

Koul, R. (1994). *The effects of graphic symbol iconicity and complexity on the acquisition of Blissymbols by individuals with aphasia and individuals with right hemisphere brain damage*. Unpublished doctoral dissertation, Purdue University, West Lafayette. Lyle L Lloyd (Advisor): 141 pages of text, 157 references, 6 appendices, 10 tables, and 16 figures.

This study investigates whether aphasia entails a central symbolic deficit in which there is a decrease in competence across a range of symbol systems (i.e., from non linguistic pictures to purely linguistic symbols) or if aphasia specifically impairs the ability to process linguistic symbols. A second purpose was to determine the effects of symbol translucency and symbol complexity on the recognition and retention of graphic symbols by individuals with aphasia. A group of subjects with aphasia, a group of subjects with right hemisphere brain damage, and neurologically normal controls participated in this study. A total of 40 Blissymbols were selected as stimulus items. Blissymbols are conceptually based logographs which provide us a unique opportunity to evaluate the cognitive consequences of non-phonetic symbol systems in individuals with aphasia and individuals with right hemisphere brain damage.

Each subject participated in two experimental sessions. During session 1 (E1), a pretest was administered to exclude the subjects who were unable to recognize the pictures or line drawings representing each of the forty Blissymbols. Also administered was a visual matching task to ensure that all subjects were able to adequately discriminate between the experimental stimuli. Those subjects who successfully completed the pretest and visual matching task were exposed to the experimental task for the remaining part of the first session. The second experimental session (E2), which examined retention of symbols, was held one week after the completion of the first experimental session. A paired-associate learning paradigm was used to teach the symbol-referent pairs to subjects in the experimental task.

The results of the current investigation clearly support the “pluralistic” position that there are different forms of asymbolia. A deficit in linguistic competence does not necessarily entail a deficit in the ability to learn graphic symbols. Additionally, translucency was found to be a potent factor in the recognition of Blissymbols by all experimental groups. Complexity did not have any influence on recognition of Blissymbols. Also, there was no significant interaction between translucency and complexity.

The finding that individuals with aphasia can learn and retain graphic symbols has significant clinical implications for aphasia therapy. Currently there are several trends in aphasia rehabilitation. One of these is to compensate or provide alternatives to bypass damaged language components. The undamaged right hemisphere in aphasic individuals can be used to facilitate communication through graphic symbols. Aphasia therapy for individuals with severe and global aphasia should capitalize on the untapped capabilities of the undamaged areas of the brain.