

### **Why leads to stronger Complex NP island effects in *wh-in-situ***

**Keywords:** Wh-in situ, strong islands, East Asian languages, experimental syntax

It has been controversial in the island literature which type of *wh*-phrase incurs island violations in Mandarin Chinese *in situ* questions. Some proposals argued that island-sensitive items comprise *wh*-adjuncts (Huang 1982; Tsai 1994; Fujii & Takita 2007), defined in terms of structural category (Stepanov & Tsai 2008), restriction of nominal variables (Reinhart 1998), semantic referentiality (Szabolcsi & Zwarts 1993) or d-linking (Pesetsky 1987). Such proposal predicts that *why*-questions and manner *how*-questions pattern **similarly** in island contexts, their degradations being non-significant from each other. An alternative proposal claims that the *why*-adjunct **uniquely** gives rise to island effects due to its idiosyncratic attachment position (Lin 1992; Jin 2015; Murphy 2017). Hence, it predicts that *why*-questions induce a significantly more severe degradation compared with manner *how*-questions in island contexts. The present study shows the latter proposal is supported by an offline acceptability judgment task.

**Stimuli** For each of the 15 stimuli, 3 sentences have been generated according to the 3 conditions: A) *why*-question B) *how*-question C) *who*-question (The argumental *who*-question serves as the control, eliciting no island effects), all within a relative clause context to probe the CNPC island effects. Table 1 provides sample stimuli across conditions. A sentence explicitly enumerating members of the corresponding domain (individuals, manners, reasons) precedes each target stimulus to serve as the immediate QUD and an exhaustive answer follows each stimulus, so as to make sure that the contextual parameter is identical across conditions.

**Table 1: Sample target stimuli across three conditions**

A) <i>who</i> -relative condition	Guke jue ding mai <b>shei</b> zuo de dianxin? customer decide.to buy <b>who</b> made REL pastry 'Who <sub>i</sub> did the customer decide to buy the pastry that [t <sub>i</sub> made]?'
B) <i>how</i> -relative condition	Guke jue ding mai shangdian <b>zenme</b> zuo de dianxin? customer decide.to buy supermarket <b>how</b> made REL pastry 'How <sub>i</sub> did the customer decide to buy the pastry that [the market t <sub>i</sub> made]?'
C) <i>why</i> -relative condition	Guke jue ding mai shangdian <b>weishenme</b> zuo de dianxin? customer decide.to buy supermarket <b>why</b> made REL pastry 'Why <sub>i</sub> did the customer decide to buy the pastry that [the market t <sub>i</sub> made]?'

**Participants and Procedure** 18 participants rated the acceptability of 15 target stimuli and 15 fillers from 1 (completely unnatural) to 7 (very natural) on a Likert scale presented on Qualtrics. The stimuli were presented to each participant based on a Latin square design.

**Results** No significant effect is observed between the mean ratings of the *who*-question and the *how*-question conditions ( $\beta=0.198\pm 0.14$ ) by an ordinal mixed model (Tukey  $\alpha$ -adjustment) consisting of a random intercept for participant and item and a random by-participant slope for conditions. Compared against either of these two conditions, a significantly lower rating for the *why*-question condition ( $p<0.001$ ) is observed by the model.

**Discussion** Results from the acceptability task on CNPC islands provide initial evidence that the causal *why*-adjunct induces significantly stronger island violations than manner *how*. The finding that manner *how* patterns with argumental *wh*-phrases under explicit contextualization supports the view that *how*'s mild island violations in out-of-the-blue contexts are d-linking effects. In addition, we fail to corroborate Stepanov & Tsai's (2008) claim that *how* is island-sensitive under a manner reading and only escape islands under an instrumental reading. Consequently, the results undermine the proposal to formulate East Asian *in situ* islands in terms of an argument-adjunct asymmetry, and instead justify efforts to derive island effects based on the wide scope taking property of causal interrogatives (Bromberger 1997; Murphy 2017). **Word Count:** 462

**References (selected):** • Huang, C.T.James. 1982. Logical relations in Chinese and the theory of grammar. Ph.D. diss, MIT  
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