World Academy of Science, Engineering and Technology
International Journal of Cognitive and Language Sciences
Vol:8, No:01, 2014

An Experimental Study of Scalar Implicature Processing in Chinese

Authors : Liu Si, Wang Chunmei, Liu Huangmei

Abstract : A prominent component of the semantic versus pragmatic debate, scalar implicature (SI) has been gaining great attention ever since it was proposed by Horn. The constant debate is between the structural and pragmatic approach. The former claims that generation of SI is costless, automatic, and dependent mostly on the structural properties of sentences, whereas the latter advocates both that such generation is largely dependent upon context, and that the process is costly. Many experiments, among which Katsos's text comprehension experiments are influential, have been designed and conducted in order to verify their views, but the results are not conclusive. Besides, most of the experiments were conducted in English language materials. Katsos conducted one off-line and three on-line text comprehension experiments, in which the previous shortcomings were addressed on a certain extent and the conclusion was in favor of the pragmatic approach. We intend to test the results of Katsos's experiment in Chinese scalar implicature. Four experiments in both off-line and on-line conditions to examine the generation and response time of SI in Chinese "yixie" (some) and "quanbu (dou)" (all) will be conducted in order to find out whether the structural or the pragmatic approach could be sustained. The study mainly aims to answer the following questions: (1) Can SI be generated in the upper- and lower-bound contexts as Katsos confirmed when Chinese language materials are used in the experiment? (2) Can SI be first generated, then cancelled as default view claimed or can it not be generated in a neutral context when Chinese language materials are used in the experiment? (3) Is SI generation costless or costly in terms of processing resources? (4) In line with the SI generation process, what conclusion can be made about the cognitive processing model of language meaning? Is it a parallel model or a linear model? Or is it a dynamic and hierarchical model? According to previous theoretical debates and experimental conflicts, presumptions could be made that SI, in Chinese language, might be generated in the upper-bound contexts. Besides, the response time might be faster in upper-bound than that found in lower-bound context. SI generation in neutral context might be the slowest. At last, a conclusion would be made that the processing model of SI could not be verified by either absolute structural or pragmatic approaches. It is, rather, a dynamic and complex processing mechanism, in which the interaction of language forms, ad hoc context, mental context, background knowledge, speakers' interaction, etc. are involved.