

THE SYNTAX AND PROCESSING OF RELATIVE
CLAUSES IN MANDARIN CHINESE

by

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ABSTRACT

This thesis investigates relative clauses (henceforth RCs) in Mandarin Chinese as spoken in Taiwan from both syntactic and processing perspectives. I also explore the interaction between these two areas, for example, how evidence from one area lends support to or undermines theories in the other area.

There are several goals I hope to achieve:

First of all, there is a significant gap in the sentence processing literature on Mandarin Chinese and in particular on RCs in Mandarin Chinese. I aim to bridge this gap by conducting experiments that will provide basic understanding of how Chinese RCs are processed. In doing so, I also provide a more complete picture of processing RCs across languages. In this thesis, I report three online reading experiments on Chinese RCs. I show that even though Chinese is also an SVO language like English and French, the results with regard to processing subject-extracted versus object-extracted RCs in Mandarin Chinese are very different from results for the same construction in other SVO languages. Thus, even though subject-extracted RCs are less complex in other SVO languages, they are more complex in Mandarin Chinese. These findings

help tease apart various processing theories, in particular, I show that even though resource-based theories, canonical/non-canonical word order (frequency) theories, theory based on accessibility of syntactic positions and perspective shift theory all account for the facts reported in other SVO languages, results from Chinese are only compatible with resource-based theories and canonical/non-canonical (frequency) theories.

Secondly, it has been noted that in many cases, resource-based theories and canonical/non-canonical word order (frequency) theories are both compatible with data from sentence processing studies. Resource-based theories attribute processing difficulty associated with subject-extracted RCs to higher storage cost in processing subject-extracted RCs whereas frequency-based canonical word order theory such as the one proposed in Mitchell et al. 1995 attributes this to the less frequent occurrences of subject-extracted RCs in corpora. As a result, it is very difficult to tease these two theories apart. However, I conducted a Chinese corpus study in this thesis and I show that there is no correlation between structural frequencies in corpora and behavioral measures such as reading times, as predicted by frequency theories. As a matter of fact, subject-extracted RCs occur more frequently in the Chinese corpus. This undermines the validity of frequency theories in explaining the processing data reported in this thesis.

Thirdly, Aoun and Li to appear argue that there is syntactic and semantic evidence in favor of positing two distinct syntactic derivations for RCs with or without resumptive pronouns. RCs containing gaps involve head-raising of the head NP (i.e. no operator movement) as reconstruction of the head NP back to the RC is available. On the other hand, RCs containing resumptive pronouns involve an empty operator in [Spec, CP] and no head-raising of the head NP (since reconstruction is unavailable). As different syntactic structures predict different processing patterns, I explore the interaction between syntax and processing by investigating how syntactic structures differing only

in the presence of resumptive pronouns are processed. I show that to a large extent the findings support Aoun and Li's theory. This discovery is significant because we are able to draw empirical evidence from sentence processing in support of a syntactic theory.

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