Noun phrases in aphasia:
A usage-based examination

Noun phrases (NPs) are central to the act of linguistic reference, which is itself fundamental to human communication. What happens to this key linguistic device, however, when the language system is disrupted, leaving the speaker less able to retrieve or assemble their utterances? This is the situation facing people with the most commonly acquired language disorder in adults: aphasia.

In line with the rule-based/componential view of language that remains dominant in aphasiology, research has primarily studied individual NP components in aphasia, particularly nouns (e.g. Alyahya et al., 2018), pronouns (e.g. Arslan et al., 2021) and determiners (e.g. Nielsen et al., 2019). Very little work investigates whole NPs, as would be of interest in a constructionist, usage-based approach, in which whole-form storage and processing can occur beyond the word level. This perspective is only just gaining traction in aphasiology (e.g. Boye et al., 2018; Hatchard, 2021; Hatchard & Lieven, 2019). No existing work applies the approach to whole NPs in spontaneous speech in aphasia, but doing so could shed new light on this debilitating disorder, as well as helping to further test usage-based theory, thereby also increasing understanding of typical language processes.

This study provides a usage-based examination of NPs in aphasia, investigating how the following vary with spoken language capability in spoken narratives from 12 people with various aphasia 'types'/ severities: percentage use of noun versus pronoun heads; NP elaboration (the number of components and component types in the phrases); NP productivity (flexibility to produce NPs with varied lexis); and any relative preservation of particular component types over others.

The analyses reveal that the people with aphasia vary along a continuum, whereby with greater spoken language capability, there is increasing use of pronoun over noun heads, and greater NP elaboration and productivity, with less reliance on more frequent and likely lexically-specific NPs. Moreover, with more severe spoken language impairment, heads are the most preserved component, followed by determiners and/then pre-modifiers, then post-modifiers; this approximately mirrors the order of acquisition of NP components by children (see Eisenberg et al., 2008), supporting the usage-based view of NPs being built up and entrenched gradually.

The talk explains how these findings can be predicted by usage-based theory, extending support for this approach from the context of aphasia to the fundamental area of NPs. Results are discussed in relation to the development of linguistic theory and also speech and language therapy.

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