Evidence on Long Head Movement in Mandarin Predicate Cleft

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This paper argues that long head movement is necessary to account for Mandarin bare predicate cleft, a conclusion reached in Cheng & Vicente (2013), but insufficiently justified. They argue that a remnant movement analysis based on vP-external scrambling cannot derive the structure and thus have to resort to long head movement. However, to be complete, the argument also needs to consider vP-internal scrambling observed by Soh (1998) and a selective deletion analysis. In this paper, (i) I show vP-internal scrambling cannot derive a plausible remnant movement analysis, nor can a selective deletion analysis; (ii) while my conclusion converges with cross-linguistic treatments, I point out the unreliability of idiom interpretation as a diagnostic for long head movement used in these studies; and (iii) I present the puzzling restrictions on the categories that can undergo pied-piping with the fronted verb. The necessity of a long head movement analysis supports bare phrase structure whereby head-to-spec movement is expected. In addition, it constitutes as an empirical argument against eliminating syntactic head movement. Point (ii) and (iii) are worth further study. Keywords: Head Movement, Wh-movement, Topicalization, Chinese

*I greatly appreciate Prof. Aniko Csirmaz for her mentoring in this project. I also benefit tremendously from the feedback by Prof. Ed Rubin, Prof. Ben Slate, Andrew Zupon, Jeff Pynes, Christina Yong, Cole Brendel, Miranda McCarvel, Prof. Aaron Kaplan and Prof. Shannon Barrios, and the attendees at UUSCIL 2015 and MOTH 2015.*
1 Mandarin Predicate Cleft

Mandarin Chinese has a *verum focus sentence* (Paul & Whitman 2008), as in (1), with the copula *shi* receiving focal stress.

\[(1) \quad \left[ F \text{ ta } \text{SHI} \text{ zuo-le } \text{wan-fan}\right], \text{buguo bu gou san-ge ren chi}. \]

He COP make-PERF dinner but not enough three-CL person eat

‘He did make the dinner, but it’s not enough to feed three persons.’

*Mandarin predicate cleft* (PC) is when the verb or verb-object string undergo topicalization on top of (1), as in (2) and (3). The lower verb still receives phonetic realization, resulting in the doubling phenomenon observed by Cheng & Vicente (2013). However, although the object can be optionally pied-piped, it cannot be duplicated, (3). Hereafter, constructions like (2) and (3) will be referred to as bare PC and full PC, respectively.

\[(2) \quad \left[ T \text{ zuo}, \text{make } \left[ F \text{ ta } \text{shi} \text{ zuo-le} \text{ wan-fan}\right], \text{buguo... } \right] \quad \text{bare PC} \]

‘As for making, he did make the dinner, but...’

\[(3) \quad \left[ T \text{ zuo wan-fan}, \text{make dinner } \left[ F \text{ ta } \text{shi} \text{ zuo-le} \text{*wan-fan}\right], \text{buguo... } \right] \quad \text{full PC} \]

‘As for making dinner, he did make it, but...’

While full PC is an obvious case of phrasal movement, the same analysis does not necessarily extend to bare PC. In fact, Cheng & Vicente (2013) argue that the higher verb in (2) is displaced by long head movement (head-to-spec A*-movement). However, their analysis is incomplete. In this study,

(i) I show that long head movement is the only possible analysis of Mandarin bare PC, and argue against phrasal movement analyses, specifically remnant movement and selective deletion (Fanselow & Ćavar 2002; Nunes 2004);

(ii) I point out the unreliability of idiom interpretation as a diagnostic for long head movement;

(iii) I show the puzzling restriction on the fronting categories in the *full PC*. Mandarin full PC is not discussed at all previously, let alone its restriction. Cross-linguistic treatments of PC seldom touch upon this issue except Landau (2007) and Ott (2010). Moreover, the ditransitive fronting restriction provides an additional argument against remnant movement.

