陳柏亨 國立政治大學
論文題目(中文): 詞性及語意限制對詞彙歧義解困的影響：中文歧義詞處理的眼動研究
論文題目(英文): THE INFLUENCE OF SYNTACTIC CATEGORY AND SEMANTIC CONSTRAINTS ON LEXICAL AMBIGUITY RESOLUTION: AN EYE-MOVEMENT STUDY OF PROCESSING CHINESE HOMOGRAPHS
指導教授: 蔡介立 副教授

1. 摘要(1-2 頁)
(請填寫摘要內容；中英文皆可)

Two primary sentence processing models have been proposed to account for the interaction between syntactic and semantic information in reading sentences: Syntax-first models assume that syntactic-category assignment must precede semantic analysis, while constraint-satisfaction models propose that information from different sources is processed and weighed at the same time during sentence comprehension. The present study examined whether these sentence processing models, which assume different contribution of syntactic category and semantic context, can explain the resolution of lexical ambiguity in sentences.

Several eye movement studies have demonstrated the subordinate bias effect (SBE) for lexical-semantic ambiguous words (i.e., NN/VV homographs), indicating that a subordinate-biased semantic context can boost the activation of the subordinate meaning of ambiguous words and causes meaning competition (Duffy, Morris, & Rayner, 1988). However, the role of syntactic context in lexical ambiguity resolution is less clear. Syntactic category ambiguous words (i.e., SCA words; VN/NV homographs), whose alternative meanings differ in syntactic category (e.g., *watch* in English), serve as a means of examining the interaction between syntactic category and semantic constraints during lexical ambiguity resolution.

The purpose of the present study was twofold: (a) to examine whether the syntactic category constraint can determine the semantic resolution of Chinese SCA words, and (b) to investigate whether syntactic category of alternative meanings of Chinese homographs can influence the SBE during lexical ambiguity resolution. Four types of Chinese biased homographs (NN, VV, VN, and NV) were embedded into syntactically and semantically subordinate-biased sentences (Experiment 1) and into syntactically subordinate-biased but semantically neutral sentences (Experiment 2). Participants' eye movements were recorded as they read each sentence.

In Experiment 1, the results showed: (1) The SBE for the four types of homographs was significant only in the second-pass reading on the post-target words. (2) Numerically, the NV homographs revealed a larger effect size of SBE than VN homographs on both target and post-target words. In Experiment 2, the results showed: (1) The SBE for VN appeared from

the first-pass reading on the target words and lasted to the second-pass reading on the target and post-target words. (2) The SBE for the other types of homographs did not occur until the second-pass reading in all analyzed regions. (3) The SBE for NV occurred much later and less obviously than that for VN. In general, our findings support the constraint-satisfaction models and reject the prediction of the syntax-first models, suggesting that the syntactic category constraint is not the only factor influencing the semantic resolution of SCA words.

2. 貢獻(1-2 頁)

(請填寫貢獻內容；中英文皆可)

Several contributions have been made in this thesis. First of all, a thorough investigation of ambiguity resolution has been conducted for four types of Chinese homographs, which were distinguished from one another in terms of the interaction between their alternative meanings' frequency and syntactic category correspondence. Although the influence of meaning frequency on lexical ambiguity resolution has been demonstrated in the previous studies, the role syntactic category plays remains unclear. To rigorously manipulate the types of ambiguous words, several norming studies were conducted prior to the eye movement experiment. Our results showed a difference of the subordinate bias effect between the two types of syntactic category ambiguous words, validating the influence of syntactic category on lexical ambiguity resolution.

Second, the constraint-satisfaction models of sentence processing were validated by manipulating the availability of the semantic context while keeping the syntactic category constraint well-defined. Our results demonstrated that the syntactic category constraint cannot eliminate the subordinate bias effect of syntactic category ambiguous words; instead, the subordinate bias effect was delayed when the semantically-disambiguating information was available. Inconsistent with some evidence from Indo-European languages, these Chinese results were opposed to the prediction of syntax-first models and may imply differential language-specific weightings of syntactic and semantic information during sentence processing.

Third, the eye-tracking methodology was employed in this study, which can provide online measures to probe both early (e.g., lexical access) and late (e.g., semantic integration) stages during sentence processing. Unlike the Rapid Serial Visual Presentation, which was used in the traditional priming paradigm, the normal reading task employed in this study provides an opportunity to investigate how readers use the preceding and succeeding sentential contexts to resolve the ambiguity in natural reading.