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Discourse in aphasia: An introduction to current research and future directions

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Discourse has been defined as any language that is “beyond the boundaries of isolated sentences” (Ulatowska & Olness, 2004, p. 300) and “a set of utterances aimed at conveying a message among interlocutors . . . [it] may be the most elaborative linguistic activity” (Ska, Duong, & Joanette, 2004, p. 302). Discourse production requires more than simply generating a continuous stream of linguistic elements (i.e., phonemes, morphemes, content units, syntax). Successful discourse requires combining units of information in a coherent manner to convey a meaningful message. The study of discourse has spanned many disciplines including linguistics, psychology, gerontology, and communication sciences. Discourse is of particular interest to aphasiologists for numerous reasons: (1) adults with aphasia often have difficulty communicating at the discourse level; (2) analyses of discourse abilities in adults with aphasia are an objective method for evaluating how well the individual can communicate with others; and (3) changes in discourse production can be used to evaluate meaningful change in response to treatment. Discourse abilities in aphasia have garnered more attention in recent years. Researchers have applied methods to evaluate discourse in adults with aphasia to better characterise their communication impairments (e.g., for review see Armstrong, 2000; Olness, Metteson, & Stewart, 2010; Stark, 2010; Ulatowska, Reyes, & Santos, 2010). Researchers have also investigated different methods for quantifying meaningful change in communication abilities of adults with aphasia that are often not detectable by standardised aphasia test batteries (e.g., Fox, Armstrong, & Boles, 2009; Goral & Kempler, 2009; Peach & Reuter, 2010). The purpose of this special issue of Aphasiology is to highlight current research in discourse in aphasia. The goal is also to challenge researchers to explore structural and functional theoretical perspectives to more comprehensively characterise communication abilities of adults with aphasia, which may subsequently prove to be sensitive to detecting meaningful change as treatment outcomes measures.

To begin this special issue on Discourse in Aphasia, Brian MacWhinney and colleagues present an overview of AphasiaBank, a computerised database that researchers can access to investigate language use of individuals with aphasia. They present an overview of AphasiaBank including the standard elicitation protocol used.
and methods employed for transcription and coding. To illustrate different automatic methods for analysing discourse, they report results of sample analyses applied to Cinderella stories produced by individuals with aphasia.

The next set of papers address treatment at the discourse level in adults with aphasia. Mary Boyle reviews the treatment literature and identifies seven empirical investigations that applied treatment at the discourse level to improve word retrieval ability in individuals with aphasia. Generally, across the treatment studies reviewed, word retrieval ability improved for the study participants following treatment; however, the improvement did not always occur for the treated lexical items. Rather, improvements in general processes of word retrieval were found. Further, review of the studies found that discourse treatment approaches improve informativeness of the discourse produced. Daniel Kempler and Mira Goral apply two treatment approaches, drill-based and discourse-based, to two individuals with nonfluent aphasia to evaluate the efficacy of the different treatments for improving word, sentence, and narrative production. Both treatments focused on verb production. Similar to Goral and Kempler’s (2009) findings, positive outcomes on measures were found following the discourse-based treatment. The two study participants improved on word level (number of verbs, verb diversity), sentence level (number of complete utterances, number of grammatical utterances), and discourse level (global coherence, local coherence) measures following the discourse-based treatment but not the drill-based treatment.

The next several papers focus on quantifying discourse production in aphasia by considering different discourse elicitation tasks and different methods for analysing discourse. Elizabeth Armstrong and colleagues apply detailed semantic and syntactic analyses to monologic and dialogic discourse samples collected from two individuals with aphasia. They report finding greater productivity and complexity in monologues compared to dialogues. Andrea Marini and colleagues demonstrate the advantages and usefulness of a multilevel procedure, grounded in linguistic and psychological theories, for documenting change over time in two individuals with aphasia that is not captured by standardised aphasia tests. Gloria Streit Olness and Hanna Ulatowska provide a partial framework for guiding discourse research. They suggest considering qualitative frameworks with quantitative approaches to develop reliable and valid methods for evaluating discourse. They demonstrate this by discussing how personal stories are useful for evaluating coherence in individuals with aphasia. Finally, Gerasimos Fergadiotis and Heather Harris Wright apply a computational method for quantifying lexical diversity in discourse samples collected from adults with and without aphasia. They found that lexical diversity in individuals with aphasia is influenced by the type of discourse elicitation task used.

We end this special issue of *Aphasiology* with Davida Fromm and colleagues’ manuscript. They describe evaluative responses by individuals with chronic aphasia about their speech, and they discuss their findings within social models of aphasia therapy. They found that individuals with aphasia had a larger percent of positive responses than negative responses about their speech. They also report that aphasia severity was significantly associated with type of response; those with less severe aphasia had more positive responses.

The work presented in this special issue represents a sampling of the current research in discourse in aphasia. Armstrong and colleagues suggest that their findings raise more questions than answers; this may be true and applicable to the results reported by the authors of the other manuscripts included in this issue. As such, the current research provides a guide for future investigations. As researchers continue
to characterise the communication impairments of adults with aphasia, they need to consider their findings within theoretical frameworks.

In future investigations it is clinically important for researchers to establish reliable and valid methods for analysing discourse in aphasia. As demonstrated by Fergadiotis and Wright, and also Armstrong and colleagues, the discourse elicitation task used needs to be considered as well, since many linguistic processes (e.g., vocabulary diversity) are sensitive to task type. We also need to continue establishing reliable and valid clinician-friendly methods; such as on-line transcription-less approaches and computational linguistic approaches. Finally, further investigations of theoretically driven, discourse-based treatments that invoke meaningful change in communication abilities of adults with aphasia are warranted; as are treatment outcome measures to quantify the meaningful changes.

REFERENCES