

**Thursday, February 8<sup>th</sup>, 2pm EDT**

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## **Predictors and mechanisms of naming treatment response in aphasia**

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Semantically-oriented naming treatments such as Semantic Feature Analysis (Boyle & Coelho, 1995) can improve both word retrieval and broader communicative function among people with aphasia. They also show evidence of improving retrieval of not only treated words but untreated, related stimuli, a critical goal of efficacious aphasia treatment (Kiran & Bassetto, 2008).

However, there is considerable variability in how well individual PWA respond to SFA treatment, both within and across studies (Boyle, 2010; Oh et al., 2016). Understanding and characterizing this variability can identify predictors of positive SFA treatment response, and it can also shed light on the mechanisms behind such treatment response.

This talk will present three complementary lines of evidence addressing these issues. In the first line of evidence, we will present results from a new meta-analysis of SFA treatment studies (Quique et al., 2017), analyzing session-level naming-probe performance from 12 published single-subject studies involving 35 PWA. Results of this meta-analysis provide evidence for a person-level predictor of treatment response, in particular improvement on untreated items, as well as preliminary evidence regarding the dose-response relationship for SFA: how much benefit may be expected from varying amounts of SFA treatment?

In the second line of evidence, we will examine which aspects of SFA treatment contribute most strongly to positive treatment response (Gravier et al., in press), drawing on data from a large-scale on-going group study of SFA response. Results identify a promising practice-related predictor of SFA response: the number of client-generated features during treatment appears to be predictive of gains for both treated and untreated stimuli. In contrast, the number of opportunities to retrieve the phonological wordform of treated items (as well as number of hours of treatment received) appears to be only weakly related to SFA treatment response.

In the third line of evidence, we will discuss person-level factors that may determine SFA treatment response (Dickey et al., in prep), again drawing on group-study data. Results indicate that pre-treatment semantic processing ability (operationalized as s-weight; Foygel & Dell, 2000) is predictive of improvement on both treated and untreated words, whereas pre-intervention phonological processing ability (p-weight) is only predictive of improvements for treated stimuli. Together with the findings regarding practice-related predictors (Gravier et al., in press), these results suggest that SFA has its positive effects by facilitating lexical-semantic aspects of word retrieval processes (Foygel & Dell, 2000). This is consistent with both the theoretical motivation of SFA (Boyle & Coleho, 1995) and contemporary models of word production and its impairments in aphasia (e.g., Dell et al., 2006; Foygel & Dell, 2000).