Nominal Internal and External Topic and Focus: Evidence from Mandarin

Yu-Yin Hsu
Bard College, yhsu@bard.edu
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Abstract
Taking the Cartographic Approach, I argue that the left periphery of nominals in Mandarin (i.e., the domain before demonstrative) has properties similar to the split-CP domain proposed by Rizzi (1997). In addition, I argue that the nominal internal domain (i.e., under demonstrative but outside of NP) encodes information structure in a way similar to the sentence-internal Topic and Focus that has been put forth in the literature. In this paper, I show that identifying Topic and Focus within a nominal at such two distinct domains helps to explain various so-called “reordering” and extraction phenomena affecting nominal elements, their interpretation, and their associated discourse functions. The result of this paper supports the parallelisms between noun phrases and clauses and it provides a new perspective to evaluate such theoretical implication, that is, the interaction between syntax and information structure.
Nominal Internal and External Topic and Focus: Evidence from Mandarin

Yu-Yin Hsu*

1 Introduction

In this paper, I argue that Topic and Focus phrases are available within a nominal expression and that information packaging is encoded by specific syntactic structures when such information is required by particular discourses. Since Chomsky’s (1970) Remarks on nominalization, linguists have been exploring the parallelisms between sentences and noun phrases. The current study examines how Topic and Focus are realized within a nominal expression in Mandarin Chinese. I assume the gist of proposals in Shyu 1995, Paul 2005b and Hsu 2013 that the sentence-internal domain in Mandarin Chinese is relevant to information packaging, in addition to the widely studied split-CP domain. In the following sections, I will show that the nominal periphery and the nominal internal domain encode information packaging in a way similar to how CP and TP domains license Topic and Focus within a sentence. In turn, the result of this study proposes a new perspective to examine the parallelism between clauses and noun phrases in regard to the interaction between syntax and information structure.

A complex nominal in Mandarin involves a demonstrative, a numeral, a classifier and a noun (e.g., (1)). Modifiers of nominal in Mandarin, such as adjectives and relative clauses, are pronominal, and they can occur at several positions inside of a nominal expression. In this paper, we will pay attention only to adjectives that modify NP (henceforth, NP adjectives), as shown in (2).¹

(1) Dem – Num – CL – N
(2) (modifiers) Dem (modifiers) Num CL (de-adj) (de-less adj) N

There are two forms of NP adjectives, de-marked and de-less. The examples in (3) show that adjectives red and small can either modify a noun directly, or modify a noun with the marker -de.²

¹The abbreviations for the glosses used in examples are: CL, classifiers; Top, Topic expressions; Foc, Focus expressions, DE, marker for nominal modifiers; Perf, perfective aspect suffix.

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²Following Feng (2001) and Paul (2005a), I assume that “A N” sequences could involve compound nouns or NPs with modifiers. Note that while multiple bare adjectives can only occur in a rigid order, adjectives within a compound noun are not subject to such a requirement of adjective-ordering. For example, da ‘big’ as a modifier of NP needs to precede another NP adjective bai ‘white’ as in (i), but when da ‘big’ is part of the compound noun, the ordering pattern is different (e.g., example (ii)).

(i) a. da bai panzi
   big white plate
   ‘(a) big white plate’
   b. *bäi da panzi
   white big plate
(ii) a. bai da-guar
   white big-gown
   ‘(a) white unlined long gown’
   b. *da- bai guar
   big white gown

Compound nouns are irrelevant to the phenomena at issue; thus, I do not discuss them in this paper.
When more than one de-less adjective occurs and when they express a hierarchical reading, their relative order is fixed.

(4) a. yi ke [\(NP\) xiao hong qiu]  
[One CL small red ball]  
‘one small ball that is red’

b. *yi ke [\(NP\) hong xiao qiu]  
[One CL red small ball]  
Hierarchical reading: ‘one red ball that is small’

In other words, with a neutral intonation and meaning, the ordering of de-less adjectives in Mandarin follows the semantic hierarchy observed cross-linguistically (see Sproat and Shih 1991, and Scott 2002). If one wants to express the reading of ‘one small ball that is red’, unlike example (4b), a de-marked adjective should be used, as illustrated in (5). Also note that de-marked adjectives only surface external to bare adjectives and the noun (cf. (5) vs. (6)).

(5) yi ke [\(NP\) hong-de xiao qiu]  
[One CL red-DE small ball]  
‘one small ball that is red’

(6) *yi ke [\(NP\) xiao hong-de qiu]  
[One CL small red-DE ball]  
‘one small ball that is red’

In the following sections, I will discuss phenomena suggesting Topic and Focus within the periphery of nominals as well as at the nominal internal domain: the peculiar distribution of NP adjectives, NP inversion construction, and NP ellipsis. I argue, first, that syntactically, the left periphery of Mandarin nominals (i.e., the domain before demonstratives) is relevant to information packaging which is similar to the CP domain proposed by Rizzi (1997) (i.e., (7a)). Moreover, I propose that the nominal internal domain (i.e., the domain outside of NP but under classifier) also encodes information structure just as the sentence-internal domain does (i.e., (7b)).

(7) a. Nominal periphery: [\(\text{Top Topic [FocP Focus [Dem ...]]}\)]  
b. Nominal internal domain: […] CL [\(\text{Top Topic [FocP Focus [NP N]]}\)]

2 Nominal External Topic and Focus

2.1 NP Adjectives away from NP

It has often been argued in the literature that adjectives appearing in a non-canonical position are interpreted as foci. For instance, the canonical position of NP adjectives in Turkish is between the article and the noun (e.g., (8a)), but Rijkhoff (1998) reports that an NP adjective may occur before the article to express an emphatic reading (e.g., (8b)).

