



A Case of V2 in Chinese

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Abstract

As far as the left periphery is concerned, there is a conspiracy between syntax, semantics, and pragmatics to ensure the success of sentence formation. We would like to put forth the claim that peripheral features play an important role in this endeavor, which can be checked by either Merge or Move according to the parameter-settings of individual languages. Along this line, topic prominence can be regarded as the result of peripheral feature checking, and the null topic hypothesis à la Huang (1984) is reinvented as a null operator merger to fulfill interface economy in the left periphery. In this regard, Chinese provides substantial evidence from obligatory topicalization in outer affectives, evaluatives, and refutory *wh*-constructions, which applies only when the licensing from a D(efiniteness)-operator is blocked. The idea also extends naturally to the issues concerning pro-drop and bare nominals in general. In this light, we may well compare Chinese obligatory topicalization to those residual cases of verb-second (V2) in English, all being manifestation of the strong uniformity.

Keywords

topic prominence, comparative syntax, minimalist program, obligatory topicalization, verb second phenomena

1. Introduction: Q-operator and the Absence of Island Effects

In this paper, we examine a cluster of phenomena in Mandarin where topicalization appears to be obligatory, including constructions containing outer affectives, evaluative adverbs, and refutory *wh*-expressions. All things being considered, the generalization seems to be that these cases actually involve peripheral construals associated with illocutionary force and information structure. In particular, we entertain the possibility that peripheral features are there to satisfy the interface economy in Reinhart's (1997) sense. That is, obligatory topicalization is carried out to meet the interpretive needs imposed by information structure, as well as by the clause-typing requirement of the usual kind à la Cheng (1991). The mechanism works in very much the same way as negative inversion in English, and even comparable to Germanic verb-second phenomena.

In this light, I would like to consider first a set of tools available for our task. There are actually two strategies to derive the absence of locality effects in Chinese island constructions, which phenomena are first noted and extensively studied in Huang (1982). The first strategy is to align interrogative *wh*'s with indefinite *wh*'s (cf. Cheng 1991, Li 1992), where nominal or argument *wh*'s-*in-situ* are analyzed as polarity variables licensed through unselective binding, and LF movement applies only to *wh* adverbs, as proposed by Tsai (1994) and Reinhart (1998). Take (1a) for instance. Here we have a case of *wh-in-situ* bound by a Q-operator externally merged to the left periphery, as in (1b). As a result, no movement is involved, and the absence of strong island effects is explained away. The interrogative construal can be further decomposed as a speech act operator soliciting information from the addressee, plus an existential operator unselectively binding the *in-situ wh*-variable (cf. Hamblin 1973; Kattunen 1977), as in (1c):¹

- (1) a. Akiu xihuan [[**shei** xie] de shu]? (interrogative)
 Akiu like who wrote DE book
 'Who is the person x such that Akiu likes [books [x wrote]]?'
 b. **Q_x** ... [_{complex NP island} [... **wh_x** ...] ...]
 c. **? ∃_x** ... [_{complex NP island} [... **wh(x)** ...] ...]
 (? : speech act operator for soliciting information)

In (2a), we have a *dou*-construction, which may involve an implicit *wulun* 'no-matter' (see Lin 1996, among others). As a result, the *wh-in-situ* in question may well be bound by the polarity operator *dou*, as in (2b), which can be further

¹ The abbreviations used in this paper are glossed as follows: Aff: affective marker; Appl: applicative head; Cl: classifier; Eva: evaluative head; Foc: focus head/feature; Inc: inchoative aspect; Int: interrogative head/feature; Neg: negation; Prf: perfective aspect; Quan: quantifier feature; Top: topic head/feature.

decomposed as a negative operator that licenses existential quantification on the *wh*'s-*in-situ*, as in (2c):

- (2) a. Akiu (wulun) [[**shei** xie] de shu] **dou** xihuan. (negative polarity)
 Akiu no.matter who wrote DE book all like
 'For any person x, Akiu likes [books [x wrote]].'
 b. **wulun** [_{complex NP island} [... **wh_x** ...] **dou_x** ...] (negative polarity \approx *no matter*)
 c. $\neg \exists_x$... [_{complex NP island} [... **wh(x)** ...] ...] (\neg : negation operator)

Finally, (3a) presents a case where the *wh-in-situ* is bound by an epistemic modal *keneng* 'possibly', as in (3b), which again can be further decomposed into a possibility operator that triggers existential quantification on the *wh*-variable, as in (3c):

- (3) a. Akiu **keneng** mai-le [[**shei** xie] de shu], (existential)
 Akiu possibly buy-Prf who wrote DE book
 suoyi ba qian hua-guang le.
 therefore BA money use-up Inc
 'It is possible that, for some person x, Akiu bought [books [x wrote]],
 and has therefore spent all his money.'
 b. **keneng_x** ... [_{complex NP island} [... **wh_x** ...] ...]
 c. $\Diamond \exists_x$... [_{complex NP island} [... **wh(x)** ...] ...] (\Diamond : possibility modal operator)

The second strategy is to align interrogative *wh*-construals with topicalization or left dislocation in the spirit of Chomsky's (1977) original insight. This option is entertained by Tsai (1997) where a nominal *wh-in-situ* is essentially treated like a resumptive pronoun bound by a null topic: Take (4a) for instance. The original proposal of Huang (1984) is to treat the null subject of the relative clause as an empty pronominal A'-bound by a topic externally merged to the left periphery:

- (4) a. Akiu_k a, [xuduo [e_k xie] de shu] dou jueban le.
 Akiu Top many wrote DE book all out.of.print Inc
 'Akiu, [many books [he wrote]] are out of print.'
 b. Topic, [Op_{[-Q]x} ... [_{complex NP island} [... pro_x ...] ...]

To recast this insight in terms of operator-variable relationship, one may postulate a null operator higher up in the left periphery that binds the subject *pro* within the relative clause, as in (4b), that in turn triggers predication on the lexical topic *Akiu*. We may therefore compare this null operator construal to the *wh*-dependency in (5): Both are established through binding, and no island effects are detected.

- (5) Op_{[+Q]x} ... [_{complex NP island} [... **wh_x** ...] ...]

On the other hand, this type of topic-*in-situ* construals does display a subject-object asymmetry, as evidenced by the ungrammaticality of (6):

- (6) * Akiu_k a, wo mai-le [xuduo [e_k xie] de shu].
 Akiu Top I buy-Prf many wrote DE book
 ‘Akiu, I bought [many books [he wrote]].’

This locality effect is predicted by the Generalized Control Rule (GCR), which requires an empty pronoun to be controlled by the closest antecedent, and may well fall under a more refined version of relativized minimality as proposed by Rizzi (2004).

In this paper, we would like to try out a hypothesis that essentially combines the two approaches presented above. Namely, one may well envision the so-called topic prominence as a form of peripheral feature checking at a criterial position in the left periphery. As a result, the null topic hypothesis in Huang’s (1984) sense can be reinvented as a null D(efiniteness)-operator merger to the left periphery. Just like a Chinese *wh-in-situ* being licensed through unselective binding by a Q-operator merged to the Int head (cf. Cheng 1991; Tsai 1994, 2008; Stepanov & Tsai 2008), as in (7a), a bare nominal in Chinese can be licensed by a D-operator merged to the Top head, as sketched in (7b):

- (7) a. [**Qx-Int**]. . . **wh(x)** . . .
 b. [**Dx-Top**]. . . **N(x)** . . .

