interactive gestures and the use of space in both modalities. Nevertheless, few studies have addressed the interactional dimension of gesture in SLs and SpLs alike, that is, their role in social interaction to include the addressee into the ongoing communicative exchange.

This research project has for general objective to examine the interactive nature of gesture, sign, and space among older signers and speakers in French Belgian Sign Language (LSFB) and Belgian French, and how the normal aging process affects those means (Thornton & Light, 2006).

The main hypothesis is that aging affects gesture, sign, and space given the different changes occurring in the normal aging process (Mathey & Postal, 2008). Such changes can impact the older person’s physical abilities (e.g., decrease in tonus and muscle mass, risk of arthritis, or loss of hearing [for speakers]), but also his/her cognitive abilities (e.g., deficits in attention and inhibitory control, and reduction in speed of information processing). It is contended that these changes can be shared between older signers and gesturers, and will affect their communicative skills. The second hypothesis is that there will be quantitative and qualitative differences between manuals (e.g. palm-up gestures) and nonmanuals (e.g. facial expression) produced by older speakers and signers. On that basis, several research questions will be tackled: Is there any correlation between the gesture/sign produced regarding their form and function? Is space used for the same communicative purposes?

Adopting a multimodal corpus-based approach, the data will be extracted from two (audio and) video corpora: The CorpAGEst corpus (Bolly & Boutet, forthcoming) and the LSFB corpus (Meurant, 2015). Different representative video samples produced by 9 older speakers (75 y. old and more) (task: discussing major steps of aging in the past) from CorpAGEst and 15 older signers (66 y. old and more) (task: explanation of a past memory) from the LSFB corpus will be selected. Then, 6 participants from each corpus will be chosen to conduct a cross-corpus comparison. In practice, the same task protocol of the LSFB corpus will be replicated on the 6 hearing participants of CorpAGEst at the UNamur LSFB-lab. Following a form-based approach, the samples will be manually annotated using the ELAN software. Finally, all nonverbal units will be systematically tagged. This process will allow the extraction of data and comparisons of results within the same corpus and across corpora, which will constitute the first cross-linguistic study between LSFB and Belgian French on these issues.

First results from the CorpAGEst project (Lepeut, 2015) reveal that the older speaker (Nadine, 75 y. old) in her encounter with a first-acquaintance versus a family member (viz. her daughter) performs slightly more interactive gestures with the former. This indicates that Nadine uses more gestural devices that regulate the flow of her exchange with the first-acquaintance (see figure 1). Moreover, it seems that Nadine experiences slightly more difficulties in processing speech and finding her words with her daughter. Finally, the gesture space analyses reveal that Nadine strongly favors the central areas of her personal space when performing interactive gestures, regardless of the addressee while she uses a wider gesture space with the unfamiliar person (see figure 2). These first results offer a first glimpse into the complex interactive world

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of older adults as far as interactive gestures and gesture space are concerned. The present research project will go a step further by continuing to analyze these aspects but also, by integrating sign language and signing space as a second major component to the analysis.

Ultimately, the benefits of the research are multifaceted: (1) to foster scientific exchanges between SL and gesture researchers, and shed new light on issues in aging, (2) understand more about our language faculty in its multimodal aspect, (3) achieve a better understanding of the interactive world of Belgian-French speakers and signers in their late life, an issue with vital implications for our future.



Fig. 1 Illustration of an interactive palm-up gesture (Lepeut, 2015)



Fig. 2 Illustration of salient gesture space use with the first-acquaintance (Lepeut, 2015)

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**Bio-note**

Alysson Lepeut is a PhD student at the University of Namur (F.R.S.-FNRS & University of Namur). Awarded a Fulbright grant for the academic year 2016-2017, she is currently in the United States where she serves as the French language assistant in the department of French and Arabic studies at Grinnell College (Grinnell, IA). Her research interests focus on issues related to the production of gestures by older speakers and signers, and the roles they play in the communicative context. Her Master thesis presented in 2015 dealt with the analysis of the intersubjective nature of gesture and space produced by older adults. She also collaborated for several months in the annotation of gesture within the framework of the [CorpAGEst](#) project (2013–2015).

**20 Kielkiewicz-Janowiak, Agnieszka (Adam Mickiewicz University in Poznań)**

## **Narratives about life across generations: communicating generational intelligence**

- *narratives; generational identity; interview; interaction*

Narrating is a universal human capacity. Its functions are multiple, but one that is crucial to human life-course is that of constituting and constructing experience. “Individual consciousness is a socio-ideological fact. If you cannot talk about an experience, at least to yourself, you did not have it.” (Emerson 1983: 26).

Another important function of the narrative is psychological and social. Mary Gergen thus quotes James Clifford: “Every version of an ‘other’ ... is also the construction of a ‘self.’” (Clifford 1986: 23), to which she adds: “Every version of a self must be a construction of the other” (Gergen 2000: 54-55). In the current study we look at how people construct their own and others’ identities through narrative, and we view it as a collaborative achievement.

Thirdly, narrative articulates the meaning of life and orders it in time. In short, “[t]he story produces the life” (Gergen 2000 :74). This would suggest that life stories are universal, and they become more frequent with age, as people gradually acquire more experience to recount (Butler 1963). Indeed, reminiscence and life review are commonly associated with old(er) people. Also the process of ageing is assumed to be an integral part of a life story (see Baars (2012: 145) for “ageing as living (in) time”) and therefore characteristic of the later part of life. However, we show that people of any life stage have a story of ageing to tell.

Importantly, stories about life are not just grand narratives. In the relatively recent strand of narrative research, analysis has focused on *small stories* (e.g. Bamberg and Georgakopoulou 2008), by contrast with *default narratives* (Ochs and Capps 2001) or *lifestories* (Erikson 1980, Bruner 1987). Small stories about life, also called ‘slices of experience’, ‘slices of life’, are common in the talk by people of different age groups and generations. Such stories have been identified in the data and retrieved for study.

In this discourse-oriented study the aim is to uncover the dynamics of collaborative construction of the life-course (structuring time and sequencing life stages) as well as positioning self and others. The data analysed here come from a corpus of narrative interviews with Poles of three generations, who tell their life stories to young(er) interlocutors.

Referring to Theme 1 of the Conference (“Pragmatic spaces”), the research questions address the *interactive* nature of life story telling and, specifically, the ways of reaching out to the interlocutor in order to *collaboratively* achieve an understanding of the (teller’s) life-course. In constructing time, narrators refer to events and values that are assumed to be shared, either as part of common socio-cultural and political heritage or as assumptions of universal sentiments concerning the passing of time (e.g. anxiety of ageing).

Methodologically, the data collection relied on the narrative interview as an interactive speech event. In terms of analysis, a discursive-narrative approach was used to identify the lexicogrammatical features and discursive strategies adopted for the interactive construction of self in time. Specifically, attention was given to the small story as an interactive device and its use in achieving a joint understanding of the life-course.

It turns out that in cross-generational encounters interlocutors – whether young or old – are aware of their generational identity and able to put themselves in the position of a member of another generation (see *generational intelligence*, defined by Biggs and Lowenstein (2011: 2) as “an ability to reflect and act which draws on an understanding of one’s own and others’ life-course, family and social history, placed within its social and cultural context”).

The (life) stories revealed include a combination of fear and satisfaction. Older tellers locate ‘turning points’ in the past, but also orient to the future. Younger tellers project their hypothetical

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futures, but also reflect upon their pasts. Both question, yet seek to legitimate, their life choices. Older and younger tellers both distance themselves from the age-other and empathize with them, both show aversion and express solidarity. All have the potential and, hopefully, the will to understand the generational other.

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#### **Bio-note**

**Agnieszka Kielkiewicz-Janowiak** is a lecturer in sociolinguistics and associate professor at the Faculty of English, Adam Mickiewicz University, Poznań, Poland. She has done research and lectured on social dialectology, historical sociolinguistics, discourse analysis as well as language and gender issues. Her current research interests focus on age as a sociolinguistic variable, and on the discourse of ageing, showing how ageing – as a lifelong process – is discursively constructed throughout the lifespan and negotiated across generations, social roles and contexts.

