Good-enough Interpretation of Cantonese Early Closure Garden-path Sentences
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The garden-path effect of English early closure sentences has been well-studied in the Western population. It is evidenced that subjects have more difficulty analyzing them and may adopt a good-enough interpretation (i.e., the initial misinterpretation lingers after the correct interpretation is formed) when interpreting early closure sentences with optionally transitive verbs (OPT) or reflexive absolute transitive verbs (RAT) [1-3]. This study aimed to investigate (i) whether the subjects adopt a good-enough interpretation when analyzing Cantonese early closure sentences and (ii) the effect of verb type on re-analysis of early closure sentences. Although some Cantonese verbs have similar properties as English OPT verbs or RAT verbs when combined with suitable suffixes, Cantonese is syntactically different from English in many aspects. To the best of our knowledge, this is the first study investigating Cantonese early closure garden-path sentences.

Design. Similar to [1], subjects are required to answer two yes-or-no questions after reading an early closure sentence. The first question was designed to investigate whether the initial misinterpretation lingers, while the second question was designed to test whether the correct interpretation is formed. A "yes" to both questions indicate that the misinterpretation lingers after the correct interpretation is formed, showing that a good-enough interpretation is adopted. The 66 experimental items had a similar structure, and they are presented along with 70 filler sentences. Half of the experimental items consisted of an OPT verb phase, while the other half consisted of a RAT verb phase.

Procedures. Sentences presented in PMingLiu 44 font were displayed in one line in the centre of a computer screen. Participants were instructed to read the sentence carefully and press the spacebar to move on to the two comprehension questions, which they are required to answer using a mouse click. There were two trials before the critical experiment. Participants' eye movements were tracked using a desk-mounted Tobii Pro machine. They sit approximately 65 cm from the computer screen in a sound-proof booth. The eye tracker was calibrated with nine dots for each subject.

Analysis & Results. Data collection is still in progress. Preliminary analysis was carried out with the data of the 8 native Cantonese speakers (6F, M_{age} = 26.75, SD = 13.2) we recruited. When the early closure sentence consisted of a Cantonese OPT verb phrase, 46.5% of the time the subject retained the initial misinterpretation after forming the correct interpretation, showing that they adopted a good-enough interpretation. But when the sentence consisted of a Cantonese RAT verb phrase, only 33.0% of the time the subject adopted the good-enough interpretation. An independent t-test also revealed that subjects retained the initial misinterpretation significantly more often when the sentence consisted of an OPT verb phrase instead of a RAT verb phrase ($t(66)$ = −3.00, p < .001). Besides, an independent t-test revealed that subjects had a shorter total visit duration in the pre-critical verb region when the early closure sentence consisted of an OPT verb phrase instead of a RAT verb ($t(66)$ = −3.00, p < .01).

Discussion. The study suggested that people adopted good-enough interpretation, especially when there was an OPT verb phrase. They also spent less effort analyzing Cantonese early

closure sentences with OPT verb phrases. Their re-analysis may terminate prior to fully revising their misinterpretation, thus leading to a good-enough interpretation.

Example of experimental items and questions

Early closure sentence with OPT verb phrase example:

阿妹	食	完	啲甜品	都	未	整好。
Younger sister	ate	finished	the dessert	all	not yet	prepared

Full translation: The younger sister finished eating everything but the dessert hadn't been prepared yet.
Question 1: Did the sentence mention the younger sister ate the dessert? (句子有冇提及阿妹食完啲甜品?)
Question 2: Did the sentence mention the dessert hadn't been prepared yet? (句子有冇提及啲甜品都未整好?)

Early closure sentence with RAT verb phrase example:

阿媽	整親	阿妹	就	俾	膠布	阿媽
Mother	hurt	younger sister	then	gave	adhesive bandage	mother

Full translation: Mother got hurt so the younger sister gave her an adhesive bandage.
Question 1: Did the sentence mention the mother hurt the younger sister? (句子有冇提及阿媽整親阿妹?)
Question 2: Did the sentence mention the younger sister gave the mother an adhesive bandage? (句子有冇提及阿妹俾膠布阿媽?)

Reference

[1] Christianson et al., 2001. *Cognitive Psychology.* [2] Christianson et al. 2006 *Discourse Process.* [3] Qian et al. 2018. *Language, Cognition and Neuroscience.*