Under this unified approach, a Q-operator encodes interrogativity in terms of existential quantification accompanied by interrogative force, whereas a D-operator encodes topicality in terms of uniqueness quantification plus discourse-linking.

In the following discussion, we will examine a cluster of peculiar phenomena where topicalization of a subject appears to be obligatory. Three instances of obligatory topicalization (i.e., affective, refutory and evaluative constructions) will be presented in Section 2–4. We argue that these cases only arise when a peripheral feature blocks the D-operator binding. As a result, the subject in question must physically raise to check the peripheral feature on Top (cf. Rizzi 1997), as illustrated below:

- (8) [_{TopP} DP [**Top** [_{IP} . . . <**DP**> . . .]]]

The mechanism works in a very similar way to those residual cases of verb-second (V2) in English, where special semantic/pragmatic factors are involved, as shown by the interrogative inversion in (9a), as well as the negative inversion in (9b):

- (9) a. What have you done?
 b. None of them did I find helpful!

In Section 5, we relate the notion of D-operator to Topic Prominence through certain mechanism of Merge in the left periphery. Section 6 then proceeds to address an interesting issue of null topic construals by postulating yet another type of implicit operator, that is, P(redicatin)-operator. In Section 7, we examine obligatory topicalization from a comparative perspective by looking into the

very nature of V2 in English and Germanic languages. Section 8 concludes this paper.

2. Case Study I: Obligatory Topicalization over Outer Affectee

The first case of obligatory topicalization has to do with two types of affective constructions in Chinese, i.e., outer vs. inner affectives, as illustrated in (10) and (11), respectively:

(10) Ta juran [gei wo] he-le san-ping jiu! [outer affective]
 he unexpectedly Aff me drink-Prf three-bottle wine
 'Unexpectedly, he drank three bottles of wine on me!'

(11) Ta juran he-le wo san-ping jiu! [inner affective]
 he unexpectedly drink-Prf me three-bottle wine
 'Unexpectedly, he drank three bottles of wine on me!'

It is pointed out in Tsai (2007, 2010) that the outer affective differs from its inner counterpart in a number of ways:

Firstly, the outer affective construal of (10) is licensed by the applicative marker *gei*, which derives from a *give*-verb. By contrast, (11) involves the so-called pseudo double object construction without any applicative marking.

Secondly, a truth-conditional distinction exists between the two types of affective construals: In the scenario that a doctor asked a patient not to drink wine at home, but the patient did not follow the instruction, the doctor may utter (10), but not (11). In fact, the latter seems to require the Affectee to be the source of the wine, in contrast with the "to-the-possession-of" reading of English low applicatives such as *John baked Mary a cake*.

Thirdly, the outer affective is speaker-oriented, while its inner counterpart is not, as evidenced by the following contrast between (12) and (13). This restriction thus suggests that outer affectives actually form part of the left periphery, which serves as a gateway to the interface construals among syntax, semantics, and pragmatics:

(12)*Ta juran [gei women/ni/nimen/ta/tamen] he-le san-ping jiu!
 he unexpectedly AFF us/you/you(pl.)/him/them drink-Prf three-bottle wine
 'Unexpectedly, he drank three bottles of wine on us!' [outer affective]

(13) Ta juran he-le women/ni/nimen/ta/tamen san-ping jiu!
 he unexpectedly drink-Prf us/you/you(pl.)/him/them three-bottle wine
 'Unexpectedly, he drank three bottles of wine on us!' [inner affective]

Finally, the outer affective can only be licensed through a special kind of illocutionary force, namely, exclamation with its tell-tale intonation as well as the

presence of *juran*, an evaluative adverb expressing unexpectedness.² As a result, it is incompatible with typical declarative intonation, as in (14). On the other hand, the inner affective (i.e., the pseudo double object construal) has no problem with the same setup, as in (15):

- (14)*Ta zuotian [gei wo] he-le san-ping jiu.
 he yesterday Aff me drink-Prf three-bottle wine
 ‘Unexpectedly, he drank three bottles of wine on me.’ [outer affective]
- (15) Ta zuotian he-le wo san-ping jiu.
 he yesterday drink-Prf me three-bottle wine
 ‘He drank three bottles of wine on me.’ [inner affective]

It is therefore reasonable to suggest that Chinese outer affectives have an unusual distribution extending far beyond the boundary of the *vP* phase, which in turn argues for an independent applicative projection in the left periphery.³

² Equally, we may replace the evaluative adverb with a causal *how*, which again conveys a sense of counter-expectation (cf. Tsai 2008), as shown below:

- (i) Ta zenme [gei wo] he-le san-ping jiu?!
 he how.come Aff me drink-Prf three-bottle wine
 ‘How come he drank three bottles of wine on me?!’

³ As a reviewer points out, there are some preverbal *gei*-phrases that do not show speaker-orientedness, as exemplified below:

- (i) Ta juran [gei wo/women/ni/nimen/ta/tamen] zaocheng-le san-ge-yi de sunshi!
 he unexpectedly to me/us/you/you/you(pl.)/him/them cause-Prf three-Cl-million DE loss
 ‘He caused a three million loss to me/us/you/you/you(pl.)/him/them unexpectedly!’

Curiously enough, the construal does not require licensing from exclamatory force and the corresponding intonation pattern, as in the following declarative sentence:

- (ii) Ta [gei wo/women/ni/nimen/ta/tamen] zaocheng-le san-ge-yi de sunshi.
 he to me/us/you/you/you(pl.)/him/them cause-Prf three-Cl-million DE loss
 ‘He caused a three million loss to me/us/you/you/you(pl.)/him/them.’

This demonstrates clearly that only a highly grammaticalized *gei* is speaker-oriented, and has become neutral for the benefactive/malefactive distinction. By contrast, all the characteristics of outer affectives are lost with the malefactive of (i) and (ii), which, just like its benefactive counterpart in (18), is situated in the *vP* periphery, and can be topicalized as a PP adjunct, as evidenced by (iii):

- (iii) [Gei wo/women/ni/nimen/ta/tamen], ta zaocheng-le san-ge-yi de sunshi.
 to me/us/you/you/you(pl.)/him/them he cause-Prf three-Cl-million DE loss
 ‘To me/us/you/you/you(pl.)/him/them, he caused a three million loss.’

Our position is further supported by another fact pointed out by the reviewer. Namely, the malefactive in question can appear either before or after a manner adverb such as *manmandi* ‘slowly’ without changing its interpretation:

- (iv) a. Ta [gei wo] manmandi zaocheng-le san-ge-yi de sunshi.
 he to me slowly cause-Prf three-Cl-million DE loss
 ‘He slowly caused a three million loss to me.’
 b. Ta manmandi [gei wo] zaocheng-le san-ge-yi de sunshi.
 he slowly to me cause-Prf three-Cl-million DE loss

This behavior, as expected, is very typical of those VP-adjuncts such as *ba*-phrases:

- (v) a. Ta [ba dangao] manmandi chiwan-le.
 he BA cake slowly finish-Prf
 ‘He slowly finished the cake.’
 b. Ta manmandi [ba dangao] chiwan-le.
 he slowly BA cake finish-Prf

This line of thinking is supported by the height advantage of outer affectives over their inner affectives. As illustrated below, outer and inner affectives can appear together in one sentence, with the former standing clearly higher than the latter:

- (16) Ta juran [gei wo] he-le renjia san-ping jiu!
 he unexpectedly Aff me drink-Prf others three-bottle wine
 ‘Unexpectedly, he drank three bottles of wine on others for my sake!’