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1Hereafter, focus and topic will be marked with $[F \ ... \ ]$ and $[T \ ... \ ]$ respectively, while constituents bearing focal stress will be in small caps.
2 Cheng & Vicente (2013) on Mandarin bare PC

Cheng & Vicente (2013) observe that Mandarin bare PC shows island sensitivity and lexical identity effects, typical characteristics of wh-movement under the copy theory of movement.

Despite that, Cheng & Vicente (2013) argue that the higher category undergoes head movement because a phrasal movement analysis cannot be implemented. In particular, the stranded object seems to suggest the derivation involves remnant movement. However, they argue this is not tenable, due to the lack of a productive scrambling process that can feed remnant movement.

Specifically, they consider a scrambling operation observed by Badan (2007) who argues that noun phrases in the position between the subject and the verb are contrastive topics, as in (4). As shown in (5-b-ii), the object is scrambled to a pre-negation vP-external position and this should induce a contrastive topic reading. However, it is not the case that the object has to be interpreted as a contrastive topic in Mandarin bare PC. Thus this derivation undergenerates. In addition, Cheng & Vicente (2013) also contend that some of the movements are unmotivated, specifically the word-order movement in (5-b-iv). Therefore, a remnant movement analysis based on vP-external scrambling is untenable for Mandarin bare PC.

They also note that Soh (1998) shows Mandarin has vP-internal object scrambling, but then immediately dismiss this option because “typically, objects do not scramble to the left of the verb”. They only consider the scrambling discussed in Badan (2007), because here the object raises to the left of the aspectually marked verb, landing in a lower Top projection.

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2 Cheng & Vicente (2013) in fact attempt a remnant movement analysis for the lian...dou construction, another focus construction considered in parallel with the bare PC for the purpose of deriving remnant movement analysis. However, they did not give a sample derivation of Mandarin bare PC.

3 They did not specify which one but the only plausible one would be (5-b-iv)

4 In principle, the object can also land between the copula and negation.
In other words, they assume that a remnant movement analysis is only possible if the object is derivationally linearly to the left of the surface verb.

However, it is unclear why remnant movement has to be based on this assumption. I suspect their reasoning is that by moving the object to the left of the surface verb, the constituent containing the surface verb can undergo remnant fronting, straightforwardly capturing the fact that the verb is the only overt element at the left periphery in bare PC. By contrast, if object lands at the right of the surface verb, then the possible constituents undergoing remnant fronting have to be dominated by the projection containing the surface verb, which entails that the fronted category only has a covert verb. In this case, one has to explain why the verb is overt at the left periphery. However, this does not have to be a difficulty. The phonological requirement of the topic head imposes pronunciation of some constituent. It is not surprising that the head of the remnant phrase, the verb, receives phonetic realization. Note that it is not a problem that the object does not get pronounced, because the phonological requirement presumably only imposes a lower bound.

Therefore, the assumption restricting the possible derivations of remnant movement is not theoretically justified. Below, I further show empirical problems if one adopts vP-external scrambling.

Recall that the object lands in a Topic projection lower than CP. In addition, the object proceeds negation, as in (4), and aspectually marked verbs, as in (6).

(6) Zhangsan [T na-ben shu] kan-guo le. vP-external scrambling
    ‘Zhangsan has read that book (but has not read some other book(s)).’

This means that the Top projection is higher than AspP but lower than CP, as in (7). In principle, AspP, vP and VP can all undergo remnant fronting, although Cheng & Vicente’s said assumption suggests their derivation fronts AspP only, due to their reliance on the notion of surface verb. However, fronting AspP is problematic as this predicts that the higher verb would carry its aspectual marker, which is banned, (8).

(7) CP > TopP > AspP > vP > VP

(8) *kan-guo, Zhangsan [T na-ben shu] shi kan(-guo) le.
    read-EXP Zhangsan that-CL book cop read-EXP PART
    ‘As for having read, Zhangsan has read that book (but has not read some other book(s)).’

To circumvent this problem, an additional PF mechanism has to be posited, which has to account for why Mandarin does not allow the higher verb to surface with aspectual
morphology whereas German and Russian do allow it, as in (9) and (10). Due to this empirical challenge, fronting AspP is not a very plausible remnant movement analysis.

(9) Gelesen hat Jürgen das Buch.  \[\text{German} \]
read.PERF has JürgenNOM the book.ACC
‘As for reading, Jürgen has read the book.’  \[(\text{Ott 2010:}(1a))\]

(10) Pisat’-(to) ona ego pišet,...  \[\text{Russian} \]
write.INF.IMPF-(PTCL) she.NOM him.ACC write.PRS.IMPF
‘As for writing, she does write it, ...’  \[(\text{Aboh and Dyakonova 2009:}(10a))\]

Another option is to front vP. This would predict that the subject can co-occur with verb and object at the left periphery. However, this is not an option in Mandarin, shown in (11). Note that (11) differs from a string-identical construction (12) in that a prosodic pause is obligatorily absent in the latter where the verb-object string presumably lands in a CP-internal topic position. Since regular PCs are compatible with a prosodic pause after the clause-initial topic, the fact that (11) is bad when it has a prosodic pause suggests subject-verb-object fronting is impossible.

(11) *wo kan shu, (wo) shi kan-guo le.
I read book COP read-EXP PART
Intended: ‘As for me reading book, I have indeed done so.’

(12) wo kan shu shi kan-guo le.

Consequently, VP is the only viable target of the fronting operation, and this is exactly predicted by vP-internal scrambling, shown in (13) (Soh 1998). The object lands in [Spec,FP], leaving VP as the only choice for fronting.

(13)
In a word, a remnant movement analysis based on Badan’s vP-external scrambling faces more empirical challenges than that based on Soh’s vP-internal scrambling. As Cheng & Vicente’s argument crucially relies on the failures of remnant movement, it is necessary to consider all potential analyses, especially the most plausible one. They did not consider the full range of analyses, because of their assumption on the relative surface order of object and verb. However, this assumption is unwarranted, so their quick dismissal of the alternative analysis is not justified. Therefore, in order for the argument to be complete, it is necessary to consider the alternative scrambling operation. In section 3.1.1, I show that the alternative analysis is also untenable.

3 The Analysis

3.1 Remnant Movement

3.1.1 Scrambling

This section shows although scrambling to vP internal position can feed remnant movement, PC occurs in absence of scrambling. Therefore, this analysis undergenerates the data. Soh (1998) proposes that Mandarin can scramble object to an vP internal position based on interaction between multiplicatives\(^5\) and scope reading, as in (14) and (15)\(^6\).

(14) wo qing-guo \([\text{liang ci}]\) [quanbu de xuesheng].
     I invite-PERF two time all DE student
     ‘Twice, I have invited all students.’  
     base order \([^\forall > 2x / 2x > \forall]\)

(15) wo qing-guo [quanbu de xuesheng]\(_i\) [liang ci] \(_t_i\).
     I invite-EXP all DE student two time
     ‘I have invited all the students twice’
     scrambled order \([\forall > 2x / 2x > \forall]\)

This scrambling operation can provide the right configuration for remnant movement. If it indeed feeds remnant movement in PC, then PC would be incompatible with the order in (14). However, PC is compatible with the base order, (16).

(16) 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.’

\(^5\)Or, duration/frequency phrase (DFP) in her terms.
\(^6\)Native speakers differ in whether to accept a post-multiplicative demonstrative pronoun. See Tang (1990), Kung (1993), Huang (1994) and Lin (1994)
This means that Soh’s scrambling cannot obligatorily feed remnant movement. Until other scrambling operations are found in Mandarin, remnant movement does not provide a plausible analysis for Mandarin bare PC.

### 3.1.2 Subextraction

This section provides subextraction facts that show remnant movement is an unlikely derivation for Mandarin bare PC.

