Resumptives in Mandarin: Syntactic versus Processing Accounts

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Whether resumptives exist for grammatical purposes or to facilitate processing is an ongoing debate in the linguistic literature. There is yet little experimental evidence on the role of resumptives and the acceptability of sentences with resumptives in Mandarin. This paper adopts questionnaires of grammaticality judgment and on-line self-paced reading tasks to investigate how language users, not just linguists, perceive the use of resumptives in Mandarin relative clauses.

Crosslinguistically, the acceptance of resumptives varies considerably. In English, resumptives, taken as spell-outs of traces, serve to save representational violations such as the Empty Category Principle (Chomsky 1982; Sells 1984; McDaniel & Cowart 1999) (e.g., That’s the girl that I wonder when \textit{she} met you). In Mandarin, Gu (2001) argues that seeing resumptives as spell-outs of the traces is problematic. As an alternative, he proposes a base-generation approach. We argue against this RP (Resumptive) projection mechanism because it is not an economical solution. If resumptives are base-generated, they should appear as frequently as traces, which is untrue in Mandarin. We propose that the occurrence of resumptives in Mandarin can be better accounted for via the grammatical constraints such as preposition stranding or controllness. Only when gap relatives violate these constraints do speakers consider resumptives to be better. Resumptives then behave more like a last resort device.

Following this line of thought, we argue that resumptives in Mandarin are a grammatical device used to save ungrammaticality. They occur obligatorily in two conditions (1 - (2)): (i) when the object of a preposition is relativized; (ii) when the object of a control verb is relativized. The preposition stranding constraint in Mandarin accounts for the obligatoriness of a resumptive pronoun in oblique object relativization. In the second case, PRO in the complement clause fails to be controlled by a variable (trace) if we extract the object of a control verb.
In addition to syntactic analyses, experimental studies accounted for the saving function of grammaticality as well and further demonstrated the processing advantage of resumptives. For example, resumptives in English are used when gap relatives violate island constraints and when the filler-gap dependency bears a long-distance relation. As McKee & McDaniel (2001) propose, while adults accepted resumptives only in unextractable sites (e.g., the lion that Grover doesn’t know what (it) ate), children accepted resumptives even in extractable positions when the resumptive pronoun is distant from the head noun (e.g., pick up the cat that Goofy is petting (it)). That is, resumptives assist the comprehension of longer filler-gap relations (according to an account based on limited working memory; Dickey 1996). However, in Mandarin, Su’s (2004) study of children’s relative clause production only confirms the syntactic account (the saving function of grammaticality). Mandarin children produced resumptives massively when the relativized elements lie in the preposition-of-object, clausal complements and subjects in island. The processing effect in Mandarin resumptives is not well-explored. In order to investigate whether processing or syntax predicts the occurrences of resumptives, we conducted two experiments in this study using questionnaires of grammaticality judgment and on-line self-paced reading comprehension tasks.

In Experiment 1, questionnaires with grammaticality judgments on a 7-point scale were conducted. We focused on three variables in a factorial design: thegrammatical location of the relative gap (subject position, object position, indirect object position and oblique position), the linear distance between the relative gap and the filler, and whether resumptives appeared. By-item and by-subject analyses showed significant effects ($p < 0.05$) on the position of the gap, the presence of resumptives, and their interaction. Resumptives were considered more grammatical than gaps only when it receives an oblique case from a preposition (as in (1)). There was no distance effect; sentences with resumptives were not judged
more grammatical when the distance between the gap and the filler was longer. Thus, our results suggest that resumptives in Mandarin are a grammatical device used to save the ungrammaticality.

In Experiment 2, we conducted an on-line moving-window self-paced reading comprehension task. We focused on the same variables as Experiment 1. Results showed that the processing of Mandarin resumptives is affected by garden-path effects in two ways. First of all, resumptive relative clauses may lead to garden path themselves and be dispreferred (significantly dispreferred in the subject, long-distance subject and object positions). Second, when gap relatives suffer from a garden-path effect, parsers would prefer resumptive relatives since they are easier to process (gaps were read significantly longer than resumptives in the indirect objects of the ‘take’ verbs (3)). This may have resulted from the complexity of arguments (S–V–I.O.–D.O.) as it is more difficult to find the extraction site when more arguments involve. The reason why indirect objects of the ‘give’ verbs do not suffer from this difficulty will be further discussed in the paper.

(3) wo tou-le * ti ta, sanbaiwan de nage ren.
    I steal.PERF *t/him three.million REL that person
    ‘that person whom I stole (him) three millions’

To sum up, resumptives in Mandarin serve as a last-resort device to save ungrammaticality. The processing function of resumptives is related to garden path. They can cause as well as remove the garden path effect. Only when resumptives remove the garden path do speakers consider them better than gaps. Hence, we conclude that both grammar and processing are responsible for the distribution and acceptability of resumptives in Mandarin relative clauses.

Selected references