In addition, it is possible to distinguish an outer Affectee further from a Beneficiary argument, which is also marked by *gei*, presumably a cognate of the outer affective marker. This can be easily seen by their positions relative to a manner adverb such as *manmandi* ‘slowly’: In (17a), the Affectee stands higher than the manner adverb, while, in (17b) the Beneficiary stays lower than the manner adverb:

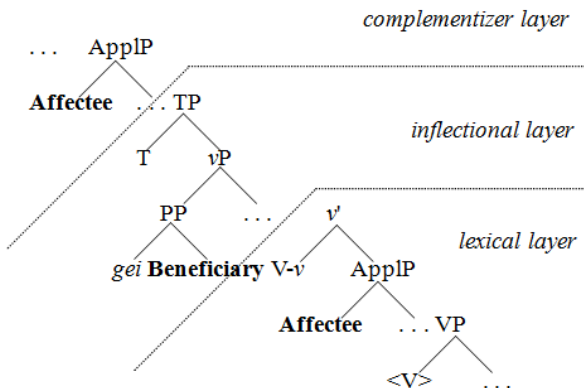
- (17) a. Akiu juran [gei wo] **mantuntundi** ca diban!
 Akiu unexpectedly Aff me slowly wipe floor
 ‘Unexpectedly, Akiu slowly wiped the floor on me!’ [affective]
 b. Akiu juran **mantuntundi** [gei keren] ca diban!
 Akiu unexpectedly slowly for guest wipe floor
 ‘Unexpectedly, Akiu slowly wiped the floor for the guests!’ [benefactive]

In fact, the two construals again can marginally co-occur in the same sentence, with the affectee and the beneficiary separated by *manmandi* ‘slowly’, as exemplified below:

- (18)² Akiu juran [gei wo] **mantuntundi** [gei keren] ca diban!
 Akiu unexpectedly Aff me slowly for guest wipe floor
 ‘Unexpectedly, Akiu slowly wiped the floor for the guests on me!’

We therefore have a clearer picture of how these “applicative” elements fare with one another in terms of syntactic cartography (irrelevant details omitted):

(19)



Now it comes to the point relevant to our discussion: In presence of outer Affective construals, the external argument must appear higher than the speaker-oriented Affectee as well as the evaluative adverb *jurán* ‘unexpectedly’, as illustrated by the contrast between (20a) and (20b):⁴

- (20) a. **Akiu** *jurán* [gei wo] na-le qian jiu pao!
 Akiu unexpectedly Aff me take-Prf money then run
 ‘Unexpectedly, Akiu took the money and ran away on me!’
 b.* *Jurán* [gei wo] **Akiu** na-le qian jiu pao!
 unexpectedly Aff me Akiu take-Prf money then run
 ‘Unexpectedly, Akiu took the money and ran away on me!’

To make sure the external argument *Akiu* is where it appears to be, we need to first pin down its exact location. A reliable test can be found in Ko (2005), where it is pointed out that a monotone increasing expression like *meigeren* ‘everyone’ or *suoyouren* ‘all people’ can undergo topicalization, as in (21a), but a monotone decreasing expression like *henshoaren* ‘few people’ or *meiyou ren* ‘no one’ cannot, as in (21b):⁵

- (21) a. *Meigeren*_k/*suoyouren*_k wo renwei [t_k dou hui qu].
 everyone/all.people I think all will go
 ‘Everyone/all people, I think will go.’
 b.**Meiyou ren*_k/*henshaoren*_k wo renwei [t_k hui qu].
 have.not people/few.people I think will go
 ‘No people/few people, I think will go.’

Let us call this a monotonicity test: It follows that if *Akiu* is indeed in a topic position, then it can only be replaced by *meigeren* or *suoyouren*, but not by *meiyou ren* or *henshoaren*. This prediction is indeed borne out, as evidenced by contrast between (22a) and (22b):

- (22) a. *Meigeren/suoyouren* *jurán* dou [gei wo] pao-le.
 everyone/all.people unexpectedly all GEI I run-Prf
 ‘Everyone/all the people ran away on me unexpectedly.’

⁴ It is possible to place the external argument in-between the evaluative adverb and the outer Affectee, where the evaluative adverb may well topicalize further to the sentence-initial position, as exemplified below:

(i) ? *jurán* Akiu [gei wo] na-le qian jiu pao!
 unexpectedly Akiu Aff me take-Prf money then run
 ‘Unexpectedly, Akiu took the money and ran away on me.’

⁵ Here a reviewer proposes an interesting alternative based on Beghelli and Stowell (1996), according to which different quantified phrases occupy different structural positions. This analysis, however, may require us to stipulate which type of quantifier position is available in the left periphery, which seems to go against the grain of the cartographic approach. We therefore do not take this particular solution in this paper.

- b. * Meiyoun ren/henshaoren juran [gei wo] pao-le.
 have.not people/few.people unexpectedly GEI I run-Prf
 ‘No people/few people ran away on me unexpectedly.’

We thus conclude that *Akiu* has indeed been raised to the topic position in (20a), otherwise the outer affective construal would be ruled out, as in (20b).⁶

Another piece of evidence comes from the following contrast between the *lian ... dou* construction and the cleft construction, where the former is associated with topicality and scalar implicatures whereas the latter typically involve a contrastive focus:

- (23) a. Lian Akiu juran dou gei wo pao le!
 even Akiu unexpectedly all Aff me run Inc
 ‘Unexpectedly, even Akiu ran away on me!’
 b. * Shi Akiu juran gei wo pao le!
 be Akiu unexpectedly Aff me run Inc
 ‘Unexpectedly, it is Akiu who ran away on me!’

The fact that the topic/scalar construal of (23a), but not the focus construal of (23b), is compatible with outer affectives shows that the external argument *Akiu* is indeed in a topic position.

3. Case Study II: Obligatory Topicalization over Refutory *Wh*’s

It is widely observed that *nali* ‘where’ has a refutory usage, serving as a negative modality operator (see, for instance, Cheung 2007), as in (24a):

- (24) a. Akiu nali qu-le Beijing! (Ta qu-le Shanghai.)
 Akiu where go-Prf Beijing! he go-Prf Shanghai
 ‘It is impossible for Akiu to go to Beijing! (He went to Shanghai.)’

⁶ Here an empirical issue is raised by a reviewer: The grammaticality of the following sentences seem to cast the monotonicity test in doubt:

- (i) a. Meiyoun ren_k, woyiwei [t_k neng tongguo kaoshi].
 have.not people I think can pass exam
 ‘I think no one can pass the checkpoint.’
 b. Henshaoren_k, wo yiwei [t_k neng guo guan].
 few.people I think can pass checkpoint
 ‘I think few people can pass the checkpoint.’

However, it should be noted that the subordinate clauses is actually a modal construction, where the topicalized quantifiers can be reconstructed back into the scope of *neng* ‘can’ at LF. Without the modal, the construal again become untenable, as evidenced by (ii,a,b):

- (ii) a.*Meiyoun ren_k, wo yiwei [t_k tongguo kaoshi].
 have.not people I think pass exam
 ‘I think no one can pass the checkpoint.’
 b.* Henshaoren_k, wo yiwei [t_k guo guan].
 few.people I think pass checkpoint

- b. *Nali Akiu qu-le Beijing! (Ta qu-le Shanghai.)
 where Akiu go-Prf Beijing! he go-Prf Shanghai

Here again we have a case of obligatory topicalization, since the external argument cannot stay in subject position, as evidenced by (24b). This usage is very much in the same spirit of the negative modality construal of the following *where*-question in English:

- (25) Where did you get that idea?! (≈ You shouldn't have that idea.)