Consider (17-a) and (18-a). A head noun can be topicalized from its modifier. However, the sentences become highly marked if the head noun is topicalized after the whole object was scrambled, as in (17-b) and (18-b). If either type of object scrambling occurs in (19), a bare PC, this would leave unexplained why the head noun can be topicalized from a scrambled position in (19) but the same extraction is marked in (17-b) and (18-b). In other words, any remnant movement analysis would create a mystery regarding extraction of a head noun from a scrambled position. Conversely, if scrambling never occurs in (19), the mystery would not occur.

(17) *vP-external scrambling*

   ‘As for the book, I have read the one about China.’

b. ??shùij, wò [guányu Zhōngguó de ści] du-le ści book I about China DE read-perf
   Intended: ‘As for the book, I have read the one about China.’

(18) *vP-internal scrambling*

a. shùi, wò du-le [liàng cì] [guányu Zhōngguó de ści]. book I read-perf two time about China DE
   ‘As for the book(s), twice, I have read the ones about China.’

b. ??shùi, wò du-le [guányu Zhōngguó de ści] [liàng cì]. book I read-perf about China DE two time
   ‘As for the books, I have read twice the ones about China.’

(19) shùi, dū, wò shí dū-le [guányu Zhōngguó de ści] book read I COP read-perf about China DE
   ‘As for the book, as for reading, I have indeed read the book about China.’
3.2 Selective Deletion

In addition to remnant movement, an alternative analytic route is selective deletion (Fanselow & Ćavar 2002; Nunes 2004). This requires some mechanism that can delete the object in the topicalized VP. In particular, this analysis predicts that bare PC and full PC have the same LF interpretation but only differ at PF. However, LF diagnostics such as scope interpretation and idiom interpretation falsify this prediction.

3.2.1 Scope Interpretation

Bare and full PC are differentiated by scope interpretation. Specifically, if a bare upper predicate, as in (20-b), contains a covert object, then its LF would be the same to a full PC in (20-a). However, this is not the case. The universal quantifier cannot take wide scope over the existential quantifier, hence *[∀ >2]. By contrast, if the object is not pied-piped, the ambiguity in (20-b) follows.

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

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

This shows that at LF, the two sentences have very different structures. If the difference is entirely PF-related, then scope asymmetry would not exist.

Note that it is logically possible that there is some LF deletion operation that deletes the purported object in (20-b). However, this runs into a serious theoretical problem. Crucially, there is no independent justification for LF deletion and it is also very problematic for LF deletion to correlate with PF deletion. If LF deletion is contingent upon PF deletion, this would require LF read off PF information, contra the standard architecture of the grammar. Moreover, it is not even clear what kind of selective deletion would operate in this construction, let alone LF deletion that is dependent on PF deletion. The conditions where the selective deletion applies need to be principled and restricted. Without a principled mechanism, the possibility of selective deletion is at best a logical possibility for PC. In a word, the asymmetry between (20-a) and (20-b) can be straightforwardly captured by the analysis here. Positing an LF deletion operation without any independent evidence is ad hoc and uneconomical.
3.2.2 Idiom Interpretation

Several studies show that bare PC disallows idiomatic reading of verb-object idioms (cf. Hebrew in Landau (2006), Spanish in Vicente (2009) and German in Ott (2010)). Under the assumption that the topic needs to be referential and that idiom interpretation is non-compositional, this is taken to mean that only the head is displaced; otherwise, the higher category should retain the idiomatic reading if it is an verb-object string at LF. For example, in Spanish, if the verb-object string is moved together as in (21), the sentence is ambiguous between a literal and an idiomatic reading. By contrast, fronting the verb alone disallows the idiomaticity as in (22).

(21) \[Estirar \ la \ pata], Juan ha estirado
stretch.INF the leg Juan el has stretched
‘Juan has stretched his leg (as a warm-up exercise).’
‘Juan has died.’

(22) \[Estirar], Juan ha estirado la pata.
stretch.INF Juan has stretched the leg
‘Juan has stretched his leg.’
‘*Juan has died.’

However, in Mandarin, the idiomatic reading can be preserved by topicalizing either the verb or the object only, (23)$^7$ and (24)$^8$.