**21 Matsumoto, Yoshiko (Stanford University)**

## **Being Ordinary: A powerful narrative strategy when feeling vulnerable**

- *stance; quotidian; frame; identity; discourse strategy*

In examining older Japanese women’s conversations and narratives associated with psychologically challenging conditions, such as one’s husband’s death or own illness, we find segments that are told from a perspective that is incongruous to such painful situations, specifically from a *quotidian* perspective, or a perspective of one’s ordinary life. These segments are accompanied by the participants’ laughter and other signs of animated engagement, such as everyday vocabulary, onomatopoeia, and utterances in short spurts. Framing a psychologically challenging and vulnerable situation in this manner can be understood as taking a *quotidian stance* toward the situation at issue and as an effective discourse strategy. I will discuss, in this paper, how *quotidian framing* is done in conversations and narratives of older Japanese women, how it functions to decrease psychological intensity and to reground participants’ sense of self in the quotidian (*quotidian self*). I also suggest positive consequences of taking the quotidian stance as a dialogic social act.

The *quotidian frame* (e.g. Matsumoto 2011a, 2011b, 2015) shares a property with an oft-mentioned frame, the “play frame” (Bateson 1972; Goffman 1974), which has been applied in analyzing various interactions, including talk among female friends (Coates 2007) and between parents and young children (Gordon 2008). Invoking the play frame alters the interactional participants’ expectations and interpretations by sending a metacommunicative message saying that what is presented is play and not real, and by establishing a paradoxical frame. The quotidian frame also alters expectations and interpretations, but with the metacommunicative message “This is an quotidian event” and by establishing a frame psychologically *incongruous* to a serious or an unwelcome situation. In one example, while retelling the time leading up to her husband’s death in a hospital room, a recent widow recounted a scene from that event that reflected her husband’s typical behavior and their daily relationship in the past. In another, a resident at a long-term care facility spoke of her fellow resident’s loving relationship with her deceased husband through an imagined scene of happily drinking together. In such narratives, the speaker may describe the scene of a critical event from a perspective of ordinary life, and with a manner and references that are associated with ordinary life. This reframing to a quotidian situation, often marked with both participants’ laughter and smiles, regulates emotion through humor and laughter in narratives (Samson and Gross 2012), lightens the weight of the situation and helps the participants agentively cast away the assumed identities (a desolate widow, an unfortunate facility resident, etc.) to gain a better sense of self.

The process of the quotidian (re)framing can be thought to constitute (meta-)stancetaking (e.g. Englebretson 2007, Du Bois 2007). Du Bois states that “[S]tance is best understood in terms of the general structure of the evaluative, positioning, and aligning processes that organize the enactment of stance” (2007:171). Framing a situation from the quotidian perspective is in a sense an evaluative act, and by such an act, the narrator (or stance leader) positions herself as her *quotidian self*. This quotidian stance is established when the speaker and the other participants of the interaction aligned themselves, as quotidian (re)framing is ratified by the participants’ laughter as a response. Taking this quotidian stance in a vulnerable situation can bring back the stability and strength of the ordinary life, and when used as a narrative strategy among older adults and people interacting with them, it can be a powerful tool in social interaction.

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#### **Bio-note**

**Yoshiko Matsumoto** is the Yamato Ichihashi Chair in Japanese History and Civilization and Professor, by courtesy, of Linguistics at Stanford University. Her research focuses on pragmatics of linguistic constructions and sociocultural aspects of discourse. One of her current research topics is conversational narratives of older women. The relevant publications include *Faces of Aging: The Lived Experiences of the Elderly in Japan*, SUP; Dealing with Changes – Humorous Self-Disclosure by Elderly Japanese Women, *Ageing & Society* 29. Others include *Noun-Modifying Constructions in Japanese: A Frame Semantic Approach*, JB; Reexamination of the Universality of Face: Politeness phenomena in Japanese", *Journal of Pragmatics* 12.



**22 Moeller, Katrin<sup>1</sup> & Schmidt, Thomas<sup>2</sup> (¹Martin-Luther-Universität Halle, ²IdS Mannheim)**

## **The Bonn Longitudinal Study on Ageing (BOLSA) as an interdisciplinary research resource**

- *longitudinal study; digitization; biographic interviews; audio data*

Our presentation is concerned with a large legacy data resource: the Bonn Longitudinal Study on Ageing (Bonner Längsschnittstudie des Alterns/BOLSA; Thomae 1976, Lehr & Thomae 1987). After a team around Prof. Dr. Hans Thomae and Prof. Dr. Ursula Lehr had, between 1965 and 1984, carried out research on successful forms of ageing and longevity on the basis of this study, BOLSA's active phase was completed some 30 years ago. Researchers participating in BOLSA helped to establish the new disciplines of psycho gerontology and social gerontology in West Germany. In 2015, the historian Christina von Hodenberg rediscovered the very well documented resource more or less by coincidence, transferred it to the Historisches Datenzentrum Sachsen-Anhalt and thus saved it from obliteration.

BOLSA holds an enormous potential for various kinds of interdisciplinary reuse. For linguistics, it is in particular the audio recordings, totaling around 3,600 hours (remaining from around 7,000 hours), which offer themselves for a large variety of research questions. These audio recordings consist of the earliest biographic interviews with predominantly 'simple' people that we are aware of. When selecting the 222 subjects for the study, Thomae and Lehr took great care to incorporate the broad middle class, for example factory workers. Participants were recruited from the regions around Köln-Bonn, Heidelberg, Mannheim, Ludwigshafen, Oberhausen, Remscheid and Frankfurt, with origins distributed across the entire area of the German Reich before 1945.

Interviewers carried out semi-structured interviews which left the interviewees ample space for verbalizing individual experiences, opinions and emotions. Compared to the first systematic 'oral history' studies in Germany which started some 20 years later, the BOLSA interviews are conducted in a broader and more open fashion. This, as well as the balanced inclusion of female subjects (not a matter of course at the time), make BOLSA a very special resource. Since the sample is rather large, it is also possible to extract subsamples for specific groups, such as single women, women with many children, refugees, speakers from certain regions, etc. Whereas the recordings with male speakers are for the greater part lost today, the interviews with female speakers are still largely complete. The longitudinal design of the study meant that interviewees were asked questions on similar topics at different points in their lives. Topics covered are not restricted to past events, but also include the speakers' present situation, their social integration and plans for the future. This opens up opportunities for comparisons not only with respect to language development over time, but also with respect to the grounding and creative development of personal narratives. The men and women from two cohorts born in the years 1890-95 and 1900-05 were already old at the time of the interviews and are dead today. In this respect, BOLSA enables cohort-wise comparisons of ageing with later cohorts, for example from more recent or ongoing longitudinal studies.

All participants were psychologically and medically examined in regular intervals (up to 8 times in the course of the study) in order to gain insights on personality development, and social, cognitive and physical effects of ageing. The examination results were thoroughly documented and are now available as paper files and as statistical raw data (SPSS). To a lesser extent, photos, correspondences and handwriting samples are available. This material can be used as detailed and comprehensive background knowledge about the participants' psycho-social and physical constitution. Combining it with the language data proper yields a very rich picture of the speakers' own perspective and biological reflection. While the data have been analysed in depth in various psychological approaches, the research team has hardly touched upon the potential of the resource for linguistic analysis.

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Curating the BOLSA data and making it available to a larger research audience can thus be expected to benefit a wide variety of interdisciplinary research interests, research on language and ageing being a prominent case in point. Besides introducing the data themselves, we are going to present a project whose aim is to fully digitise and document audio recordings, paper files and further materials from the BOLSA study, incorporate them into digital archives and disseminate them to the scientific community. Following up on this, we would like to discuss requirements and possibilities for further steps in preparing the audio resources for a broad and effective reuse in discipline specific research contexts.

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#### **Bio-note**

**Katrin Moeller** studied history, educational science and sociology at the University of Rostock. She received a doctorate for a dissertation on the persecution of witches in Mecklenburg. Since 2002, she has headed the department on New Media and Quantitative Methods at the Martin-Luther-Universität Halle-Wittenberg and is currently also the coordinator of the Centre for Historical Data of Saxony-Anhalt.

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**Thomas Schmidt** studied mathematics and linguistics at the universities of Kaiserslautern, Mainz, Edinburgh, FU Berlin and Paris VIII. He received a doctorate from the University of Dortmund for a dissertation on computer-assisted transcription. Between 2000 and 2011 he was a member of the Special Research Centre on Multilingualism at the University of Hamburg. Since 2011, he has been heading the department on Oral Corpora at the Institute for the German Language in Mannheim.

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**23 Parisot, Anne-Marie & Rinfret, Julie (Université de Québec, Montréal)**

## **Intergenerational variation in the use of space in Langue des signes québécoise (LSQ): the case of verb agreement marking**

- *grammatical use of space; senior signers; argument structure*

Very little is known about age-related variation in LSQ, especially about intergenerational variation. Linguistic differences in the numeral system among senior signers have been reported in LSQ (Dubuisson & Grimard, 2006). In the case of Sign Languages, most studies to date have focused on the sociolinguistic variation in lexical structures (McKee & McKee, 2011; Schembri *et al.*, 2009; Sutton-Spence, Woll, & Allsop, 1990; Padden & Gunsauls, 2003, among others). Intergenerational variation in grammatical structures has been reported for emergent sign languages (Padden *et al.*, 2010; Sandler *et al.*, 2011; Senghas & Coppola, 2001). For instance, Sandler *et al.* (2011) show that younger ABSL signers tend to make more extensive use of pronouns as abstract grammatical markers of arguments, and to combine predicates with their arguments within a constituent, unlike senior signers. Following the work on intergenerational variation in grammatical structure reported for emergent sign languages, we propose the two following hypotheses for our subject’s production: Younger subjects are making a significantly more important use of space for verbal agreement marking than seniors (H1), and Senior signers prefer one-argument sentences than the Youngest (H2).

In this talk, we will present a comparative descriptive study of the grammatical use of space in verb agreement by two generations of LSQ signers (group 1 (n=10), aged 20-40; group 2 (n=10), aged 60+). In addition to the verification of our assumptions, we analyze, through seven research questions, the influence of variables that may be involved in the distribution of verbal marking for our two group of subjects: 1) Do they prefer a phonological category of verb (flexible-V1, semi-flexible-V2 and body-anchored-V3)? 2) Do they spatially mark verbal agreement according to verbal phonological categories? 3) Do they spatially mark verbal agreement for classifier predicates? 4) Do they spatially mark verbal agreement in constructed action structures? 5) Which type of agreement marker do they prefer, manual (pointing sign, spatial modification) vs. nonmanual (body shift vs. eyegaze)? 6) Do they superimpose agreement markers? 7) Do they use sequential agreement marker (pointing sign)?

The data come from a depiction task involving the production of short narratives. From the data set we extracted a total of 1108 verbs, and coded, using Elan: 1) the phonological class of the verb (V1, V2, V3); 2) the semantic class of the verb (VCL or not); 3) spatial marking (yes or no); 4) the type of agreement marker; 5) the type of discourse context (constructed action/dialogue or not). The influence of these variables is statistically measured.

Preliminary results suggest that young signers are more likely to use space in their narratives than seniors. More specifically, seniors make few spatial modifications in general. Verbs are less spatially modified by seniors. In addition, younger signers make extensive use of construction action/dialogue, as opposed to seniors, who are more likely to produce verbs in the narrator perspective. Beyond an apparent similarity with emergent languages, it could be important to look at other factors (biological, cognitive, educational, etc.) that could explain how seniors also “avoid marking argument structure grammatically and instead use a variety of strategies that eliminate the need for overt marking” (Sandler *et al.*, 2014: p.251).

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#### **Bio-note**

**Prof. Ratté** is a Professor in the Department of Software Engineering and IT at École de technologie supérieure in Montreal, Canada. She is the Research Director of the LiNCS Laboratory and the Principal Investigator of the Cécilia Project. She obtained her BSc. and MSc. degrees in Mathematics and Computer Sciences, and her doctoral degree in Computational Linguistics from Université du Québec à Montréal. She completed a postdoctoral fellowship in the Department of Brain and Cognitive Sciences at MIT. Her current research interests include natural language processing, data mining, and machine learning, with applications in health, education, and social/cultural studies.

MSc. **Hernandez-Dominguez** is a Ph.D. candidate from École de technologie supérieure under the supervision of Profs. Sylvie Ratté and Gerardo Sierra-Martinez. She majored in Computer Engineering at Universidad Tecnológica de la Mixteca, and obtained her Computer Science Master’s degree from Universidad Nacional Autónoma de México (UNAM). Her main research interest, and subject of her Ph.D. studies, is Natural Language Processing, machine learning and their application to detect cognitive diseases.

**Dr. Davis** is a Bonnie E. Cone Professor of Teaching in Applied Linguistics/English and Professor of Gerontology at University of North Carolina - Charlotte. Her fifteen-year longitudinal collection of conversational interviews with persons with Alzheimer’s disease is one cohort in the online digital Carolinas Conversations Collections, sponsored by the National Libraries of Medicine. She obtained her M.A. and Ph.D. degrees at the University of North Carolina at Chapel Hill. Her areas of research include sociohistorical approaches to stance, pragmatics and narrative, incorporating sociohistorical approaches to medical discourse and Alzheimer’s speech, lifespan language, online discourse, and digital corpora of speech.

**Dr. Pope** is an Associate Professor in the College of Nursing and Chief Nurse for Research at the Ralph H. Johnson VA Medical Center, and the Principal Investigator for the Carolinas Conversations Collection. She received her BSc. degree in nursing from the University of Maryland, her Master’s in Public Health and Certificate in Nurse-Midwifery from the Johns Hopkins University School of Hygiene and Public Health, and doctoral degree from the University of Rochester Margaret Warner Graduate School of Education and Human Development. She completed a postdoctoral fellowship in Preventive Cardiology to advance skills in epidemiology and apply sociolinguistics methodology in health service research.

**Dr. Roche-Bergua** is the Medical Chief and founder of the Psychogeriatric Unit at the “Fray Bernardino Álvarez” Psychiatric Hospital (FBA-PH) in Mexico. He obtained his Bachelor of Surgery degree from the School of Medicine at Universidad Nacional Autónoma de México (UNAM). He later specialized in Psychiatry in the Secretary of Health-UNAM, and was certified by the Mexican Council of Psychiatry. He has worked for over 30 years at the FBA-PH, and been a Postgraduate Studies Professor at the School of Medicine (UNAM) for 10 years. His main area of interest is the care and treatment of geriatric patients with dementia.

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**Dr. Sierra-Martínez** is a National Researcher of Mexico. He leads the Language Engineering Group at the Engineering Institute of Universidad Nacional Autónoma de México (UNAM). He holds a Ph.D. in Computational Linguistics from the University of Manchester Institute of Science and Technology (UMIST). He is author of the book “Introducción a corpus lingüísticos” and more than a hundred papers on journals, chapter of books and peer-reviewed proceedings. His research interest is focused on language engineering and includes computational lexicography, concept extraction, corpus linguistics, text mining and forensic linguistics.