Our observation is supported by the result of the monotonicity test. As mentioned above, we need to prove that the external argument *Akiu* in (24a) occupies a topic position. As illustrated in (26a), only a monotone increasing expression can appear sentence-initially:

- (26) a. Meigeren/suoyouren nali dou qu-le Beijing!
 everyone/all people where all go-Prf Beijing!
 'It's not the case that everyone/all people went to Beijing!'
 b. *Meiyou ren/henshaoren nali qu-le Beijing!
 have.not people/few.people where go-Prf Beijing!
 'It's not the case that no one/few people went to Beijing!'

By contrast, a monotone decreasing expression cannot occupy the same position, as evidenced by (26b). This indicates that the *Akiu* has indeed undergone topicalization in (24a), and that the process is obligatory, since otherwise the sentence would be ruled out, as is the case with (24b).

An important issue raised by a reviewer has to do with that fact that one we add a copula or a modal after the refutory *nali*, the grammaticality of (24b) appears to improve, as exemplified below:

- (27) a. Nali shi Akiu qu-le Beijing! (Shi Xiaodi qu-le Beijing.)
 where be Akiu go-Prf Beijing! be Xiaodi go-Prf Beijing
 'It is not Akiu that went to Beijing! It is Xiaodi that went to Beijing.'
 b. ? Nali yinggai Akiu qu Beijing! (Yinggai Xiaodi qu.)
 where should Akiu go Beijing! should Xiaodi go
 'It is not Akiu who should go to Beijing! Xiaodi should go.'

This move essentially changes the dynamics of the refutory construals in (27a), since *Akiu* becomes a full-fledged contrastive focus associated with the emphatic marker *shi*, and cannot be related to the topic position by any means (cf. Section 5).

As for (27b), it is instructive to note that the sentence is only marginal to some of the informants we consulted. To those who accept (27b), only the deontic version of *yinggai* 'should' is allowed. In other words, its epistemic counterpart does not license the refutory construal, as evidenced by the deviance of the following example:

- (28) * Nali yinggai Akiu qu-le Beijing! (yinggai Xiaodi qu-le.)
 where should Akiu go-Prf Beijing! should Xiaodi go-Prf
 ‘It is note the case that Akiu should have gone to Beijing! It is Xiaodi who should have.’

This indicates that *Akiu* in (27b) is in the inner subject position at the edge of vP, as deontic modals typically occupy the inflectional layer in Rizzi’s (1997) sense (cf. Tsai, in press). As a matter of fact, there is solid evidence suggesting that the postmodal argument is indeed an inner subject: As illustrated by the contrast between (29a,b), the existential subject preceding deontic *yinggai* must be interpreted as specific, while that following deontic *yinggai* can be nonspecific, a sure distinction of inner subjecthood in Chinese (cf. Diesing 1992, Tsai 2001):

- (29) a. You sange ren yinggai qu Beijing. [outer subject]
 have three person should go Beijing
 ‘Three (specific) persons should go to Beijing.’
 b. Yinggai you sange ren qu Beijing. [inner subject]
 should have three person go Beijing
 ‘There should be three persons going to Beijing.’

More specifically, the premodal subject of (29a) is interpreted as individuals. By contrast, its postmodal counterpart of (29b) receives a quantity reading, hence nonspecific. In this light, (27b) is (marginally) allowed simply because *Akiu* is too low to be related to the topic position in the left periphery. As a result, neither (27a) nor (27b) are relevant to our discussion as far as obligatory topicalization is concerned.

4. Case Study III: Obligatory Topicalization over Evaluatives

There is yet another relevant fact noted by P. Li (2013): In presence of *jianzhi* ‘simply’, an evaluative adverb expressing completeness or straightforwardness, the external argument must topicalize, as in (30a). Otherwise, the construal would become ungrammatical, as in (30b):

- (30) a. Akiu jianzhi mei ba wo fang zai yanli!
 Akiu simply have.not BA me put in eye
 ‘Akiu simply thinks nothing of me!’
 b.* jianzhi Akiu mei ba wo fang zai yanli!
 simply Akiu have.not BA me put in eye

Here we apply the monotonicity test, and the result once again confirms that (30a) involves obligatory topicalization: Namely, a monotone increasing expression such as *meigeren* ‘everyone’ may appear before the evaluative adverb *jianzhi* ‘simply’, as in (31a), and a monotone decreasing expression such as *meiyou ren* ‘no one’ may not, as in (31b):

- (31) a. Meigeren/suoyouren jianzhi dou mei ba wo fang zai yanli!
 everyone/all.people simply all have.not BA me put in eye
 ‘Everyone/all people simply think(s) nothing of me!’
 b.* Meiyou ren/henshaoren jianzhi mei ba wo fang zai yanli!
 have.not people/few.people simply have.not BA me put in eye
 ‘No one/few people simply think nothing of me!’

All in all, the three case studies presented above have shown that we may well compare Chinese obligatory topicalization to English negative inversion or Germanic V2. As a matter of fact, our findings fit right into the so-called strong uniformity entertained by Miyagawa (2010), which states that every language shares the same set of grammatical features, and every language overtly manifests these features.⁷ Therefore, it is not surprising at all that we are able to locate V2 phenomena in disguise in Chinese. In the next section, we will extend this line of inquiry into the notion “topic prominence”.

5. D-operator and topic prominence

Under the minimalist approach, it seems natural to suggest that obligatory topicalization in Chinese is actually an instance of peripheral feature checking in the CP domain, presumably driven by considerations based on interface economy (cf. Reinhart 1997) and the clause-typing requirement (cf. Cheng 1991). The real challenge, however, lies in how these peculiar cases should be related to the traditional notion of topic prominence (cf. Tsao 1979). One way to think of this issue is to say that the null topic analysis of Chinese-type pro-drop à la Huang (1984) should be understood as the external merger of a null operator to check the peripheral feature in question. The relevant configuration is laid out below in the spirit of Chomsky (1977):

- (32) *Chinese-type pro-drop*: ... [_{TopP} Op_k-Top ... [_{TP} e_k ...

In this light, we propose that peripheral feature checking can be implemented either by externally merging a null operator to the Top head, or by internally merging (i.e., moving) a DP to the Spec of Top. The former option is allowed only in Chinese-type languages presumably due to its robust analyticity (cf. Huang 2004), and is done in exactly the same fashion as *wh-in-situ* licensing via unselective binding (cf. Tsai 1994, 2008).

A nice consequence of our proposal is that this particular type of null operator can be regarded as the quantifier part of a definite expression. Call it a D(efiniteness)-operator. Topicality is thus related to definiteness in a straightforward manner.

⁷ The original formulation of the uniformity principle is given by Chomsky (2001:2):

(i) In the absence of compelling evidence to the contrary, assume languages to be uniform, with variety restricted to easily detectable properties of utterances.

In typological terms, this means that Chinese topics can be analyzed as discontinuous DPs due to its robust analyticity. It is a D-operator that encodes topic prominence by binding a nominal down below, as in (33a), just like a Q-operator serving to license *wh*'s-*in-situ*, as in (33b):⁸

- (33) a. [**D_x-Top**] . . . **N(x)** . . .
 b. [**Q_x-Int**] . . . **wh(x)** . . .

