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Bios

Jan-Louis Kruger  
BA (Hons) NWU, MA NWU, PhD NWU  
Associate Professor/ Head of Department of Linguistics, Macquarie University

He holds a PhD in English on the translation of narrative point of view. He has been involved in the teaching of and research into audiovisual translation (AVT) since the late nineties and has completed projects on subtitler training, subtitling and multilingualism, subtitling in the classroom, and subtitling and immersion. His main research interests are the reception and processing of audiovisual translation products including investigations on cognitive load and psychological immersion combining eye-tracking, subjective measures and EEG. He is particularly interested in the role of AVT in narrative perspective, with a secondary interest in educational uses of AVT. He is a co-editor for Perspectives, Studies in Translatology.

Stephen Doherty  
BA (Hons.) DCU, HDip DBS, PhD DCU, MBPsS  
Lecturer and program convenor in the in the School of Humanities & Languages, UNSW

Using eye-tracking, psychometrics, and EEG methodologies, Stephen researches language and cognition, namely: translation process studies, translation technologies and multimodal cognitive processing.

Wendy Fox  
BA JGU Mainz, MA JGU Mainz, PhD JGU Mainz

Wendy Fox is a PhD candidate in English Language and Translation Studies at FTSK Germersheim, University of Mainz, Germany, and a research assistant since October 2014. She has been a lecturer for Audiovisual Translation at the FTSK Germersheim since 2012. Her main academic interests are related to subtitling, reception studies and graphic design. She is also a student at the University of Arts and Design in Karlsruhe since October 2012.

Her work in connecting subtitling and graphic design gained her the Karl Steinbuch scholarship of the MFG Innovation Agency for ICT and Media (2013) and two prizes at the student competition "Zukunftsspreiz Kommunikation 2013", one of them awarded by SKY Germany.

Haidee Kruger  
BA NWU, BA Honours NWU, MA NWU, PhD Wits  
Research Fellow, Department of Linguistics – Macquarie University

Haidee Kruger completed her PhD in Translation Studies in 2010 at the University of the Witwatersrand in South Africa. Her first monograph was published in 2012 by John Benjamins, titled Postcolonial Polysystems: The Production and Reception of Translated Children's Literature in South Africa. In 2013 she was the co-recipient of the European Society for Translation Studies (EST) Young Scholar Award for this monograph. In the same year she also received a highly competitive rating from the South African National Research Foundation (NRF), based on her research outputs.

Haidee’s current research interests include projects on understanding bilingual language processing (particularly in translation and indigenised second-language varieties) as a type of
sociocognitively constrained language processing, making use of corpus-linguistic methods as well as experimental methods derived from writing and reading research, including eye-tracking, keylogging and screen recording. She is also involved in a project to write a syntax of Afrikaans.

**Melanie Ann Law**  
BA NWU, BA Hons NWU, MA NWU  
Lecturer in Language Practice, School of Languages, North-West University

Melanie Ann Law completed her MA in Language Practice in 2010 at the North-West University in South Africa. In her MA, she developed a list of standards for editorial practice for South African editors, after which she published research exploring how various contextual factors influence South African editorial work. Melanie is currently enrolled for a PhD in which she is investigating the role of editorial intervention in language variation and change in South African and Australian English.

Melanie is a lecturer and programme leader in Language Practice at the North-West University, where she teaches text editing, publishing and research modules to third-year and honours students.

**Peter de Lissa**  
BSc Macq, MSc Maastricht, PhD Macq  
Postdoctoral researcher in the department of Psychology, Macquarie University  
Affiliated to The HEARing Cooperative Research Centre, Melbourne, Victoria and The ARC Centre of Cognition and its Disorders (CCD), Macquarie University.

He is part of a cross-disciplinary team working on the fields of visual and auditory processing, using EEG, ERP, eye-tracking, and fixation-related potentials to investigate cognitive processes.

**Isabelle Boisvert**  
BSc Udm, MPA Udm, Aud(c), MAudSA, PhD Macq  
Postdoctoral researcher and Research Program Coordinator for the HEARing CRC

Isabelle is a postdoctoral researcher and research program coordinator for the HEARing CRC. She also has broad experience as a clinical audiologist. Isabelle's research interests stem from questions that arise during clinical practice. Current research include the measurement of listening effort, optimising the prediction of cochlear implantation outcomes, comparing different types of training for adults using cochlear implants, and decision-making in Audiology.
Abstracts

The secret life of subtitles: Investigating multimodal cognitive processing in L1 and L2
Stephen Doherty

In a time when our consumption of multimedia products continues to increase, the usage of text-based stimuli within media and across its diverse platforms also continues to develop. Subtitles, in particular, are becoming more and more popular due to the factors of globalisation, language diversity, economic viability, and technological feasibility. While research into subtitling has paved the way for developments in accessibility, audio-visual translation, and intercultural communication, a scarcity of empirical research into the cognitive processing of subtitles has led to a lack of effective, wider application. This paper reports on early findings from a current experimental study using eye tracking and EEG to investigate the cognitive processing and resultant effects of English same-language subtitles in viewers with English as their first (L1) and second language (L2). Focusing here on the manipulation of evidential adverbs, we confirm the susceptibility of same-language subtitles to be manipulated covertly, and demonstrate the significant but distinctive effects of this manipulation on both language groups in terms of comprehension, and cognitive load. Finally, we reflect on the development of this methodology and detail recent applications in projects focussing on (machine) translation quality assessment, second language acquisition in educational settings, and psychological immersion in L1 and L2.

