The influence of sense-contingent argument structure frequencies on ambiguity resolution in aphasia

Anneline Huck, Robin L. Thompson, Madeline Cruice, Jane Marshall

PII: S0028-3932(17)30119-7
DOI: http://dx.doi.org/10.1016/j.neuropsychologia.2017.03.031
Reference: NSY6312

To appear in: Neuropsychologia

Received date: 6 October 2016
Revised date: 14 March 2017
Accepted date: 31 March 2017

Cite this article as: Anneline Huck, Robin L. Thompson, Madeline Cruice and Jane Marshall, The influence of sense-contingent argument structure frequencies on ambiguity resolution in aphasia, Neuropsychologia, http://dx.doi.org/10.1016/j.neuropsychologia.2017.03.031

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.
The influence of sense-contingent argument structure frequencies on ambiguity resolution in aphasia

Anneline Huck1*, Robin L. Thompson2, Madeline Cruice1, Jane Marshall1
1Division of Language and Communication Science, School of Health Sciences, City, University of London, Northampton Square, London EC1V 0HB, UK
2School of Psychology, University of Birmingham, Edgbaston, Birmingham B15 2TT, UK
*Corresponding author. Anneline.Huck.1@city.ac.uk

Abstract
Verbs with multiple senses can show varying argument structure frequencies, depending on the underlying sense. When acknowledge is used to mean ‘recognise’, it takes a direct object (DO), but when it is used to mean ‘admit’ it prefers a sentence complement (SC). The purpose of this study was to investigate whether people with aphasia (PWA) can exploit such meaning-structure probabilities during the reading of temporarily ambiguous sentences, as demonstrated for neurologically healthy individuals (NHI) in a self-paced reading study (Hare et al., 2003). Eleven people with mild or moderate aphasia and eleven neurologically healthy control participants read sentences while their eyes were tracked. Using adapted materials from the study by Hare et al., target sentences containing an SC structure (e.g. He acknowledged (that) his friends would probably help him a lot) were presented following a context prime that biased either a direct object (DO-bias) or sentence complement (SC-bias) reading of the verbs. Half of the stimuli sentences did not contain that so made the post verbal noun phrase (his friends) structurally ambiguous. Both groups of participants were influenced by structural ambiguity as well as by the context bias, indicating that PWA can, like NHI, use their knowledge of a verb’s sense-based argument structure frequency during online sentence reading. However, the individuals with aphasia showed delayed reading patterns and some individual differences in their sensitivity to context and ambiguity cues. These differences compared to the NHI may contribute to difficulties in sentence comprehension in aphasia.

Keywords
Aphasia; Structural Ambiguity; Garden-Path; Argument Structure Frequency; Probabilistic Cues; Verb Sense; Eye Tracking

1. Introduction
Language processing by neurologically healthy individuals (NHI) involves the integration of a variety of information sources at different levels, sometimes referred to as cues (Elman et al., 2005; MacDonald et al., 1994; MacWhinney and Bates, 1989; Spivey-Knowlton and Sedivy, 1995). These cues are integrated in an incremental manner, meaning that each word enters the processing system as soon as it is encountered, and is analysed in light of the information that is available at that point in the sentence (Marslen-Wilson, 1975). Further, it is assumed that processing is not just based on the information encountered, but that processing may additionally be based on predictions, expectations, and anticipations (Altmann and Kamide, 1999; Hare et al., 2009, 2003; Kamide, 2008; Kamide et al., 2003; Levy, 2008). Expectations can be based on probabilistic factors such as word frequency or the influence of a sentence context, which help to determine the statistical likelihood that a word or a structure occurs in a sentence. Eye tracking while reading studies demonstrated, for example, that fixation durations are
دریافت فوری متن کامل مقاله

امکان دانلود نسخه تمام متن مقالات انگلیسی
امکان دانلود نسخه ترجمه شده مقالات
پذیرش سفارش ترجمه تخصصی
امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
امکان دانلود رایگان ۲ صفحه اول هر مقاله
امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
دانلود فوری مقاله پس از پرداخت آنلاین
پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات