

Deriving *Wh*-Correlatives in Mandarin Chinese: *Wh*-movement and (Island) Identity

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Overview I reanalyse what has been named a ‘bare conditional’ in Mandarin as a *wh*-correlative. The proposal has repercussions not just for the typology of correlatives, but also for our understanding of *wh*-movement in in-situ languages, and the asymmetry between *wh*-nominals and *wh*-adverbials in Mandarin.

Background Cheng & Huang (1996) dubbed the Mandarin construction in (1) as a ‘bare conditional’, which has the defining property of involving a pair of *wh*-phrases matched in both form and number:

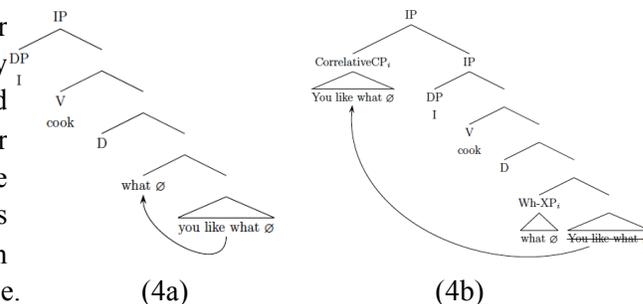
- (1) Ni ai chi **shenme**, wo gei ni zhu **shenme**.
 you love eat what I for you cook what
 ‘I cook whatever you love to eat for you.’

They analysed (1) as a conditional where two *wh*-indefinites are unselectively bound by a covert necessity operator. This account faces many problems: (i) unlike conditionals, the construction in (1) allows non-interrogative use of *wh*-adverbials *zenme* ‘how’ and *weishenme* ‘why’; (ii) the conditional paraphrase of (1) is permitted only under a generic context but not an episodic context (Huang, 2010); (iii) the pair of *wh*-phrases cannot be indefinites due to a violation of the Novelty Condition (Chierchia, 2000).

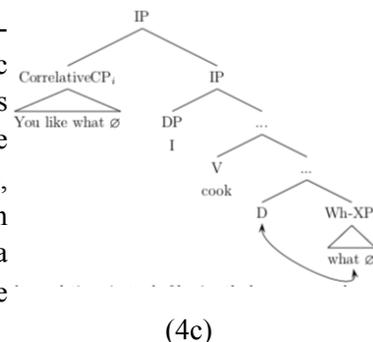
Matching effect I propose that a *wh*-correlative analysis for (1) captures its key properties. Correlatives are left-adjoined relative clauses with a corresponding proform in the main clause (Bhatt 2003). Mandarin *wh*-correlatives exhibit a “matching effect” which imposes strict identity requirement on the two *wh*-phrases: neither of the *wh*-phrases can be replaced by a pronoun or a definite description (2); nor can the NPs inside complex *wh*-phrases differ even minimally (3). Recent accounts proposing a question-based semantics for (1) have no resources to capture this matching effect on the form of *wh*-phrases (Liu 2018).

- (2) Ni xiang qing **shei**, wo jiu qu qing {**shei** / *ta / *na-ge ren}.
 you want invite who I PRL go invite who / 3SG / that-CL person
 ‘I will go to invite whoever you want to invite.’ (*Pronoun/*Definite)
- (3) **Na-ge haizi** zai ku, **na-ge** {**haizi** / *xiaohai} jiu shi e le.
 which-CL child PROG cry which-CL {child / child} PRL be hungry PERF.
 ‘Whichever child is crying must be hungry.’ (*Different NPs)

Proposal I propose a movement-based account for *wh*-correlatives using the following three key ingredients: *wh*-movement, clausal A'-movement, and morphological reanalysis *Fusion*. I argue that the pair of identical *wh*-phrases in *wh*-correlatives are derivationally related to each other. The sentence is base-generated like an English free relative, but with the *wh*-word appearing in situ inside the relative clause.



To derive a *wh*-correlative, I argue that the *wh*-phrase first undergoes *wh*-movement for relativization (4a), then the relative clause A'-moves to a topic position (4b). I assume the copy theory of movement and suggest that copies delete unless morphological reanalysis blocks deletion. After the correlative clause is fronted, the lower copy of the *wh*-phrase fuses with the D (4c), blocking deletion. The fused element is spelled out as an overt determiner in Hindi, but results in multiple spell-out of *wh*-phrases in Mandarin, a determiner-less language. The different spell-out rules captures the typological relations between Hindi and Mandarin correlatives.



