Annals of General Psychiatry

BioMed Central

Poster presentation

Open Access

Differential effects of ambiguity type for word recognition

Christina Andreou*[1], Kyrana Tsapkini[2], Vasilis Bozikas[3], Ioannis Papouliakos[3], Vasiliki Holeva[1], Kostas Fokas[3] and Athanasios Karavatos[1]

Address: [1]1st Department of Psychiatry, Aristotle University of Thessaloniki, Greece, [2]Department of Psychology, Aristotle University of Thessaloniki, Greece and [3]2nd Department of Psychiatry, Aristotle University of Thessaloniki, Greece

* Corresponding author

from International Society on Brain and Behaviour: 2nd International Congress on Brain and Behaviour
Thessaloniki, Greece. 17–20 November 2005

Published: 28 February 2006

Annals of General Psychiatry 2006, **5**(Suppl 1):S73 doi:10.1186/1744-859X-5-S1-S73

Background

It is well known that semantic characteristics of words have differential effects on word recognition. Recently, attention has been drawn to the effects of the type of ambiguity, i.e. whether a word has different meanings that correspond to different entries in the dictionary and have different derivations (homonymy), or related senses that are all enlisted under the same entry in the dictionary (polysemy). The aim of this study was to investigate the effects of ambiguity type on visual single-word recognition in greek.

Materials and methods

Twenty-five subjects participated in a single-word visual lexical decision task. Stimulus items were 37 homonyms, 37 polysemous words and 36 unambiguous words, along with 110 pseudowords. The three groups of words were matched for printed frequency, length and lexical neighbourhood size.

Results

Response time values were calculated separately across items and participants. Both analyses revealed a significant effect of word group; subjects responded faster to homonymous words than to unambiguous words, with reaction times for homonyms falling in between the two. For the subset of ambiguous words, there was a significant main effect for number of meanings and number of senses. However, these two effects were in the opposite direction: multiple senses elicited faster reaction times, whereas multiple meanings seemed to slow down responses.

Discussion

Our results suggest an advantage of multiple related senses for visual word recognition, alongside a relative disadvantage for words with multiple meanings. This finding has interesting implications for models of lexical representation and access mechanisms.