Integrated titles and multimodal measurement of cognitive load during subtitle processing
Jan-Louis Kruger, Wendy Fox, Stephen Doherty & Peter De Lissa

The following abstract is based on my ongoing doctoral thesis on integrated titles and a study of multimodal measurement that took place at Macquarie University in 2015. An extensive eye tracking study on individual placement of (sub)titles already showed that a more creative and sophisticated process can not only increase the audience’s aesthetic experience but also decrease reading time and increase time spent exploring the image (see Fox forthcoming). Another recent study that combined direct and indirect methods, namely eye movement data, EEG, and self-reported psychometrics, investigated the impact of language and layout on cognitive load in the absence and presence of same-language subtitles and integrated titles in an English fiction film viewed by L2 speakers of English. Among other results, it showed that titles placed following the image conception result in a lower perceived linguistic complexity (Kruger et al. forthcoming). The results and implications of both studies will be presented during the talk.

Objective measures of listening effort in noise
Peter De Lissa & Isabelle Boisvert

It is often necessary to exert much effort in order to understand speech in noisy environments. Attempts have been made to index this type of listening effort through physiological measures, such as pupil dilation and EEG. The current study aimed to measure both of these indices concurrently, while participants listened to speech in a varying spectrum of background noise intensity, while also varying the quality of the speech signal through vocoding. This was done in order to discern whether such a relationship between listening effort and pupil-dilation or EGG is reliable within the same paradigm, and whether either formed a superior index for researchers and clinicians to use in order to gain insight into how individual differences in cognitive capacity might interact with listening effort. A follow up study will look into these indices during natural conversations in noise.
What’s happening when nothing’s happening? Combining eyetracking and keylogging to explore cognitive processing during pauses in translation production

Haidee Krugger

Can a combination of eyetracking and keylogging yield a better understanding of the cognitive processing that occurs during pauses in translation production? This paper analyses the interaction between a number of temporal and spatial variables associated with pausing (including pause duration, the syntactic location of the pause and reading behaviour during the pause) to answer this question. Third-year students of translation, translating from English to Afrikaans, translated a 180-word text while their keystrokes and eye movements were recorded. Pauses were defined by means of a predetermined cut-off point, and coded for the temporal and spatial variables above. The relationships between these variables was analysed using linear mixed effects modelling. The findings of the study point to a complex relationship between pause duration, the syntactic position of the pause, syntactic asymmetries between the languages involved, reading behaviour and cognitive effort.

How editors read: An eye-tracking study of the effects of professional editorial experience and task instruction on reading behaviour

Melanie Law and Haidee Kruger

Despite recent developments in research utilising eye-tracking measures to understand reading behaviour and cognitive processing during different language-processing tasks (such as translation, post-editing, proofreading and revision), little research has been conducted on the reading behaviour of professional editors. Consequently, very little is known about professional editors’ reading behaviour and strategies, and how these may differ from non-editors and across different reading tasks. The main focus of this exploratory study is the relationship between the predictor variables of editorial experience and task instruction, and reading behaviour. Two groups of participants (professional editors and non-editors) were asked to read two comparable texts for different purposes: for the purpose of comprehension, and for the purpose of preparing for editing. Both texts contained similar errors to ensure the ecological validity of the tasks. Overall reading behaviour was analysed using the eye-tracking measures of fixation duration, saccade length and regression length. In addition, errors were marked as Areas of Interest (AOIs), and the reading behaviour associated with these AOIs were also analysed, using the measures of first-fixation duration and dwell time. The data were analysed by means of linear mixed effects modelling. Our findings suggest that task instruction and editorial experience interact to have a particularly strong effect on temporal eye movements during reading for editing. Specifically, we found that at least in terms of fixation duration, first fixation duration and dwell time, editors do not find reading for comprehension very different from reading for editing, while non-editors do. In contrast with editors, non-editors find reading for editing to be much more cognitively expensive than reading for comprehension.

Panel discussion: Methodological issues in eye-tracking research

Far from being a panacea, eye tracking methods have their limitations. Moving from theoretical assumptions to applications, this panel brings together researchers working with eye tracking in several fields of research to discuss contemporary issues. We aim to share our experiences with those who are new to the method and those who are already established and interested in learning about other disciplines’ perspectives and applications.
Hosted by

Department of Linguistics, Macquarie University

And

School of Humanities and Languages, University of New South Wales

Co-sponsored by

Macquarie University Centre for Language Sciences (CLaS)

ARC Centre of Excellence in Cognition and its Disorders (CCD)

In association with:

Centre for Translation and Cognition
TRA&CO, Johannes Gutenberg University