The derivation involves **Step 1** *wh*-movement for relativization and **Step 2** fronting of the correlative:

Evidence for Step 1: I take relativization to involve *wh*-movement and island effects to be signatures of this movement. In (5), island effects arise as the result of extracting the *wh*-phrase out of an island in the correlative clause: the *wh*-nominal *shenme* ‘what’ in the correlative clause is inside an adjunct phrase *zai ... zhongtu* ‘in the middle of’, incurring an island violation due to the movement in Step 1.

(5) *Ni [zai **shenme** zhongtu] shoushang, wo jiu bikai **shenme**
 you in what during injure I PRL avoid what

Intended ‘I will stay away from whatever thing/event during which you got injured.’

Evidence for Step 2: The *wh*-phrase in the main clause is also sensitive to island constraints, as a result of Step 2. First, (6) shows that *shenme* ‘what’ in the main clause cannot be extracted from an adjunct island:

(6) ***Shenme** kongbu, Yuehan jiu [zai **shenme** zhongtu] shuizhao.
 what scary John PRL during what middle fall-asleep

Intended: ‘John falls asleep during the middle of whatever is scary.’

Further, reconstruction under Principles A and C suggests the correlative clause originates from below the subject of the main clause: the long-distance reflexive *ziji* in the correlative clause can be bound by *John* if the latter is in the subject (7a) but not the object (7b) position of the main clause. In (8), *John* in the correlative clause cannot be co-indexed with the subject pronoun *ta*, which c-commands *John* at LF.

(7) a. **Shei** shanghai-le ziji, Yuehan_i jiu baofu-le **shei**.
 who hurt-PERF self John PRL revenge-PERF who

‘John took a revenge on whoever hurt him (=John).’

b. ***Shei** chumai-le ziji, **shei** jiu baofu-le Yuehan_i.
 who betray-PERF self who PRL revenge-PERF John

Intended: ‘Whoever betrayed John took a revenge on him.’

(8) ??**Shei** da-le Yuehan, ta jiu taoyan **shei**.
 who hit-PERF John 3SG PRL hate who

Intended: ‘John hates whoever hit him.’

Wh-movement & wh-in-situ The current proposal derives relativization via *wh*-movement. I’ve shown *wh*-nominals to be island-sensitive in *wh*-correlatives, leading to an analysis thereof. However, this runs counter to Huang’s (1982) observation that *wh*-nominals are island-*insensitive* in Mandarin questions. Why are *wh*-nominals sensitive to islands in *wh*-correlatives but not questions? Borrowing insights from Nishigauchi (1990/2012), I suggest that the answer lies in the availability of (covert) pied-piping of an island containing a *wh*-nominal in both questions and *wh*-correlatives. Evidence for this comes from the fact that, although *wh*-phrases show island effects in the correlative clause (5) as well as the main clause (6), the sentence becomes acceptable if **the islands containing the pair of *wh*-phrases are identical:**

(9) Zhangsan xihuan [**shei** qing de zuojia], Lisi jiu taoyan [**shei** qing de zuojia].

Zhangsan like who invite REL author Lisi PRL hate who invite REL author

‘Lisi hates the authors invited by whoever invited the author Zhangsan likes.’

This may suggest that pied-piping of the island involving *wh*-nominals is operative: in (9), the entire island including the *wh*-phrases is pied-piped, satisfying the matching effect. Clausal pied-piping occurs in both *wh*-correlatives and questions, but multiple spell-out occurs only in *wh*-correlatives since there’s no Fusion with D involved in questions, creating the illusion that *wh*-nominals are “island-*insensitive*” in Mandarin questions. It is only in *wh*-correlatives that we observe the outcome of clausal pied-piping. Meanwhile, *wh*-adverbials don’t have this option of pied-piping large constituents that contain a *wh*-phrase (Cable 2010), explaining the nominal/adverbial asymmetry in Mandarin questions.

References: Cheng & Huang (1996). *Two types of donkey sentences*. Chierchia (2000). *Chinese conditionals and the theory of conditionals*. Huang (1982). *Move wh in a language without wh-mvt*. Liu (2018). *Varieties of alternatives: focus particles and wh-expressions in Mandarin*.