**24 Petré, Peter & Anthonissen, Lynn & Strik, Oscar (University of Antwerp)**

(additional authors: Budts, Sara & Manjavacas, Enrique)

## **Grammatical change in adults: cognitive and social mechanisms**

- *lifelong learning; adult cognition; grammatical change; Early Modern English*

While it is widely recognized that language users continue to expand their vocabulary well into adulthood (e.g. Brysbaert *et al.* 2016), the issue of grammatical change in adults is still largely unsettled, with views ranging from grammatical change being possible only in first language acquisition (e.g. Lightfoot 1999) to change being almost exclusively the business of adult interaction (e.g. Croft 2000). These seemingly conflicting views can be conciliated if we acknowledge that an individual’s mental grammar is both systematic and adaptive in nature (cf. Beckner *et al.* 2009), and thus conceive of a person’s mental grammar as a structured system that interacts with language use at the aggregate level of the community. Against this background, we investigate how much grammatical innovation is possible in adult life.

We will demonstrate how this fundamental question is investigated in the context of a collaborative research project situated at the intersection of historical sociolinguistics, cognitive linguistics and corpus linguistics. Thematically, this talk aims to advance our understanding of lifelong learning (cf. Ramsar *et al.* 2014). Investigations into longitudinal change across the lifespan require not only large amounts of data, but also a number of established cases of grammaticalization. We therefore turn to the 17<sup>th</sup> century, in which several constructions undergo incipient or more advanced grammaticalization. In this talk, we will present a new large-scale longitudinal corpus of 50 adults and illustrate how aging affects the flexibility with which grammatical innovations are adopted by means of the *be going to* INF construction.

Extensive digitalization projects such as Early English Books Online (EEBO) and Eighteenth Century Collections Online (ECCO) have recently provided historical linguists with digitized editions of writings by all British authors between 1600-1800. From this collection we established a suitable body of 50 prolific writers, who are embedded in the social network of the London-based elite and span five generations. With a size of about a 100 million words and the availability of network information, this new longitudinal corpus (called *Early Modern Multiloquent Authors [EMMA]*) will significantly broaden the scope of (historical) sociolinguistic studies. Given the increasing size and scope of research projects, new needs also emerge for tracking and synchronizing interdependent analyses by different researchers. An in-house developed web application (called *Cosycat*) allows us to query and annotate the corpus in a team-based context.

The effect of aging on the flexibility with which innovations are adopted will be illustrated by a discussion of three innovative features in the grammaticalization of *be going to* INF. The first two features, fronting of the embedded object of the infinitive (*the thing I was going to say*) and the use of motionless instances of *be going to* INF (*I am going to love this*), background or obliterate the original sense of motion associated with *be going to* INF. The data indicate that while older authors produce the structural context of fronting that most likely enabled the extension to no-motion uses, they did not spontaneously adopt this new semantic extension when it became current. Depending on when no-motion uses were conventionalized, adults may adopt semantic innovations that have grammatical repercussions (loss of motion brings *going* closer to being an auxiliary) until about the age of 45 (latest possible conventionalization around 1660), or acquisition beyond childhood is not corroborated (early conventionalization ca. 1635).

The third feature relates to the construction’s predictive semantics. Prior to the mid-1650s, all instances could be interpreted as reflecting relative future or intended future (e.g. when speaker and agent are the same). From the mid-1650s instances of guessing other people’s

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imminent actions started to appear (*He charged his Gun; whereat the Child Shrieked out, He's going to kill me!*). In this case aging seems to have had a more mixed effect on the degree of adoption: authors aged 40 or above by the mid-1650s never adopt this innovation, whereas among the authors aged 30-40, 4 authors adopt the innovation and 5 do not. Overall, the data indicate that more disruptive semantico-grammatical extensions (loss of motion) are not adopted by adults (beyond a certain age), whereas less disruptive ones (guessing other people's intentions rather than having access to one's own) may be adopted at a later age, but this does not happen consistently.

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#### **Bio-notes**

**Peter Petré** is a research professor in English linguistics at the University of Antwerp, and holds a PhD from the KU Leuven (Belgium). He aims at keeping a wide view, combining insights and research methods from linguistics, psycholinguistics, history, philology, philosophy, and evolution research. Currently he is examining grammaticalization at the most basic level of the (adult) individual.

##### Selected publications

2016. Grammaticalization by changing co-text frequencies. *English Language and Linguistics*. 20. 31-54.
2015. What grammar reveals about sex and death: interdisciplinary applications of corpus-based linguistics. *Digital Scholarship in the Humanities* 30. 371-387.
2014. *Constructions and environments*. Oxford: OUP.

**Lynn Anthonissen** works on a full-time doctoral research grant as part of the EU-funded project 'Mind-bending grammars' (supervised by Peter Petré). She investigates the cognitive and social mechanisms underlying the increasing productivity of special passives in English.

##### Selected publications

2016. With Astrid de Wit & Tanja Mortelmans. Aspects meets modality: a semantic analysis of the German *am*-progressive. *Journal of Germanic linguistics* 28. 1-30.

**Oscar Strik** is a postdoctoral researcher, working, *inter alia*, on the sociolinguistic dimension of the EU-funded project 'Mind-bending grammars' (supervised by Peter Petré). He has a background in Scandinavian and Frisian, and Dutch linguistics. Previous research topics include inflectional morphology, analogy, productivity, and language change in general. He also has an interest in social aspects of language and language change, historical linguistics, and play studies.

##### Selected publications

2015. *Modelling Analogical Change. A History of Swedish and Frisian Verb Inflection*. Groningen: Rijksuniversiteit Groningen dissertation.
2014. With Remco Knooihuizen. 2014. Relative productivity potentials of Dutch verbal inflection patterns. *Folia Linguistica* 35. 173-200.

**25 Pot, Anna (University of Groningen)**

## **The impact of (second) language ability on older Turkish migrants’ mental and social wellbeing**

- *multilingualism; older migrants; wellbeing; SLA*

The group of older adults in Western societies is not only growing in number, the group is also becoming more and more culturally diverse. As a result, an increasing number of older adults age in a linguistic environment that differs from their mother tongue. This presentation focuses on the relation between language and healthy aging, and examines the consequences that growing old in an L2 environment may have on older adults’ social, mental and perhaps even physical wellbeing.

Taking the Netherlands as its focal point, the present study examines the impact of (second) language ability on older Turkish migrants’ mental and social wellbeing. Turkish migrants form the largest migrant group in Dutch society, with its ‘first-generation’ (who arrived in the 1950s-60s as guest-workers) approaching old age (>65). The situation of especially the female Turkish migrants in this group is characterised by a minimal command of the L2 (Dutch), no or few years of education and high levels of L1/L2 illiteracy.

Within this increasingly multilingual older population, monolingualism is still largely society’s norm. Individuals need to master the Dutch language in order to take or maintain control over their aging process. Not being able to consult a doctor independently, read medicine prescriptions or call a taxi to increase mobility creates a situation of (linguistic) dependence, which may contribute to social (less interaction, withdrawal from society) and cognitive (decreased cognitive stimulation) deterioration.

The main question to be answered in this presentation is how the L2 can be effectively used to enhance independence, and thereby increase wellbeing for the group of low-educated, illiterate older adults. Research in the field of cognitive aging attests that although certain cognitive functions decline as a result of reduced functional brain connectivity – which has an effect on speech perception and production (Burke & Shafto, 2008) - the brain retains much of its plasticity, making it not impossible to learn new skills, such as language, at an advanced age (Antoniou et al., 2013).

Despite sustained plasticity, the notion that older people struggle more with language learning persists. As such, it is not as much cognition per se that dictates the learning process, but rather the social and psychological environment in which a language is learned (Marinova-Todd et al., 2000). This means that, for example, a full-fledged language course in a heterogeneous group may not be an optimal learning condition for older adults, who may struggle to focus attention and experience stress.

Therefore, this presentation proposes a short language training intervention, aimed at increasing L2 awareness in a low-threshold environment, to observe possible benefits in the social and cognitive domain – not in the least through increased social interaction and participation.

