Evidence on wh-head movement for Mandarin bare predicate cleft

**Issue:** When topicalization occurs in a *verum* focus sentence, Mandarin allows doubling of the predicate, and the object can be optionally pied-piped (hereafter, full/bare PC [=predicate cleft] with/without the object respectively) as in (1).

Cheng & Vicente (2013) argue the *bare* PC is derived by wh-head movement (HM) due to island sensitivity and the lack of productive scrambling operations that can feed remnant movement (RM). **Although their conclusion is right, their argument is incomplete** in that they didn’t consider another scrambling observed by Soh (1998) and a selective deletion analysis, which is topicalizing VP but deleting the object at PF (Fanselow & Cavar, 2002; Nunes, 2004).

I show that RM is untenable because Soh’s scrambling cannot feed the derivation and subextraction facts also argue against it (A). A selective deletion analysis is also not tenable (B). Lastly, idiom interpretation, as a widely-used diagnostic for HM in PC, needs to be discarded (C*).

A. Remnant Movement

A1. Scrambling: Soh (1998) observes vP-internal object scrambling over multiplicatives, based on scope interpretation, as in (2) and (3). If this scrambling feeds RM, then the base order in (2) should be incompatible with PC. However, since PC is compatible with both orders as in (4) and (5), scrambling in Soh (1998) cannot feed RM.

A2. Subextraction: The head noun of the object can be topicalized from its modifier (6). However, topicalization is banned after the whole object is scrambled (7). This asymmetry remains in a PC where the head noun is independently topicalized, (8) and (9). If sentence (8) is derived by RM, object scrambling has to occur. Crucially, this leaves unexplained why scrambling bans extraction in (9) but not in (8). However, if scrambling doesn’t occur in (8), the asymmetry follows.

B. Selective Deletion

B1. Quantifier scope: Full and bare PC are differentiated by scope interpretation. In particular, if a bare upper predicate, as in (10b), contains a covert object, then its LF would be the same to a full PC in (10a). However, this is not the case. In (10a), given phrasal movement creates scope island, the quantified object is trapped inside the topicalized predicate and therefore cannot move out to c-command the existential quantifier (Sauerland, 1998), hence *∀x >2. By contrast, the ambiguity in (10b) follows if the object is not pied-piped.

C*. Idiom interpretation: Previous account confirms the necessity of HM. **Although my conclusion converges with multiple cross-linguistic studies, their use of idiom interpretation as a diagnostic is problematic.** They show fronting verbs disallows idiomaticity of verb-object idioms while fronting both verb and object preserves the idiomaticity. This is taken to mean only the head is displaced. However, this is unexpected because idioms reconstruct to their base positions (Chomsky, 1993). Mandarin data is consistent with this claim, as in (11) and (12). Therefore, idiom interpretation is not universally blocked by head movement. This calls into question the reliability of this diagnostic used in various studies.

**Conclusion:** HM is necessary to account for PC in Mandarin because no productive scrambling operations can be found and subextraction facts directly argue against it. Also, scope facts show that a selective deletion analysis is also untenable. However, idiom interpretation as a widely used diagnostic is not reliable. The above evidence converges with recent discussion on PC cross-linguistically, which constitutes an empirical argument against eliminating head movement (Chomsky, 2001).

\[
(1) \quad [T \chi (wanfan)], [\text{he COP eat-PERF but eat dinner}] \quad \text{but... .}
\]

\[
(\text{As for eating (the dinner), he has indeed eaten, but... .')}
\]

(A) **Remnant Movement:** \([\text{VP chi } t_i \ ]_k, \text{ta shi chi}_j\text{-le (wanfan)} [\text{VP } t_j \ t_i \ ]_k\]

(B) **Selective Deletion:** \([\text{VP chi wanfan }], \text{ta shi chi}_j\text{-le [VP ... [VP } t_j \text{ wanfan }] }_i\]

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2Out of 4 informants, judgment on (11) is consistent across all informants whereas (12) 3 informants.
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(2) wo qing-guo [liang ci] [quanbu de xuesheng].
   I invite-EXP two time all DE student
   ‘Twice, I have invited all the students’ [*∀ > 2x / 2x > ∀]

(3) wo qing-guo [quanbu de xuesheng], [liang ci] t₁.
   ‘I have invited all the students twice’ [∀ > 2x / 2x > ∀]

(4) qing, wo shi qing-guo [liang ci] [quanbu de xuesheng].
   invite I COP invite-EXP two time all DE student
   ‘As for inviting, twice, I have indeed invited all the students.’

(5) qing, wo shi qing-guo [quanbu de xuesheng] [liang ci].
   ‘As for inviting, I have indeed invited all the students twice.’

(6) shuᵢ, wo du-le [guanyu Zhongguo de t₁].
   book I read-PERF about China DE.
   ‘As for the book, I have read the one about China.’

(7) ??shuᵢ, wo [guanyu Zhongguo de t₁] du-le tᵢ.
   book I about China DE read-PERF.
   Intended: ‘As for the book, I have read the one about China.’

(8) shuᵢ, du, wo shi du-le [guanyu Zhongguo de t₁].
   book read I COP read-PERF about China DE
   ‘As for the book and reading, I have indeed read the book about China.’

(9) ??shuᵢ, du, wo [guanyu Zhongguo de t₁] shi du-le tᵢ.
   book read I about China DE COP read-PERF
   Intended: ‘As for the book and reading, I have indeed read the book about China.’

(10) a. ma [mei yi-ge nanhai], liang-ge nihai shi ma-le.
    swear.at every one-CL boy two-CL girl COP swear.at-PERF
    ‘Sworn at every boy, two girls have.’ [2 > ∀ / ∀ > 2]
  
  b. ma, liang-ge nihai shi ma-le [mei yi-ge nanhai].
    swear.at two-CL girl COP swear.at-PERF every one-CL boy
    ‘Two girls have sworn at every boy.’ [2 > ∀ / ∀ > 2]

(11) chao, gongsi shi mei chao youyu, dan fa, shi fa-le gongzi.
    Stir.fry company COP not.have stir.fry squid but penalize COP penalize-PERF salary
    ‘As for firing, the company has not fired (him), but as for penalizing, they have indeed penalized by deducting a portion of (his) salary.’

(12) youyu, gongsi shi mei chao, dan gongzi, queshi shi fa-le.
    squid company COP not.have stir.fry but salary indeed COP penalize-PERF
    ‘As for firing, the company has not fired (him), but as for salary, they have indeed deducted a portion of his salary for penalty.’