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SEMINAR ABSTRACTS

Seminar 1

Psycholinguistic Models and AAC

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Abstract: The central theme of this research meeting will be centered on two questions: (1) what can AAC learn from the psycholinguistic discipline, and (2) what can psycholinguistics learn from AAC.

First, psycholinguistics is the discipline that describes the processes involved in the use of language. To put it simply, psycholinguists try to find out whether the components of language (such as phonology, morphology, syntax, lexicon, and pragmatics) are distinguishable structures that are detectable in the processes of language

users. The framework helps us to raise important questions about the nature of processes involved in the use of AAC.

1. **Lexical Search.** When a typical speaker searches for a word and finds it in his or her internal mental lexicon, it immediately activates the “lexeme”, which includes the phonological – articulatory program. This means that, when you recognize a vegetable as a “carrot”, the speech articulation program gets activated and you say it (unless you have a form of apraxia of speech). This may also be the case in unaided forms of AAC: for example when you think of a “carrot”, you may have direct access to the motor plan to execute the manual sign CARROT. In aided forms of AAC: after you identify a lexical element (a word, or a graphic symbol) in your internal mental lexicon, you may still need to go through a second process, which can be navigating through a device or on a communication board, or activating the motor plan for an icon sequence. The question then is whether step one (the initial search in the mental lexicon) and step two are linked or come together (which will allow faster lexical access and production).
2. **Multimodality.** A number of proposals have been made to extend model of speech generating to a more general, multimodality oriented, model of communication message generation. For example, some proposals have been made to describe how natural gestures and natural speech are generated in parallel processes. Such an extended “gesture – speech” production model might (or might not) be a prototype of how different modalities are managed and coordinated together. AAC is very much about multimodality.
3. **Is the internal lexicon multimodal?** Does an AAC user have a united coordinated internal store of lexical representations of the spoken word, the printed word, the graphic representation (including the information where to navigate, or information on the icon sequencing)?
 - a. There is a wealth of data and research that supports the notion that gesture helps lexical access and lexical production in oral speech. Can this be generalized to whether other non-speech modalities help with natural speech?
 - b. What is the multimodality capacity of a user – are more modalities always better? Is there such a thing as incompatibility of modalities?
4. **The models have two almost mirror-like sides, i.e. a production side and a reception side.** The production side describes the process from intention (or idea) to the behavior (speech, manual signing, pointing, gesturing, etc.) that creates the message. The reception side describes the process by the message recipient how the intended message is reassembled from elements (cues) in the acoustic, visual, or other information. The model allows for a focusing on (1) the environment (especially the listener/ communication partner) and the (2) developmental and cognitive function of the communicator.



Second, AAC offers a unique perspective on the questions whether “alternative” ways of generating messages require alternative sets of cognitive or motor skills.

As part of the session, we will have (1) a presentation and discussion by Mr. Chris Klein, an AAC user, who will, introspectively, reflect on strategies that he has acquired to enable him to generate quick and relevant messages as part of natural conversations [are these primarily internalized syntactic patterns? Lexical based? Psychomotor patterns?], (2) videotapes of AAC users who will comment on these issues, and (3) clinical reflections (What clinical help should be provided? Should clinical help be focused on fast lexical searches, or generative syntactic patterns, or what?)

Seminar 2

Processes of Aided Language Development in Cognitively High-Functioning Children and Adolescents

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Abstract: Children who need augmentative and alternative communication (AAC) vary widely. The only characteristic they have in common is that they have little or no speech. Comprehension of spoken language, cognitive levels and profiles, and perceptual and motor abilities, as well as specific learning disorders and autistic features, may vary as much as in the general population. Also, experiential features will influence the children's development of alternative means of language to different degrees. Some children have motor impairments that make it difficult for them to manipulate objects and act on the world, while others have problems with executive functions that may make navigation in a communication aid and other forms of planning difficult. The significant variation within the group of children who use AAC makes it necessary to investigate the different developmental paths and the variation among children who have different characteristics and use different forms of AAC.

An overview of the literature suggests that children who need AAC are often discussed as one heterogeneous group. The most researched subgroups appear to be children with autism spectrum disorders and with intellectual disability. There is also a considerable literature on children with motor impairments but few studies seem to explicitly address the language development of children who use AAC who have relatively good cognitive abilities and comprehension of spoken language. Children in this group typically have cerebral palsy and use communication aids. The developmental paths of these "high-functioning" aided communicators and the factors that influence their developmental paths may differ from factors influencing AAC development in other groups. Investigations of their language development and the informal (scaffolding) and formal (teaching) social practices that may influence their developmental paths may shed light on both typical and atypical language development processes.

Moderator:

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Presenters:

Carmen Basil, University of Barcelona, Spain

Michael Clarke, University College London, UK

Shelley K. Lund, University of Wisconsin, USA

Judith Oxley, University of Louisiana, USA

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