Under this view, the rather peculiar definite reading of Chinese bare NPs is also explained away without resorting to N-to-D raising, as in (34a). It is done in very much the same way as the licensing of a generic NP, as in (34b):

- (34) a. [**D_x-Top**] [_{TP} **hua(x)** kai le]!
 flower blossom Inc
 ‘The flower is blossoming!’
 b. **Gen_x** [_{TP} **hua(x)** xüyao zhaogu]!
 flower need care
 ‘Flowers need care.’

The topicality of Chinese bare nominals is therefore taken to be an instantiation of the “discrete” definiteness in question. It follows that, in a language where a D-operator merges to a nominal domain (rather than a CP domain), no Chinese-type pro-drop should be allowed. By typological correlation, this language would typically resort to *wh*-movement, since the Q-operator is already built into an interrogative *wh*, and must be “pied-piped” along to a scope position in the left periphery. This is essentially what happens in a less analytic (hence less topic-prominent) language such as English (cf. Tsai 1994).

An interesting implication presents itself when we consider the traditional wisdom that all Chinese subjects are topics (see, for example, Chao 1968 and Tsao 1979). There are actually two aspects of this phenomenon that deserve our attention: On the one hand, the topicality restriction applies only to a subject in a declarative sentence, as in (35a). This is because indefinite objects typically receive aspectual licensing (cf., Tsai 1994, Liao 2011), as in (35b), while indefinite subjects often get modal licensing in a non-declarative sentence such as (35c) (cf. Tsai 2001):

- (35) a. * san-ge ren qu-le Beijing.
 three-Cl person go-Prf Beijing
 ‘Three people went to Beijing.’
 b. Akiu kaichu-le san-ge ren.
 Akiu fire-Prf three-Cl person
 ‘Akiu fired three people.’

⁸ As for those languages (e.g., Russian) that are not topic-prominent, but still allow definite bare nominals, it seems reasonable to suggest that there may well be two strategies for nominals to realize its definiteness across languages, that is, either by D-operator binding or by N-to-D raising.

- c. San-ge ren keyi da yi-liang jichengche.
 three-Cl person can take one-Cl taxi
 'Three people can take one taxi.'

On the other hand, bare nominals can get a definite reading even in object position, as illustrated below:

- (36) Wo ganggang zhao-dao ren le! Ta keyi bang wo.
 I just find-reach person Inc he can help me
 a. 'I just found the person! He can help me.' [definite]
 b. 'I just found a person/some people! He/They can help me.' [indefinite]

All these observations point to the conclusion that the D-operator contributing to the definite reading of (36a) is only one of the potential licensors, whose availability is determined by the morpho-syntactic makeup of an individual language. The indefinite interpretation of (36b), on the other hand, is presumably due to the existential quantification associated with aspectual licensing. We will therefore limit our discussion to bare nominals, and leave numeral indefinites for future considerations on specificity construals.

Given the mechanics developed above, now we are in a position to offer a structural analysis of the obligatory topicalization in Chinese. Let us first deal with Mandarin outer affectives. Our hunch is that D-operator binding is blocked by the evaluative-affective construal of (10). To implement the intuitive idea, we adopt a refined version of relativized minimality entertained in Rizzi (2004): Instead of the three-way distinction among A-, A'- and head-dependencies à la Rizzi (1990), the intervening factors have been reclassified into the following four types:

- I. Argumental: person, number, gender, case
- II. Quantificational: Wh, Neg, measure, focus...
- III. Modifier: evaluative, epistemic, Neg, frequentative, measure, manner, ...
- IV. Topic

The evaluative adverb *surprised* 'unexpectedly' is in itself a focus-sensitive operator, and the outer affective is associated with an exclamatory and speaker-oriented construal. Both are qualified as quantificational to block the D-operator binding in question. Interestingly enough, as pointed out by Liliane Haegeman (personal communication), the D-operator binding construal is very much reminiscent of the *combien* extraction discussed in Rizzi (1990; 2004): As illustrated in the following contrasts, "pied-piping" of the whole object *wh*-phrase may cross over negation and quantifiers such as *beaucoup* 'a lot' or *peu* 'little', whereas extraction of *combien* 'how.many' alone is blocked by these interveners:

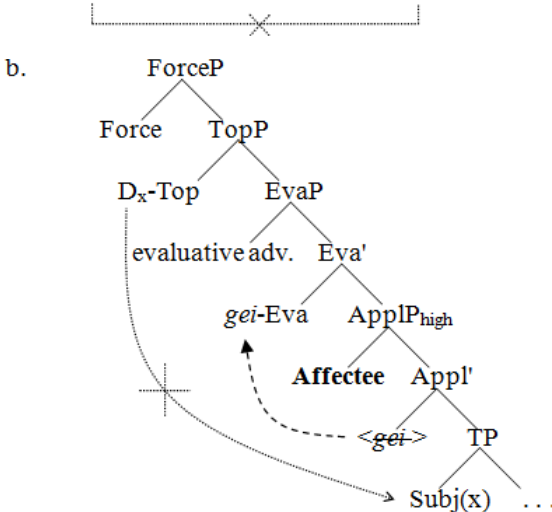
- (37) a. [Combien de problèmes]_k ne sais-tu pas résoudre t_k?
 how.many of problems not can-you not solve
 'How many of problems can't you solve?'
 b.* Combien_k ne sais-tu pas résoudre [t_k de problèmes]?
 how.many not can-you not solve of problems
 'How many can't you solve of problems?'

- c. [Combien de livres]_k a-t-il beaucoup consultés t_k?
 how.many of books have-he a.lot consult
 'How many of books has he a lot consulted?'
- d.* Combien_k a-t-il beaucoup consulté [t_k de livres]?
 how.many have-she a.lot consult of books
 'How many has he a lot consulted of books?'
- e. [Combien de films]_k a-t-elle peu aimés t_k?
 how.many of films have-she little like
 'How many films did she little like?'
- f.* Combien_k a-t-elle peu aimé [t_k de films]?
 how.many have-she little like of films
 'How many did she little like of films?'

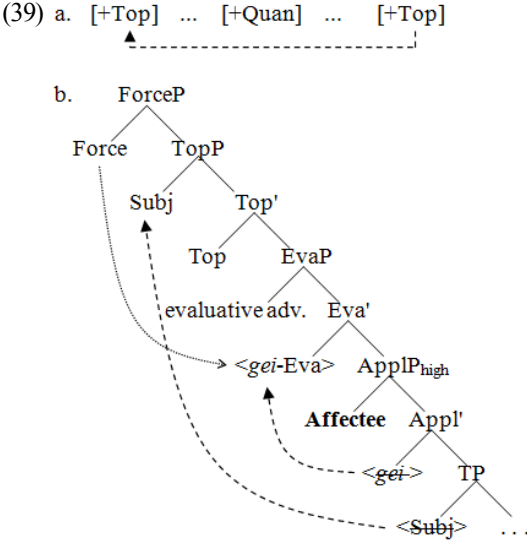
The difference, of course, lies in the morph-syntactic makeups of French *wh*-questions, where the Q-operator forms part of *wh*-expressions. As a result, it may either pie-pipe with the whole object *wh*, or extract independently. By contrast, the D-operator may merge to the left periphery in Chinese such that topicalization is essentially a last resort to avoid intervention effects.