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

(24) youyu, gongsi shi mei chao ti, 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 they have indeed deducted his salary.’

This is surprising if idiom interpretation is entirely noncompositional. If topicalizing the verb allows idiomaticity while topicalizing the object does not, this could mean that the verb in fact pied-pipes a silent object, hence a remnant movement analysis. If topicalizing either

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Footnotes:

$^7$Four out of four informants accept this sentence.

$^8$Three out of four informants accept this sentence.
the verb or the object disallows idiomaticity, this could mean that the verb moves alone. However, it is unexpected that topicalizing either preserves idiomaticity, as any component of an idiom should not be able to carry the idiomaticity.

A potential explanation would be that idioms differ in how compositional their interpretation is. In Mandarin, it is possible to say (25) and (26). Namely, a possessive and a DP can represent the patient of the event; it is even possible to quantify the object to convert an abstract idea of criticism into quantified instances of criticism, as in (26-c). This means these idioms are, to a certain extent, compositional. In (25), the object, *squid*, might be conceptualized as *job*, although *squid* cannot take modifiers for *job*. In the case of (26), the object, *cold water* seems to represent criticism or discouragement while the verb denotes ‘carry out’ the criticism or discouragement. Similarly, English example (27) shows that topicalizing a component does not necessarily disallow idiomaticity. The fact that an idiom component can be modified shows its degree of compositionality.

(25)  
a. chao ta-de youyu  
stir-fry he-POSS squid  
‘fire him/staff’  
b. chao yuagong youyu  
stir-fry staff squid  
‘fire staff’

(26)  
a. po ta-de leng shui  
pour he-POSS cold water.  
‘dampen his enthusiasm’  
b. po chuangye-zhe leng shui  
pour entrepreneur cold water  
‘dampen entrepreneur’s enthusiasm’  
c. po san-tong leng shui  
pour three-CL cold water  
‘make three points of criticism’

(27) *Those* strings, he wouldn’t pull for you.⁹

Vicente (2009) in fact hinted on this possibility in a footnote, stating “... the different resistance of idioms to assigning a contrastive interpretation to just one of their parts”. This seems to suggest that the idiom is to a certain extent compositional, if idiomaticity can be preserved when its parts are interpreted contrastively. If it is noncompositional, then the contrastive interpretation of its parts would not be idiomatic.

⁹http://people.umass.edu/scable/LING720-FA13/Handouts/Keine-Presentation.pdf
If (some) idioms are to a certain extent compositional, then it is not surprising that fronting either the verb or the object can preserve idiomaticity.

An alternative account would be that the referential requirement may not be true and idioms can reconstruct to theta positions. Consider (28). Chomsky (1993) observes that for the idiomatic reading of *take picture, himself* can only be co-indexed with *Bill*. This argues for obligatory reconstruction of idioms to its first merged position in wh-movement. If this is true, then it is not unexpected that fronting either the verb or the object can preserve the idiomaticity. In the case of Spanish example (22), repeated below as (29), *leg* is an inalienable object\(^{10}\) in the string *stretch the leg*. This property might require strict inseparability of the verb and object, if idiomaticity needs to be maintained. So the loss of idiomaticity might be attributed to the inalienability instead of a general restriction on idiom interpretation. Again, in this view, idiom interpretation cannot be a diagnostic for head movement, as whatever gets displaced will reconstruct to its theta position at LF.

(28) John wondered which picture of himself; Billi took.

(29) [Estirar], Juan ha estirado la pata.
    stretch.INF Juan has stretched the leg
    ‘Juan has stretched his leg.’
    ‘*Juan has died.’

### 3.3 Long Head Movement

Example (32) represents a derivation for the bare PC sentence (2), repeated below as (31). The verb undergoes canonical head movement from V to Asp, via *v*, which forms a verb raising chain. Head movement to Asp is required in Mandarin, due to example (30). On the other hand, the [topic] feature at the left periphery probes the verb which undergoes A′ movement to the specifier of Top, forming a A′ chain.