Through a perspective of ‘translanguaging’, whereby speakers build different repertoires for different languages in different situations and the L1/L2 distinction becomes fluid and transcends traditional language boundaries (Canagarajah, 2011), an intervention is set up. Language is hereby regarded as a proxy for cognitive and social stimulation. Through engaging with L2 activities, learners create a safe environment in which they develop self-confidence and build language awareness.

This presentation discusses the theoretical and practical considerations for the development of such an intervention programme. Through highlighting the unique learning situation of older migrant adults, which is characterised by low levels of motivation (as a result of their deemed cognitive incompetence), absence of learning skills due to their limited educational experience,

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and high levels of illiteracy, the study investigates the role of language issues in multilingual contexts of interaction. Focus interviews, together with a cognitive pre- and post-test, followed by a retention test after 2 and 6 months give insight in the (differential) development of individuals’ cognitive and social abilities before and after the language training.

This proposal is part of an on-going PhD study towards the influence of a second language on the cognitive and social wellbeing of older migrants in the Netherlands. The proposed intervention will be designed and implemented in a group of older female Turkish migrants in the Netherlands in January 2017.

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#### **Bionote**

**Anna Pot** holds an MA degree in Applied Linguistics and is currently a PhD candidate at the University of Groningen, where she conducts research in the field of second language acquisition and aging.

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## **Cécilia Project: an international multidisciplinary collaboration on the study of language in later life**

- *language in later life; corpus linguistics; dementia; communication; longitudinal study*

The purpose of our talk will be to present the Cécilia Project, an ongoing vast project created to study the language, facial and body expressions in later life. This project is focused on creating affordable non-invasive tools and methods to better recognize early alterations caused by Alzheimer's disease and other dementias, as well as on developing strategies to improve and prolong communication with the elderly, especially with those suffering from mental disorders.

Cécilia Project started in 2014 as a collaborative project between linguists, computer scientists, research nurses, psychogeriatricians and geriatric care givers from École de Technologie Supérieure in Montreal, Canada; the Medical University of South Carolina (MUSC) and the University of North Carolina at Charlotte (UNCC) in the USA; the Universidad Nacional Autónoma de México (UNAM) and the “Fray Bernardino Álvarez” Psychiatric Hospital (FBA-PH) in Mexico; and the “Perpetuo Socorro” Foundation (PSF) in Ecuador.

The project is centered on two main undertakings: first is the creation of a multi-lingual longitudinal corpus with Latin American elderly speakers from Ecuador and Mexico, and English and French speakers from Canada. This corpus is set to be included as a new cohort in the already existing and available for research purposes Carolinas Conversations Collection (Pope & Davis, 2011: 143–161). The second undertaking consists of a combination of studies on automatic analysis of language in later life to better understand and detect the changes that mental disorders, such as Alzheimer's disease (AD), schizophrenia, depression, and bipolar disease, cause on patients. These studies—focused on analyzing multiple language modalities, such as speech, written communication, discourse, emotions, and facial and corporal expressions—aim to create tools that may aid in the early detection of these conditions, and to develop strategies to improve communication with the elderly.

The new corpus is being constructed with the clinical advice provided by specialized psychogeriatricians at the FBA-PH and experts in the field of nursery and healthcare from MUSC and UNCC. So far, it incorporates natural conversations with participants from the PSF, a home for elderly people in Quito, and patients from the FBA-PH. Participants can be either cognitively healthy or suffering from a known mental disorder. To allow **longitudinal studies**, recollections are being made at least twice a year with each participant. All medications and treatments are being registered to conduct **studies on treatment progress and pharmacological effects**. Also, **socio-demographic information**, such as medical history, educational background, economic level and previous occupation of the participants is being stored. The **video-recorded conversations** are manually **transcribed** and time-aligned by the Linguistic Engineering Group at UNAM, a group with a vast experience in the creation of linguistic corpora. Further information on this cohort can be found in (Anonymized reference, 2016b:16-21). Our corpus can aid researchers in further understanding the progression of cognitive degenerative diseases of the elderly.

With regards to our second undertaking, we started experimenting with restricted-discourse analysis in different corpora. For our first experiments, we trained a Support Vector Machine classifier to automatically discriminate between the discourse of healthy and AD patients in the early and moderate stages (Anonymized reference, 2016a:10-15). This experiment was conducted over the Spanish cohort of the publicly-available BBVA Corpus (Peraita & Grasso,



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2010), which contains the transcripts of elderly participants, healthy or suffering from Alzheimer’s disease, describing six common objects. We selected some basic linguistic features (part-of-speech rates and lexical richness measurements) used in previous works of free spontaneous discourse analysis, but applied them to the restricted discourse context of the BBVA corpus. Our results compared favorably with a previous work that relied on manual extraction of attributes (Guerrero *et al.*, 2016).

We are currently experimenting with the analysis of the English descriptions of the standard *Cookie Theft* test in the Dementia Bank Corpus (Becker *et al.*, 1994). By using the similarity measure proposed by Velazquez *et al.* (2016), we are able to evaluate the informativeness of the utterance of a participant and the overall coverage of the description of the picture. Our preliminary results indicate that this measure could be used to obtain a quick general overview of the performance of a participant in restricted discourse mental tests.

Our following short-term endeavors in the Cécilia Project will be to continue the discourse analysis, but in the free discourse context of our own corpus, and to conduct studies on the analysis of corporal expression and facial gestures of the elderly.

To sum up, the aims of Cécilia Project are twofold. First, it contributes to add a new set of conversations in Spanish and French to a well-known **longitudinal** collection. Second, it aims to develop new computer-based techniques to **analyze verbal and nonverbal communication** with the elderly for better describing the evolution of language in later life.

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### **Bionotes**

Prof. Ratté is a Professor in the Department of Software Engineering and IT at École de technologie supérieure in Montreal, Canada. She is the Research Director of the LiNCS Laboratory and the Principal Investigator of the Cécilia Project. She obtained her BSc. and MSc. degrees in Mathematics and Computer Sciences, and her doctoral degree in Computational Linguistics from Université du Québec à Montréal. She completed a postdoctoral fellowship in the Department of Brain and Cognitive Sciences at MIT. Her current research interests include natural language processing, data mining, and machine learning, with applications in health, education, and social/cultural studies.

**MSc. Hernandez-Dominguez** is a Ph.D. candidate from École de technologie supérieure under the supervision of Profs. Sylvie Ratté and Gerardo Sierra-Martinez. She majored in Computer Engineering at Universidad Tecnológica de la Mixteca, and obtained her Computer Science Master’s degree from



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Universidad Nacional Autónoma de México (UNAM). Her main research interest, and subject of her Ph.D. studies, is Natural Language Processing, machine learning and their application to detect cognitive diseases.

**Dr. Davis** is a Bonnie E. Cone Professor of Teaching in Applied Linguistics/English and Professor of Gerontology at University of North Carolina - Charlotte. Her fifteen-year longitudinal collection of conversational interviews with persons with Alzheimer's disease is one cohort in the online digital Carolinas Conversations Collections, sponsored by the National Libraries of Medicine. She obtained her M.A. and Ph.D. degrees at the University of North Carolina at Chapel Hill. Her areas of research include sociohistorical approaches to stance, pragmatics and narrative, incorporating sociohistorical approaches to medical discourse and Alzheimer's speech, lifespan language, online discourse, and digital corpora of speech.

**Dr. Pope** is an Associate Professor in the College of Nursing and Chief Nurse for Research at the Ralph H. Johnson VA Medical Center, and the Principal Investigator for the Carolinas Conversations Collection. She received her BSc. degree in nursing from the University of Maryland, her Master's in Public Health and Certificate in Nurse-Midwifery from the Johns Hopkins University School of Hygiene and Public Health, and doctoral degree from the University of Rochester Margaret Warner Graduate School of Education and Human Development. She completed a postdoctoral fellowship in Preventive Cardiology to advance skills in epidemiology and apply sociolinguistics methodology in health service research.

