

**Word Retrieval Deficits in Aphasia: Effects of
Phonological Awareness and Lexical Semantic Processing**

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Abstract

The aim of this study was to investigate two factors that have been claimed to be associated with the word retrieval difficulties experienced by individuals with aphasia. These factors were aphasic subjects' level of phonological awareness and their lexical semantic processing.

Three experiments were conducted which examined aphasic subjects' level of phonological awareness and their lexical semantic processing in relation to the subjects' word retrieval. The first experiment investigated whether there was a positive relationship between aphasic subjects' level of phonological awareness and their success at picture naming. Fifteen classical anomic aphasic subjects, who were matched to 15 normal nonbrain damaged control subjects, underwent extensive testing of their phonological awareness. Despite the aphasic subjects having poor scores on syllable and particularly phoneme awareness tasks compared with normal controls, the aphasic subjects' performance on these tasks was not associated with the severity of their naming disorder. There was some evidence however, that a number of other cognitive factors such as the subjects' short-term memory and reading/spelling were associated with their performance on each of the phonological awareness tasks, but each subject was affected differently. In Experiment 2, the line of investigation was continued regarding the relationship between phonological awareness and naming in aphasic subjects. This inquiry involved a single case treatment study that examined whether the word retrieval of an aphasic subject could be enhanced if she attained high levels of phoneme awareness after training. The results of that study showed that the subject's level of spoken naming and use of phonemic self-cues did not significantly improve after the phoneme awareness training unlike the improvements that were made to her phoneme awareness skills. Taken together, the results of these first two experiments suggest that aphasic subjects' level of phoneme awareness appears to be independently impaired to that of their word retrieval.

The third experiment explored the notion that aphasic subjects' word retrieval is associated with their lexical semantic processing. The lexical semantic processing of another sample of 21 aphasic subjects was examined in relation to their naming success. The results of this study confirmed that a lexical semantic processing disorder is prevalent in individuals with aphasia and that their naming success is associated with

their lexical semantic processing. The positive association between the aphasic subjects' lexical semantic processing and their naming success was argued to be of therapeutic importance, in contrast with the effect of the subjects' phonological awareness upon their word retrieval.

This is to certify that:

- i) this thesis comprises my original work towards the PhD;
- ii) due acknowledgment has been made in the text to all other material used;
- iii) the thesis is less than 100,000 words in length exclusive of tables, references, figures, footnotes and appendices.

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