(30) Zhangsan zuo-le wanfan.
    Zhangsan make-PERF dinner
    ‘Zhangsan has made the dinner’

(31) [T zuo], [F Zhangsan shi zuo-le (wan-fan)], buguo... . bare PC
    make Zhangsan COP make-PERF dinner but
    ‘As for cooking, Zhangsan did cook the dinner, but... .’

\(^{10}\)Thanks to Beth Levin for her feedback during UUSCIL 2015
Note the current study is only committed to the representation of the topicalization operation. It remains neutral in terms of the syntax of the bare *verum* focus clause or whether Mandarin has T. Also, the focus interpretation is presumably achieved through covert movement to [Spec,Foc]. However, I remain noncommittal on all these issues. I believe the derivation of the topicalization operation is independent from these issues and if anything, it has to be accommodated by any analyses on the other details of the construction.

4 The Putative VP Fronting

It was shown in section 1 that objects can be optionally pied-piped with the verb in (3), repeated below as (33). Thus far, I have only presented data where there is only one object. Below I show the fronting pattern of a ditransitive verb, whose restriction follows the constituency. Then, I provide data on the puzzling restriction on fronting when VP-internal constituents are not nominals.
First, consider the fronting pattern involving a ditransitive verb, *gei*, ‘give’.

(34) Zhangsan gei-le wo yi-ben shu.  
     *Base sentence*  
     Zhangsan give-PERF me one-CL book.  
     ‘Zhangsan has given me a book.’

(35) [T gei], Zhangsan shi gei-le wo yi-ben shu.  
     *Bare PC*  
     give Zhangsan COP give-PERF me one-CL book.  
     ‘As for giving, Zhangsan has indeed given me a book.’

(36) *[T gei wo], Zhangsan shi gei-le (wo) yi-ben shu.  
     *Verb+IO*  
     give me Zhangsan COP give-PERF me one-CL book.  
     Intended ‘As for giving me, Zhangsan has indeed given me a book.’

(37) [T gei yi-ben shu], Zhangsan shi gei-le (wo) (*yi-ben shu)  
     *Verb+DO*  
     give one-CL book Zhangsan COP give-PERF me one-CL book  
     ‘As for giving a book, Zhangsan has indeed given (me) one.’

(38) [T gei wo yi-ben shu], Zhangsan shi gei-le (*wo) (*yi-ben shu)  
     *Verb+IO+DO*  
     give me one-CL book Zhangsan COP give-PERF me one-CL book  
     ‘As for giving me a book, Zhangsan has indeed done so.’

This fronting pattern respects constituency. As shown in (39), given that the *give-me* string does not form a constituent, (36) is bad. By contrast, *give-a-book* and *give-me-a-book* all form a constituent and thus undergoing fronting is not problematic. Note that it is unclear how a remnant movement analysis can account for this pattern. In principle, the object, *a book*, can be scrambled out of *vP*, and this would render (36) a possible construction.

(39)
It was assumed up to this point that (all) VP can be fronted. However, this is not true. Specifically, VPs with a PP, CP, or AdvP complement cannot front, shown below. At this point, I do not have an explanation and the puzzling data are worth further study.

(40) **PP**
   a. *[T ting zai xue xiao], [F che shi ting (zai xue xiao)].
      park at school vehicle COP park at school
      ‘As of being parked at the school, the vehicle is indeed parked there.’
   b. [T ting], [F che shi ting *(zai xue xiao)].
      park vehicle COP park at school
      ‘As of parking, the vehicle is indeed parked at the school.’

(41) **CP**
   a. *[T huai yi qian mei-le], [F ta shi huai yi (qian mei-le)].
      suspect money disappear-PERF he COP suspect money disappear-PERF
      ‘As of suspecting, he is indeed suspecting the money has disappeared.’
   b. [T huai yi], [F ta shi huai yi qian mei-le].
      suspect he COP suspect money disappear-PERF
      ‘As of suspecting, he is indeed suspecting the money has disappeared.’