**Dr. Roche-Bergua** is the Medical Chief and founder of the Psychogeriatric Unit at the “Fray Bernardino Álvarez” Psychiatric Hospital (FBA-PH) in Mexico. He obtained his Bachelor of Surgery degree from the School of Medicine at Universidad Nacional Autónoma de México (UNAM). He later specialized in Psychiatry in the Secretary of Health-UNAM, and was certified by the Mexican Council of Psychiatry. He has worked for over 30 years at the FBA-PH, and been a Postgraduate Studies Professor at the School of Medicine (UNAM) for 10 years. His main area of interest is the care and treatment of geriatric patients with dementia.

**Dr. Sierra-Martínez** is a National Researcher of Mexico. He leads the Language Engineering Group at the Engineering Institute of Universidad Nacional Autónoma de México (UNAM). He holds a Ph.D. in Computational Linguistics from the University of Manchester Institute of Science and Technology (UMIST). He is author of the book “Introducción a corpus lingüísticos” and more than a hundred papers on journals, chapter of books and peer-reviewed proceedings. His research interest is focused on language engineering and includes computational lexicography, concept extraction, corpus linguistics, text mining and forensic linguistics.

27 Sachweh, Svenja (Talkcare Bochum)

## As good as it (probably) gets – how living in a dementia housing project engenders animation and interactivity

- *dementia; motivation strategies; emotion-oriented communication*

In my thesis in the late 1990s (Sachweh, 1998; Sachweh, 1999), I studied communicative practices in German nursing homes for the aged: Which strategies do nurses use in order to both get their jobs done and further their relationships with and the personhood of the residents? Which of their approaches work, and which don't? Ever since, I've been teaching nurses and other professional and lay caregivers how to talk both effectively and respectfully with older people, especially those with dementia.

The present study focuses on a relatively new form of caring for people with dementia, namely community housing projects. Even in high quality traditional nursing homes, in which lots of social and occupational activities are on offer, being cared for causes residents to become passive, withdraw and cease to interact with others. For that reason, the German attempts to come up with better living arrangements for people with dementia have led to the implementation of small group housing projects. In these, 4-12 people share a flat in the community. The philosophy of these group homes centers on creating not a small nursing home, but a normal, family-like household, in which every member plays an active part and has obligations and duties. Thus, the focus is on housekeeping, not on care, and every resident is invited to contribute, however small or infrequent the contribution may be. Watching a video of such a housing project aroused my curiosity – and led to my research question: How do staff in group homes trigger this interactivity, i.e. how do they inspire people with advanced dementia to talk and interact so animatedly, especially when compared to nursing home residents? The ultimate goal of this study was to not only to identify such animation and motivation strategies, but to be able to teach them to everyone who is interested.

The project is mainly based on what German linguists call "applied conversation analysis", i.e. a method which, in order to teach and improve communicative practices in institutional and other occupational settings, empirically documents and analyses authentic conversations (Becker-Mrotzek & Brünner, 1992). My data consist of 57 hours of audio-recordings, 47 of which have so far been fully transcribed and analyzed in detail. All in all, 33 staff and 47 residents from 5 different group homes participated.

Preliminary results suggest that group homes warrant a role reversal in carers, particularly if their occupational background is nursing: they need to practice simply being with and spending time with residents instead of doing things for them. Accordingly, there is some functional talk, but social topics prevail. Knowing that sooner or later, dementia takes away people's reasoning abilities to some degree, but hardly ever compromises their emotional intelligence, many **staff favor emotional over rational communication strategies**. That is to say that in order to create a positive atmosphere, they use (often self-deprecating) humor and validation. In order to show interest in the residents' wellbeing, they mirror their feelings. When the going gets tough communicatively, and mutual understanding seems to break down, staff explicitly blame themselves for the problem (instead of the linguistic difficulties of the person with dementia). Moreover, in conflict situations, they refrain from contradicting and confronting residents and they don't use rational arguments to convince them that they are right and the residents are wrong. Instead, they give in and use emotional arguments to deflect them.

What is especially intriguing is how carers in group homes activate and motivate residents emotionally to do things, be it grooming, eating and drinking, motion, joining in social activities such as singing and playing, or helping around the house with chores: They never take for granted that the residents want to join in and always politely ask whether they feel like it. They allure them with compliments and praise, by making whatever they want them to do look small

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and easy-to-do in no time at all, and by offering some kind of barter or gratification ("Will you come with me if I get you the lovely black shoes?"). When it comes to helping around the house, they appeal to basic human feelings and dispositions, such as pride ("You peel better than me and my mom!") and vanity ("We'll be having cucumber salad today. Shall we use your recipe instead of mine?"), compassion ("I can't manage by myself, it's too much work for me alone!"), readiness to help ("Where would I be without your help!") and the sense of fairness ("It's give and take, I help you, and you help me, right?").

These strategies are very successful: many people, even in the more advanced stages of dementia, do join in. Once they realize that their help is appreciated and that they are still capable of doing things successfully, they become more and more self-assured, they talk more and more often (even if none of the staff is present), and they develop a sense of togetherness, a feeling of really being at home ("We're a terrific lot, aren't we?").

Therefore, there could indeed be some truth in the proverb "Use it, or lose it!": Having things to do and being involved in managing everyday life or, in other words, a role change from passivity to activity might (amongst other things) not only further the wellbeing of people with dementia, but also slow down their loss of language. Thus I think that the conversational strategies which are geared towards reaching the residents' hearts rather than their minds, and which often convince them to get actively engaged should be taught to all persons caring for and working with people with dementia.

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#### **Bio-note**

After her linguistic thesis on communication in German nursing homes for the aged, Dr. phil. **Svenja Sachweh** set up her own business as a communication teacher for nurses and others working with elderly people. Nowadays, her main research interest is communication by and with people with dementia. Her main goal is to put scientific results into messages non-academic practitioners can understand and profit from.

Sachweh, S. 2008. *Spurenlesen im Sprachdschungel. Kommunikation und Verständigung mit demenzkranken Menschen*. Bern: Verlag Hans Huber.

Sachweh, S. 2012. "Noch ein Löffelchen?" *Effektive Kommunikation in der Altenpflege*. Bern: Verlag Hans Huber.



- 28 Schröder, Johannes<sup>1,2</sup> & Degen, Christina<sup>1</sup> & Frankenberg, Claudia<sup>1</sup> for the ILSE study group (<sup>1</sup>Section of Geriatric Psychiatry, Heidelberg University, Heidelberg; <sup>2</sup>Germany Institute of Gerontology, Heidelberg University)

## The ILSE Corpus: Results of the Interdisciplinary Longitudinal study on Adult Development and Aging

- *longitudinal study; aging; cognitive impairment; linguistic changing*

**INTRODUCTION:** The Interdisciplinary Longitudinal study on Adult Development and Aging (ILSE) is a representative, population-based follow-up interdisciplinary longitudinal study which involves two birth cohorts born 1930-32 (C30) and 1950-52 (C50). Between 1993/93 and 2014/16 cohorts were examined in four examination waves. Geriatric analyses focused on the course and development of mild cognitive impairment and Alzheimer's disease.

**METHODS:** All examination waves included thorough medical examinations (including laboratory findings), neuropsychological testing, and semistructured interviews which were recorded. Subgroups also received magnetic resonance imaging to address potential cerebral changes.

**KEY RESULTS & PERSPECTIVES:** Findings clearly demonstrate that Alzheimer's disease is generally initiated by a prodromal phase, i.e. mild cognitive impairment. The course of the disorder varies with a number of risk factors among them (Pantel et al., 2003; Schönknecht et al., 2005; Sattler et al., 2011) a high educational attainment, lifelong social activities, physical fitness, and a good general health appear to be most important (Berna et al., 2012; Degen et al., 2015; Kuzma et al., 2011; Sattler et al., 2011, 2012; Toro et al., 2009, 2014). Along with these findings the comparison of neuropsychological performance and MCI prevalence between the 'young' and the 'old' cohort yielded a more favorable profile of risk factors with better performance and a significantly lower MCI prevalence in the young cohort (Degen et al., 2017). Preliminary findings indicate that the onset of AD may also be heralded by changes in speech processing as suggested by a reduced word fluency, word finding deficits, less frequently use of complex semantic connectors, more incomplete phrases, an overuse of pronomina, and a lower propositional density (Wendelstein & Felder, 2013; Wendelstein & Schröder 2016).