This move also suggests that unselective binding observes relativized minimality, in that D-operator binding is blocked by the evaluative operator according to (37b), both being quantificational expressions, as shown in (38a). More specifically, the binding dependency between the D-operator and the subject nominal cannot cross over a fully substantiated evaluative operator, which is valued as exclamatory by the Force head through Agree. (38b) spells out the relevant derivation in more detail:

- (38) a. [+Quan] ... [+Quan] ... [+Quan]

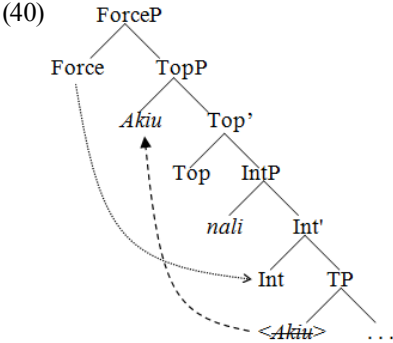


As it turns out, the only alternative is for the D-operator to merge to the subject instead, which in turn must raise to [Spec, TopP] to check its peripheral feature. Since topicalization is not sensitive to the intervening quantifier (i.e., the evaluative operator) according to the new classification in (37a–d), as in (39a). The derivation therefore converges without further complications, as visualized in the diagram (39b):



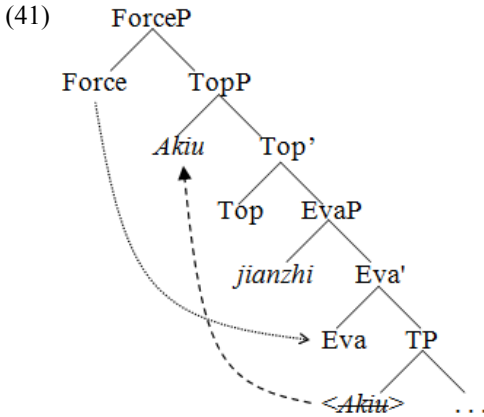
We therefore have an explicit minimalist account of the apparent obligatory topicalization in outer affective constructions without resorting to pragmatic idiosyncrasies.

In the case of refutory *wh*'s, D-operator binding is blocked by the negative modality operator *nali*, which occupies the Spec position of an Int(errogative) head. Consequently, the D-operator is merged to the external argument *Akiu*, which in turn topicalizes as a last resort, as shown below:



Here the Int head may well hold a probe-goal relation to the Force head, thus acquiring a special kind of exclamatory force through Agree. The whole process thus types the sentence as exclamative in the spirit of Cheng (1991) and Brandner (2004).

Finally, we may analyze the adverb *jianzhi* ‘simply’ in (30a) as an evaluative operator, which is again valued as exclamatory. As a result, it blocks D-operator binding in accordance with the new formulation of relativized minimality. This explains the ungrammaticality of (30b). It follows that we must resort to topicalization to prevent the derivation from crash, as sketched in the following diagram:



Here the Eva head which hosts *jianzhi* ‘simply’ is again valued as exclamative through Agree, which accounts for the exclamatory flavor of (30a).

In light of our findings above, it seems reasonable to unify the locality principle on movement and unselective binding under this refined version of relativized minimality. One interesting issue raised by Barry Yang (personal communication) concerns the implication of this unified analysis with respect to multiple *wh*-construals in Chinese. For instance, the following classic example from Huang (1982) is three-way ambiguous:

- (42) Akiu xiangzhidao [shei mai-le shenme]
 Akiu wonder who buy-Prf what
 a. Akiu wonders [who bought what].
 b. Who is the person *x* such that Akiu wonders [*x* bought what]?
 c. What is the thing *y* such that Akiu wonders [who bought *y*]?

The first reading is an indirect multiple *wh*-question with normal intonation, as in (42a), where both the subject *wh* and the object *wh* assume the narrow scope. This means that they are unselectively bound by the same local Q-operator, as illustrated by (43a). By contrast, the second reading of (42b) has the subject *wh* in

the wide scope instead, preferably stressed, as in (43b). Finally, it is the object *wh* in (42c) that receives a stress, and is scoped out of the complement clause through unselective binding from the matrix Q operator, as in (43c):

- (43) a. [Akiu xiangzhidao [Q_{j,k} [shei_j mai-le shenme_k]]]
 b. [Q_j [Akiu xiangzhidao [Q_k [SHEI_j mai-le shenme_k]]]]
 c. [Q_k [Akiu xiangzhidao [Q_j [shei_j mai-le SHENME_k]]]]

Now the question is why the local Q operator does not block the binding dependency between the matrix operator and the *wh-in-situ* in (43b,c). Here we propose a feature-based solution based on Starke's (2001) analysis of weak islands (see also Rizzi 2004, Laenzlinger & Soare 2005, and Haegeman 2012): As mentioned above, a feature would block a dependency based on a feature of same type, as in (44a). On the other hand, if the features of the "intervener" form a subset of the features of the "crossing-over" dependency, then no blocking effect will be induced, as in (44b):

- (44) a. * $\alpha_i \dots \alpha_j \dots \alpha_i$
 b. $\alpha\beta \dots \alpha \dots \alpha\beta$

In light of this subset restriction on interveners, we may translate the stress on a *wh-in-situ* as a focus feature [+Foc]. As a result, the quantificational feature on the local Q operator is a subset of the feature set shared by the matrix Q operator and the *wh-in-situ* in (43b,c), as shown in the following schema:

- (45) [+Quan, +Foc] ... [+Quan] ... [+Quan, +Foc]

6. P-operator and Unexpected Island Effect in the Null Topic Construction

The other side of the coin for topic prominence is the formation of a topic-comment relationship, which is typically triggered by a null operator situated in the left periphery (cf. Chomsky 1977). Under the analysis entertained here, it differs from Q-operators and D-operators in licensing predication rather than quantification (i.e., as a non-quantificational anaphoric operator in Rizzi's (1997) terms). This is because the null operator itself has no reference, and needs to be identified (cf. Chomsky 1986). Call it a P(redication)-operator.

One interesting issue in this context is raised by Yang (2014), where strong island effects are demonstrated to emerge in the absence of a lexical topic, as exemplified by the contrast between (46a,b):

- (46) a. Akiu a, [DP henduo [NP [CP e xie de] shu]] dou mai-de bucuo.
 Akiu Top many writeDE book all sell-Res not.bad
 'As for Akiu, [many books [that (he) wrote]] sell well.'

- b. * [_{DP} Henduo [_{NP} [_{CP} e xie de] shu]] dou mai-de bu-cuo.
 many write DE book all sell-Res not-bad
 ‘[many books [that (he) wrote]] sell well.’

The question, of course, is how to treat this anomaly under the Minimalist approach. Furthermore, the above phenomenon is not isolated: we found the same pattern in the following case of preposition stranding:

- (47) a. Ni zai chao, wo jiu bu gei [e] zhufan le!
 you again annoy I then not GEI cook Inc
 ‘If you keep bugging me, then I won’t cook for you!’
 b. *Wo zaiye bu gei [e] zhufan le!
 I again not GEI cook Inc
 ‘I won’t cook for (you/him) again!’

This indicates that the null topic construction may indeed involve null operator movement (i.e., internal Merge), which neither can cross over a complex-NP island nor leave a preposition behind. Accordingly to Yang, this is due to a licensing requirement on checking the [Top] feature in the CP layer, which proposal is quite compatible with our position. On the other hand, there is also an identification requirement on the empty pronominal, which is encoded in the form of Generalized Control.