(42) **AdvP**
   a. *[T jiang de hen qing chu], [F laoshi shi jiang (de hen qing chu)].
      Explain DE very clear teacher COP explain DE very clear
      ‘As of explaining very clearly, the teacher indeed explained very clearly.’
   b. [T jiang], [F laoshi shi jiang *(de hen qing chu)].
      explain teacher COP explain DE very clear
      ‘As of explaining, the teacher indeed explained very clearly.’

5 Conclusion

5.1 Predicate Cleft

To recap, I complement Cheng & Vicente’s argument on refuting a phrasal movement analysis for Mandarin bare PC. Instead, a long head movement analysis clearly captures the empirical facts. I have achieved this goal by considering a full range of possibilities of phrasal movement. Regarding remnant movement, vP-internal scrambling warrants consideration although ultimately it underpredicts the data; I have also provided converging evidence against remnant movement based on the subextraction facts and the ditransitive fronting pattern. On the other hand, selective deletion or any PF account is directly disproved by scope interpretation.
Crucially, the current study does not claim that bare PC across languages should all be analyzed as long head movement. The current view on Russian PC adopts a remnant movement analysis (Abels 2001; Aboh & Dyakonova 2009).

A few words are in order regarding the theory on the displacement of heads. First, head-to-spec movement is expected under the Minimalist Program (Chomsky 1995). Projection size is defined relationally. A head landing in a specifier position is simultaneously a minimal and maximal projection. Given the right feature to be probed, nothing prevents heads from moving in the same manner as phrases. The current finding thus supports bare phrase structure and poses no surprise given the current theoretical framework. In fact, ruling syntactic head movement out would require additional justification.

Second, it is not problematic for canonical head movement to be syntactic, or at least have a syntactic component. Canonical head movement was thought to be the only type of displacement operation of a head. Due to its special properties, arguments have been made to get rid of syntactic head movement altogether (Chomsky 2001; Brody 2000; Mahajan 2003; Matushansky 2006). In particular, the head adjunction operation has to be stipulated; canonical head movement is also subject to strict locality, in addition to violating Extension Condition or having no LF effect. Due to its many problems, attempts have been made to analyze syntactic head movement as phrasal movement (Koopman & Szabolcsi 2000; Hinterhölzl 2002; Mahajan 2003; Nilsen 2003) or a PF phenomenon (Chomsky 2000; Brody 2000; Abels 2001, 2003; Boeckx & Stjepanović 2001; Harley 2004). However, given the strong empirical evidence for A' head-to-spec movement, syntactic displacement of a single head is independently needed and also displays LF effects. Given this, the motivation to dispense with syntactic head movement becomes much weaker, as a single head minimally has to be able to move and this movement does not necessarily have the oddities mentioned before. Moreover, head movement and phrasal movement become more parallel, with both canonical head movement and A-movement showing no LF effect while their A' types behave similarly. The fact that verb raising shows strict locality can be attributed to the overt expression of subcategorization (Svenonius 1994; Pesetsky & Torrego 2001; Matushansky 2006). In sum, it no longer appears problematic for canonical head movement to be syntactic or to have at least a syntactic component.

Two questions are worth further study. First, what conditions the fronting restriction in Mandarin full PC? It is also worthwhile to see if similar pattern holds cross-linguistically. Second, why can VP be probed by Top while vP is banned in Mandarin? Both options are available in a number of languages, such as Spanish and German (Vicente 2009; Ott 2010).
5.2 Idiom Interpretation

In addition, I have shown that idiom interpretation shows a more complicated pattern than what is presented in several studies, which renders it a problematic diagnostic for long head movement. I have presented two accounts on the preservation of idiomaticity in partial topicalization of idioms. The interpretation of idioms is generally thought to be noncompositional and they are canonically considered to be a chunk, much like a lexical item, in syntax. However, given the facts in section 3.2.2, this understanding is not uncontroversial and certainly merits further examination.

References


18