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#### **Bio-note**

Dr. med. **Johannes Schröder** is professor for Geriatric Psychiatry and Clinical Gerontology at Heidelberg University. Ageing and dementias represent his main field of interest. Recent studies investigated risk and protective factors for dementias, the importance of communication changes for patients and caregivers, bilingualism and cognitive reserve. From 2012–2015, he served as the president of the International Society for Neuroimaging in Psychiatry.

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**29 Schuurman, Ineke & Sevens, Leen & Vandeghinste, Vincent (KU Leuven, Belgium)**

## **You’re never too old for e-inclusion, are you?**

- *social media; apps; simplifications; spelling correction*

Many elderly people risk social isolation. Social media are coming more and more to the rescue, as their role in everyday life is still growing. People are hooked to these apps and websites, so they don’t want to stop using them just because they have a deteriorated sight, hearing, voice, brain functionality or manual dexterity. Can we remedy this, at least to a certain extent? In this paper, we introduce tools that increase e-inclusion of elderly people.

While ageing, many people experience a gradual deterioration of different functions. With respect to social media, this mainly concerns sight (reading), hearing (listening), speaking (phone), brain (understanding and composing), and manual skills (entering a message). There are tools to overcome these issues

Within the **Able to Include** project (Medina Maestro *et al.*, 2016), an *Accessibility Layer* was developed to enable people with Intellectual Disabilities (ID) to use social media. This layer can also enable or facilitate other target groups to use social media, like the elderly. It offers the following services:

- Read aloud messages (with adaptable speed)
- Simplified messages (with adaptable simplification)
- Pictograph-to-text conversion and vice versa (with adaptable pictographs or pictures)
- Input facilitation (user interface method for people with motoric disabilities, automated spelling correction for people with cognitive disabilities)

In this presentation, we focus on text simplification and spelling correction.

**Simplification.** The Flemish public broadcast organization VRT told us that many elderly people watch the news for children, and the reason for this is twofold: The formulation of these news items is less complex, and items that are too unpleasant or gruesome are avoided.

Depending on personal circumstances (social-economic context, educational level, language fluency, culture, health) messages (both written and oral) may be better understood when adapted and/or simplified requiring proper simplification, as well as sentence compression.

*Syntactic simplification* is concerned with the simplification of long and complicated sentences into equivalent simpler ones. This implies that coordinated sentences are split into two or more parts, that passive voice is converted into active voice, that subordinate clauses and participial phrases are detached from the main clause, and that in these cases, the antecedent (subject or object) is identified and explicitly repeated in the detached part, among other things.

*Lexical simplification* implies that difficult or uncommon words or expressions are substituted by simpler or more frequent equivalents.

*Sentence compression* consists of shortening of sentences and deleting words, while taking care that the left-out words do not contain essential parts of the message.

Cultural adaptation deals with ways of addressing a user, depending on their religion, age, sex, or descent. Such information can be deduced from the user’s metadata, although these may be overruled by preferences of individual users.

**Spelling correction.** Research has shown that in various types of (early) dementia people start spelling words as they are pronounced. Knowledge about spelling is stored in two distinct areas in the brain: one for regular, phonologically based spelling, and another for irregular word forms. Children who are learning to write and people with ID tend to spell the first way. Elderly people suffering from dysgraphia tend to spell, for example, ‘touch’ as ‘tutch’, ‘debt’ as ‘dept’, (Hughes *et al.*, 1997) or ‘Leicester’ as ‘Lester’, Sevens *et al.* (2016) describe a context sensitive

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spelling corrector for (Dutch) microtext dealing with such misspellings, even when the ‘wrong’ spelling corresponds to an existing word (cf. ‘maid’ vs ‘made’).

Both simplification and spelling adaptation are meant to make using social media a pleasant pastime as well as a means to remain included in one or more communities. A problem we are facing, especially for spelling correction, is that there are hardly any born-digital, written corpora available containing the original language used by the elderly. Existing corpora are often based on spoken material, transcribed using correct spelling. To develop our tools for Dutch, we currently use similar corpora by children and people with ID, as a proxy, and we are collecting original data from elderly while testing (and improving) these tools. Recently some research has been reported using original, born-digital written material (Leijten *et al.* 2015, Bull *et al.* 2016), mainly used for diagnostic purposes. For Dutch, Leyten *et al.* (2016) make use of elicited messages (descriptions of two pictures, therefore containing a very limited vocabulary), while in Bull *et al.* (2016) free text was used (Swedish).

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#### **Bio-note**

Ineke Schuurman (KU Leuven) has been working on a broad range of projects in the fields of machine translation, semantics, corpus annotation, computer-assisted language learning, linguistic standards,... She is also involved in the research infrastructure projects CLARIN and CLARIN-PLUS, and coordinates the European project Able to Include, in which NLP is used to make social media accessible for people with intellectual disabilities. It turns out that several of the techniques developed in the latter project, are also useful for elderly people.

30 Svennevig, Jan & Landmark, Anne Marie & Lind, Marianne (University of Oslo)

## Collaborative word searches in conversations involving bilingual speakers with dementia

- *dementia; conversation; word search; communication strategies; bilingualism*

Many persons suffering from dementia of the Alzheimer’s type (DAT) are observed to experience problems in retrieving appropriate lexical items in speech production, a difficulty which often leads to difficulties with participation in social interaction (Goral, 2013; Reilly, Troche & Grossman, 2014). However, in bilingual speakers little is known about to what degree such problems are related to language proficiency and the status of the language as first or second language. The current paper is a conversation analytic case study of word searches by a bilingual speaker with DAT. His L1 is English, and his L2 is Norwegian. The study describes his word search activity in conversations with unacquainted interlocutors in English and Norwegian, and compares his word searches in the two languages. It also compares his conversational performance at two different points in time, the first approximately three years after the onset of dementia, and the second two years thereafter.

The analysis of the data from the first observation shows that in English, he mainly displays production problems when required to produce a specific content word, usually a low frequency one. His word search strategies centrally involve paraphrasing, using more general and high-frequency lexical items or proxy nouns (e.g. *thing*), and hypo- and hypernyms. The word searches often generate suggestions by the interlocutor, who is usually provided with sufficient verbal context to be able to guess the word searched for. In the Norwegian conversation, by contrast, the search activity often seems to involve more global problems, such as planning the sentence structure of the utterance-in-progress. The hesitations and search activity often start earlier in the utterance, at a point where the upcoming syntactic structure is not yet projectable. This makes it more difficult for the interlocutor to guess what the speaker is searching for, and thus there are less opportunities for suggestions, often leading to serious threats to the intersubjectivity and progressivity of the talk.

In the second observation, the speaker shows signs of deterioration. In the English conversation, one can sometimes observe problems similar to those observed for his second language, Norwegian, in the first observation. Semantically light introductory constructions are recycled and the speaker shows problems in producing the main verb and thus constructing a syntactic frame for the utterance. And in Norwegian, the conversation at times stops completely due to the speaker’s inability to produce a coherent contribution. At other times, he renounces to provide an answer in Norwegian and switches to English.

This case study gives rise to a hypothesis to be tested in subsequent work that DAT affects first and second language speech production and interaction in different ways.

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### Bio-note

**Jan Svennevig** is Professor of Language and Communication at the University of Oslo, Norway, and member of the Center of Excellence *MultiLing – Multilingualism in Society across the Lifespan*. His current research deals with conversational interaction involving persons with dementia. He also works with issues of understanding in second language interaction in various workplace settings, such as business meetings, construction sites, and health care encounters.