First note that from our point of view, D-operator binding is unavailable for an empty pronominal, since it is itself a D. Instead, we would like to propose that the identification relies on a P-operator externally merged to the left periphery (presumably to the Pred head in the sense of Saito (2008)), as sketched in (48a):

- (48) a. [_{PredP} Topic [**Px-Pred** [_{TP} . . . **ex** . . .]]
 b. λx (. . . x . . .) (Topic)

In a sentence with an overt topic, syntactic predication is triggered by the P-operator in question. It scopes over TP, and translates directly into a λ -operator, as shown in (48b): This gives us the topic-comment construal of (46a) as desired. Consequently, the null subject is licensed by P-operator binding in a straightforward manner. Then what happens when there is no overt topic in the matrix clause, as is the case with (46b)? Here no P-operator is available since there is no topic to predicate upon. The only way for the empty subject to secure its interpretation, as proposed by Yang (2014), is to raise to the main clause.

From our point of view, Chinese pro-drop essentially involves a D-operator that is itself merged to an argument position. As a result, it must adjoin to the Top head (i.e., through internal merge) so that it may bind its trace to avoid vacuous quantification, as in (49a). It follows that it is impossible for the D-operator to appear within a complex NP, since the subsequent raising would result in the strong island effect observed in (46b), as illustrated by the derivation of (49b):

- (49) a. $[\text{TopP } \mathbf{D_x-top} [\text{TP} \dots t_x \dots]]$
 ↑
 └──────────┘
 b. $[\text{TopP } \mathbf{D_x-top} [\text{TP} [\text{complex-NP island} \dots t_x \dots] \dots]]$
 ↑
 └──────────┘
 ×

Furthermore, there are three pieces of evidence that lend support to our position concerning the P-operator construal: The first one has to do with a special class of reflexive adverbials, often dubbed as “reflexives of nature”. As shown in (50a) and (51a), they trigger predication on a cause event in the discourse, producing a “by nature” interpretation:

- (50) a. Feng da-le, men **ziji** hui kai.
 wind strong-Inc door self will open
 ‘When wind becomes stronger, the door naturally will open.’
 b. [Feng da-le], $[\text{TopP } \text{SELF}_E\text{-Top} [\text{men hui kai(E)}]]$
 wind big-Inc door will open
 c. $\lambda x \exists e (\text{CAUSE}(x, e) \ \& \ \text{open}(e) \ \& \ \text{Theme}(\text{door}, e))$ (*stronger wind*)
- (51) a. Shijian dao-le, hua **ziji** hui kai.
 time due-Inc flower self will blossom
 ‘When the time is due, flowers will blossom by nature.’
 b. [Shijian dao-le], $[\text{TopP } \text{SELF}_E\text{-Top} [\text{hua hui kai(E)}]]$
 time due-Inc flower will blossom
 c. $\lambda x \exists e (\text{CAUSE}(x, e) \ \& \ \text{blossom}(e) \ \& \ \text{Theme}(\text{flower}, e))$ (*due time*)

(50b) and (51b) shows that the reflexive adverbial SELF can be analyzed as a λ -operator binding a Neo-Davidsonian event argument (cf. Parsons 1990), which in turn licenses the topic-comment relationship (cf. Chierchia 1986). Here SELF works in conjunction with an implicit causative predicate CAUSE, which construal is wired into its outer reflexive semantics (cf. Tsai, to appear). In other words, SELF is essentially a lexical P-operator that predicates the door-opening event as the result of the stronger wind in (50a), and the flower-blossoming event as the effect of the due time in (51a). Their semantics is illustrated by (50c) and (51c), respectively.

Secondly, as noted by Miao-Ling Hsieh (personal communication), there is another side of Chinese bare nominals that seem to trigger predication. As shown by the so-called double nominative construction below, the bare nominal in the inner subject position typically bears an inalienable relationship to the subject upstairs (see Chao 1964, Teng 1974, and Tsao 1982, among others):

- (52) a. Akiu ren hen hao.
 Akiu person very good
 ‘Akiu’s personality is very good.’
 b. [Akiu $[\text{P}_x\text{-Pred} [\text{ren}(x) \text{ hen hao}]]]$
 Akiu person very good

We may easily accommodate the fact by applying the P-operator analysis to establish the predicative relation in question, where the operator turns the inner clause *ren hen hao* into a predicate of the outer subject *Akiu*, as sketched in (52b).

The final case concerns sloppy relatives in Chinese, a special type of non-gapped relative clauses where the modifier-head relation can be characterized loosely as aboutness (cf. Tang 1979), as in (53a) and (54a):

- (53) a. [[Xiaodi zuobi] de xichang]
Xiaodi cheat DE consequence
'The consequence of Xiaodi's cheating'
b. $[_{DP} [_{TopP} P_E\text{-Top} [Xiaodi zuobi(E)]] \text{ de } xichang]$
Xiaodi cheat DE consequence
- (54) a. [[Wanghu sha-ren] de jia]ma]
Wanghu kill-people DE price
'The price charged by Wanghu to kill people'
b. $[_{DP} [_{TopP} P_E\text{-Top} [Wanghu sha-ren (E)]] \text{ de } jia]ma]$
Wanghu kill-people DE price

Here we may follow Tsai (1997) in characterizing this peculiar construal as an instance of eventuality causation (e.g., cause–effect, process–product), which is made possible by merging a P-operator to the CP layer. As illustrated in (53b) and (54b), the difference from the previous cases is two-fold: On the one hand, the P-operator binds an implicit event variable just like reflexives of nature. On the other hand, it triggers modification rather than syntactic predication, thereby licensing the sloppy relative construals in question.

7. Obligatory topicalization as a V2 phenomenon

Given what we have seen in obligatory topicalization, the next logical question to ask is how it fares with our formal analysis of topic prominence. As mentioned before, an external argument must raise to [Spec, TopP] to realize its topicality when D-operator binding is blocked. We may well take this phenomenon to be a special instance of V2, very much akin to interrogative and negative inversion in English. Take (55) ((9a) repeated here) for example: It starts with everything *in-situ*, as in (55a). Then the Int head attracts the auxiliary, while the object *wh* raise to check the peripheral feature on Int. The negative inversion in (56) ((9b) repeated here) is derived in the same way, except that it is the focus head that triggers inversion this time:

- (55) What have you done?
 a. you have done what
 ⇒ b. [have_k-Int [you t_k done what]]
 ⇒ c. [what_i [have_k-Int [you t_k done t_j]]]
 (56) None of them did I find helpful!
 a. I did find none of them helpful
 ⇒ b. [did_k-Foc [I t_k find [none of them] helpful]]
 ⇒ c. [[none of them]_i [did_k-Foc [I t_k find t_i helpful]]]

By comparison, German V2 sports a complete spectrum of force construals in root contexts, as exemplified below (data drawn from Bayer (2004)):

- (57) a. *V2-declarative*:
 John Adams **ist** nicht der Komponist von 'Don Pasquale'
 John Adams is not the composer of Don Pasquale
 'John Adams is the composer of 'Don Pasquale'.'
- b. *V2-exclamative*:
 Du **bist** vielleicht ein Trottel!
 you are perhaps an idiot
 'What an idiot you are!'
- c. *V2-wh-interrogative*:
 Wer **ist** der Komponist von 'Don Pasquale'
 who is the composer of Don Pasquale
 'who is the composer of 'Don Pasquale'?'
- d. *V2-wh-exclamative*:
 Was **bist** du nur für ein Trottel!
 what are you only for an idiot
 'What an idiot you are!'

As noted by Bayer (2004), V2 counts as a process that visualizes features of illocutionary force (see also Wechsler 1991). Namely, I-to-C is a core device in establishing force. Brandner (2004) also argues quite convincingly that V2 is a strategy to specify a force-value in an explicit way. In V2 languages, there is no distinct lexical item (or inflection) that indicates the force-value. Therefore, the finite verb must be in a spec-head relationship with a phrase that bears this feature via lexical specification. The difference, as we envision it, lies in the typological setup of Chinese which employs Agree/binding instead of I-to-C raising to realize its illocutionary force.

Furthermore, obligatory topicalization is essentially a main clause phenomenon, as embedded clauses typically disallow this type of usages. As shown below, force-related construals such as outer affectives, refutatory *wh*'s and exclamatory evaluatives cannot occur in clausal complements, as exemplified by (58-60) respectively:

- (58)*Xiaodi xiangxin [Akiu juran [gei wo] na-le qian jiu pao].
 Xiaodi believe Akiu unexpectedly Aff me take-Prf money then run
 '??Xiaodi believes [unexpectedly, Akiu took the money and ran away on me].'
- (59)*Wo renwei [ta nali qu-le Beijing].
 I think he where go-Prf Beijing
 'I think [it is impossible for him to go to Beijing].'
- (60)*Akiu zhidao [Wanghu jianzhi mei ba wo fang zai yanli].
 Akiu know Wanghu simply have.not BA me put in eye
 '??Akiu knows [Wanghu simply thinks nothing of me].'

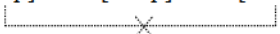
The same observation applies to adverbial and relative clauses, where similar construals are uniformly blocked, as illustrated below:

- (61)*Dang [Akiu juran [gei wo] na-le qian jiu pao],
 when Akiu unexpectedly Aff me take-Prf money then run
 wo zhende hen shangxin.
 I really very hurt
 'When Akiu took the money and ran away on me unexpectedly, I am really hurt.'
- (62)*Yaoshi [ta nali qu-le Beijing], wo hui hen shangxin.
 if he where go-Prf Beijing I will very hurt
 'If it is impossible for him to go to Beijing, I will be very hurt.'
- (63)*[Nage [Wanghu jianzhi mei fang zai yanli]] de ren gang zou.
 that Wanghu simply have.not put in eye DE person just leave
 '[The person [whom Wanghu simply thinks nothing of]] just left.'

An interesting issue raised by Chih-Hsiang Shu (personal communication) concerns the fact that V2 is generally available for Germanic objects, which option is blocked for Chinese obligatory topicalization. Take the outer affective construal of (64a) for example: If the object raises instead of the subject, as is the case with (64b), the derivation crashes:

- (64) a. Akiu juran gei wo touzou-le zhe-bi qian!
 Akiu unexpectedly Aff me steal-Prf this-Cl money
 'Unexpectedly, Akiu stole this money on me!'
- b.*[Zhe-bi qian]_k juran gei wo Akiu touzou-le t_k!
 this-Cl money unexpectedly Aff me Akiu steal-Prf

The answer may well lie in the feature-based relativized minimality in that a topic feature may not cross over another topic feature, as sketched below:

- (65) [+Top] ... [+Top] ... [+Top]


On the other hand, once the topic feature on *Akiu* is checked off through obligatory topicalization, nothing would prevent the object from raising further to an even higher position in the left periphery, presumably as a discourse topic, as evidenced by the following example:

- (66) [Zhe-bi qian]_k, Akiu juran gei wo touzou-le t_k!
 this-Cl money Akiu unexpectedly Aff me steal-Prf
 'Unexpectedly, Akiu stole this money on me!'

It is therefore safe to say that Chinese obligatory topicalization lends substantial support to the strong uniformity, in that the phenomenon is essentially V2 in disguise, driven by the intervention effects from special force-related construals, as well as the need to comply with the interface economy.

8. Concluding Remarks

To sum up, Mandarin obligatory topicalization can be compared to residual V2 in English and to some extent, Germanic V2, in that both of them involve clause-typing and information structure-related peripheral construals. The typological difference then boils down to whether it is possible to build an operator-variable pair on a sentential scale, presumably through unselective binding.

Topic prominence is then reinvented in this new light: The null topic operator can be regarded as the quantifier part of a definite argument, and a Chinese topic is either an XP in the Spec-head relation with Top, or a discontinuous DP consisting of a peripheral D-operator and an *in-situ* nominal. We have therefore established a three-way typology for operator binding in a robust analytic language such as Chinese:

- I. *Q-operator binding for wh-in-situ:*
 $[Q_x\text{-Int}] \dots wh(x) \dots$
- II. *D-operator binding for bare nominals in-situ:*
 $[D_x\text{-Top}] \dots N(x) \dots$
- III. *P-operator binding for empty subject pronouns:*
 $[P_{redP} \text{ Topic } [P_x\text{-Pred } [_{TP} \dots e_x \dots]]$

This leads us to the conclusion that, as far as the left periphery is concerned, there is a conspiracy between syntax, semantics, and pragmatics through either Agree or Move to ensure the success of sentence formation. This is actually a welcome result from the viewpoint of the cartographic approach, because we can easily implement this insight by encoding relevant restrictions with various functional projections in the complementizer layer.

Acknowledgments

I am grateful for the comments and suggestions from Lisa Cheng, Lawrence Cheung, Liliane Haegeman, Miao-Ling Hsieh, James Huang, Jianhua Hu, Paul Law, Haihua Pan, Tim Shi, Chih-Hsiang Shu, Sze-Wing Tang, John Whitman, Barry Yang, and two anonymous reviewers, as well as the audience at the Workshop on the Syntax of Topics (T. T. Ng Chinese Language Research Centre, The Chinese University of Hong Kong). The research leading to this article is funded by the National Science Council of Taiwan (NSC 98-2410-H-007-051-MY3).

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Received: April 9, 2014

Accepted: July 21, 2014

漢語動詞二位現象的個案探討

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提要

本文認為句子上層的左緣結構是由句法、語意、語用等因子共同構築而成的，而邊緣特徵 (peripheral features) 在其中扮演著極為吃重的角色，無論合併 (Merge) 或是移位 (Move) 均出於檢驗這些特徵的需求，並依個別語言不同的參數設定來實行。如此一來，話題的顯著性 (topic prominence) 即可重新理解為邊緣特徵檢驗的結果，而 Huang(1984) 的空話題 (null topic) 亦可視為合併至左緣結構的空算子 (null operator)，是界面經濟 (interface economy) 的具體呈現。我們發現外蒙受、反詰疑問詞、評注狀語等句構之所以會產生必用話題化 (obligatory topicalization) 的現象，是由於定指算子 (D-operator) 的約束作用受阻所致。以此為基礎，本文將觸角延伸至代詞失落 (pro-drop) 及光桿名詞組 (bare nominals) 等語言類型學上的重大議題，並指出必用話題化其實就是動詞二位 (verb-second) 的特殊案例，跟英語和德語的相關現象有異曲同工之妙，均為強勢共性 (strong uniformity) 的具體表徵。

關鍵詞

話題的顯著性，比較句法，微言主義，必用話題化，動詞二位現象