**31 Van De Mieroop, Dorien & Verhelst, Avril (KU Leuven)**

**Multilingualism in Flemish nursing homes:  
‘overaccommodation’ versus ‘epistemic brokering’ in  
interpreters’ translations of caregivers’ questions**

- *nursing home; multilingualism; interpreted interactions; ‘overaccommodation’; ‘epistemic brokering’*

More than sixty years ago, a large group of Italian workers emigrated to the Belgian province of Limburg. These immigrants – and later also their families – did not really arrive in ‘Belgium’, rather they arrived in ‘social structures’ prepared by other immigrants from that region who had arrived earlier (Leman, 1982). They formed close-knit communities, and especially the women had little contact with the local population and hardly spoke any Flemish. The first generation immigrants are now retired and, surviving their husbands who tended to pass away early from work related diseases, many women in particular ended up in Flemish nursing homes. In these homes, Flemish is the working language, which self-evidently creates many understanding issues. Depending on feasibility, these issues can be solved by inviting an interpreter to a selection of ‘important’ interactions (e.g. an Alzheimer’s test, a room change for a resident) (see Van De Mieroop, Bevilacqua, & Van Hove, 2012, for a more extensive discussion).

In this presentation, we will draw on a small dataset of three authentic interpreted interactions in a Flemish nursing home. In particular, we investigate what the influence of the interpreter is on the interaction. As research has extensively demonstrated by now (see e.g. Bolden, 2000; Gavioli & Maxwell, 2007; Van De Mieroop, 2016; Wadensjö, 1998), interpreters are not mere ‘linguistic parrots’ who simply transfer information from one language to another, rather they are real participants who contribute in important ways to the construction and negotiation of meaning. It is important to mention that next to acting as linguistic and cultural ‘brokers’, interpreters also engage in ‘epistemic brokering’ practices. These can be defined as “the interactional steps taken by interpreters to ensure that linguistically discordant doctors and patients/parents are socially aligned at each step in the ongoing interaction by facilitating the establishment of common ground” (Raymond, 2014a: 427). These steps are thus taken in an attempt to level out the potentially steep epistemic gradient (Heritage, 2012) between the interlocutors and are viewed as a crucial way for the empowerment of care receivers in interpreted interactions.

This topic is particularly interesting to investigate in interpreted interactions that involve caregivers and older adults, as the former have been found to also orient to the difference in epistemic status of the latter by producing speech as clearly and simply as possible, while also “overbearing” and using “excessively directive and disciplinary speech” (Coupland *et al.*, 1988). Such forms of accommodation are not without consequences, for this is experienced by elders as a form of “linguistic depersonalization”, which is why it has been aptly termed ‘overaccommodation’ (Ibid.), and is deemed an inappropriate adjustment of communication (cf. ‘overaccommodation’ as a variety of ‘non-accommodation’, Giles & Gasiorek, 2013). It is interesting to investigate whether these overaccommodation-features are also present in interpreted interactions and where precisely these can potentially be found. One might hypothesize that they could be absent from caregivers’ talk, as they address their turns directly to the interpreter, and that the latter transforms the turns not only linguistically but also in an overbearing way to accommodate to the older recipient.

We implemented this research question by selecting first pair parts of question-and-answer adjacency pairs that are initiated by the caregivers and subsequently translated by the interpreter. A systematic comparative analysis is made of the discursive features of the Flemish versus the Italian (interpreted) questions. The analyses indicate that the Italian translations are often modified by repetitions, the addition of preliminaries, changes to the question format and additional structuring of the question. The implications of these findings are discussed and



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conclusions are drawn about the relation between ‘epistemic brokering’, which has typically been considered as a way to “promote patient participation (...) and facilitate positive provider–patient relationships” (Raymond, 2014b: 39) and ‘overaccommodation’, which has been viewed to achieve the opposite.

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#### **Bio-note**

**Dorien Van De Mieroop** is an associate professor at the Linguistics Department of KU Leuven, Belgium. Her main research interest is in the discursive analysis of identity, which she studies in institutional contexts and in research interviews. She (co-)authored more than 20 articles in international peer reviewed journals as well as a book (*Master Narratives, Identities, and the Stories of Former Slaves*) on this topic. She is associate editor of *Narrative Inquiry* (*John Benjamins*).

**Avril Verhelst** holds Master’s and Postgraduate Master’s degrees in Linguistics obtained at KU Leuven (Belgium). There, she has begun doctoral research on interaction in Flemish nursing homes, using qualitative and quantitative methods. Her interests lie in a broad range of fields and approaches (e.g. pragmatics, interactional sociolinguistics, variational sociolinguistics, narrative studies, identity studies), with a proclivity for discourse analytic research.

**32 Wright, Heather Harris (East Carolina University)**

## **Discourse Changes with Age: Considering Microlinguistic and Macrolinguistic Processes**

- *narrative coherence; lexical diversity; discourse processing*

Discourse is defined as any language “beyond the boundaries of isolated sentences” (Ulatowska & Olness, 2004, p. 300), and it allows people to communicate; including tease each other, create, share feelings, and make plans for the future. Yet discourse requires more than simply generating a continuous stream of linguistic elements. Discourse is a naturally occurring form of communication that involves activation and interaction of multiple interconnected cognitive and linguistic subsystems (Fergadiotis et al., 2011). Discourse production requires both microlinguistic elements and processes that are traditionally associated with the field of linguistics and macrolinguistic elements and processes to produce a coherent message.

The focus of this presentation is to review how micro- and macrolinguistic processes change and are maintained within discourse as people age. Further, different discourse elicitation tasks are used across studies. Tasks have included narratives, such as picture descriptions, story tellings, and personal recounts, and also procedural discourses. In previous studies, age-related differences for discourse measures have differed based on the discourse elicitation task (e.g., Fergadiotis et al., 2011; Wright et al., 2014). For this talk, micro- and macrolinguistic processes within aging research are reviewed and task type is also considered. Microlinguistic processes are the linguistic units of discourse and include lexical and syntactic features. For microlinguistic processes, the focus is lexical diversity, which can be defined as the range of vocabulary used by a person within a discourse sample. Several techniques have recently been developed to assess the breadth of a speaker’s vocabulary and these techniques will be reviewed as they are applied to different types of discourse elicited from adults across the adult lifespan. Macrolinguistic processes can be considered the “glue” that holds the blocks (linguistic units) together and include coherence and accuracy and completeness of the schema or script. For macrolinguistic processes, the focus is coherence, which can be defined as how discourse is connected and organized beyond the grammar of a sentence. Coherence is the conceptual organization of discourse (Gloser & Deser, 1992) and can be further subdivided into two types: global coherence and local coherence. Global coherence is how the discourse relates to the overall topic, whereas, local coherence refers to how the individual sentences or propositions within the discourse are linked or, rather, maintain meaning. Different methods have been employed to measure coherence in the literature and these will be reviewed and results discussed. Cognitive abilities in older adults have been well investigated and it is well documented in the literature that as adults age, declines in cognitive functions, such as memory and attention occur. These age-related changes in cognitive function may contribute to changes in discourse processing across the adult lifespan. Results investigating influence of cognitive abilities on discourse performance will be reviewed. To conclude, for both lexical diversity and coherence, current research findings, common analysis techniques, what occurs to these processes as we age, and the cognitive and linguistic systems that underpin these aspects of discourse are discussed.

### **Bio-note**

Dr. **Heather Harris Wright** is Professor in Department of Communication Sciences & Disorders and Associate Dean for Research for the College of Allied Health Sciences at East Carolina University, Greenville, North Carolina, USA. Her research focus includes identifying the influence of cognitive function on language processing in aphasia and across the adult lifespan. Her work has been funded by NIH. She is the North American Editor for *Aphasiology* and co-Editor of *Seminars in Speech & Language*, has presented her work at numerous national and international conferences, and published in several journals including *Journal of Speech-Language-Hearing Research*, *Aphasiology*, and *Discourse Processes*.