(8) a. bir büyük ev  \(\Rightarrow\) neutral reading (Turkish)  
[One big house]  
‘a/one big house’

b. büyük bir ev  \(\Rightarrow\) emphatic reading  
[Big-EMP a/one house]  
‘a BIG house’

\(^3\)Although some NP adjectives can surface with or without the -de marker as reviewed in the Introduction, only de-marked NP modifiers are allowed to occur outside of NPs. Therefore, I only use de-marked NP adjectives in the discussion of this section.
The examples in (8) suggest that the nominal periphery is associated with the emphatic interpretation, i.e., the left periphery is relevant to information packaging. A similar phenomenon is found in Mandarin as well. With a neutral intonation and meaning, the examples in (9) show that NP adjectives, such as da-de ‘big’, cannot surface at a higher position but must stay close to NP.

(9) a. na yi dong [da-de [np fangzi]]
   that one CL big-DE house
   ‘that big house’

b. * [da-de [na yi dong [np fangzi]]]
   big-DE that one CL house

However, when NP adjectives are in the superlative form, they are better realized at the nominal periphery preceding a demonstrative, rather than at their original canonical position. The examples in (10) demonstrate this point.

(10) a. [Zui-da-de [na yi dong [np fangzi]]] shi wo jia.
   most-big-DE that one CL house be my home
   ‘The biggest house is my home.’

b. # [na yi dong [zui-da-de [np fangzi]]] shi wo jia.
   that one CL most-big-DE house be my home

The contrast between examples (9) and (10) suggests that the left periphery of nominal is relevant to information packaging and it licenses Focus phrases expressing ‘extreme and exhaustive’ readings. I propose that such a Focus interpretation is accounted for structurally at the nominal periphery by a Focus Phrase, as shown in (11) (cf. (7a)).

(11) Nominal periphery Focus: [FocP Focus [Dem …]]

In addition to superlative NP adjectives, exclamatory NP adjectives stand for another supporting evidence. It is generally assumed that exclamatory expressions convey concepts like ‘extreme degree of unexpectedness’ and ‘speaker’s strong feelings’ and they are generally analyzed as involving A’-movement (see Haegeman and Guéron 1999 and Zanuttini and Portner 2003), where the inversion of the article and the exclamatory adjective is obligatory.

(12) a. So long a story!
   b. How harrowing an experience!
   c. *A so long story!
   d. *A how harrowing experience!

Following Zanuttini and Portner (2003), I assume that exclamatory expressions give rise to a set of alternatives of propositions. In other words, exclamatory adjectives are Focus expressions. The contrast shown between the Mandarin examples (13) and (14) suggests that an NP adjective has to stay close to NP in order to modify the NP, but an exclamatory NP adjective is better moved to the periphery of the entire nominal.

(13) a. yi ge kepa-de gushi
   one CL horrible-DE story
   ‘a/one horrible story’

b. *kepa-de yi ge gushi
   horrible-DE one CL story

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4 Adding stress to the nominal-initial NP adjective can improve acceptability, as it may be interpreted as a Focus phrase. Although prosody is another way to express information packaging, in this paper I only discuss information packaging realized through specific syntactic structures.
In sum, the preceding discussion shows that the nominal periphery is associated with Focus. In the next sub-section, I argue that in addition to Focus, Topic may appear at the nominal periphery alone or co-occur with a Focus expression, which can also be accounted for under the proposed structure (7a).

2.2 The NP Inversion Construction

In their corpus study, Chang and Huang (1995) report that speakers of Mandarin reverse the order of the NP and the sequence of number-classifier to highlight quantity, as shown in examples in (15) and (16).

(15) Canonical order with neutral reading:
  Qing gei wo [liang bei guozhi].
  please give me two cup juice
  ‘Please give me two cups of juice.’

(16) Quantity reading:
  Qing gei wo [guozhi [liang bei]].
  Please give me juice two cup
  ‘Please give me juice, two cups [of it].’

I argue that such nominal-internal inversion presents the preposed NP as Topic at the nominal periphery, as illustrated in (17).

(17) Nominal-internal Topicalization
  Qing gei wo [[guozhi]Top [liang bei][Comment t]].
  Please give me juice two cup
  ‘Please give me juice, two cups [of it].’

To the best of my knowledge, only Tang (1996) discusses the syntax of the phenomenon at issue. Tang’s analysis is shown in (18) below, in which the noun bi ‘pen’ is claimed to be base-generated as the specifier of V and controls PRO that is generated in a lower position. In her structure, Tang adopts Bowers’ (1993) Pr(edication) Phrase analysis, which incorporates the concepts of VP-shell (Larson 1988). However, there is good reason not to adopt Tang’s syntactic analysis as is. If we take the base-generated approach to analyze Topic expressions, as in (18), some facts related to island effects will be left unexplained.
Although topicalization in a sentence and within a nominal may not necessarily be derived in the same way, the example in (19) below shows that the empty category within the nominal cannot be associated with an NP outside of its current domain.

(19) a. Adjunct
*Gongsi, ta [pp zai [san jian ec]] shangban.
  company he in three CL work
  Lit. ‘(About) companies, he works in three.’
  (from Tang 1996:460)

b. Complex nominal
*Nuer, ta bu renshi [[[rc shen-le] yi ge ec]]-de na ge ren.
  daughter he not know give.birth.to-Perf one CL DE that CL person
  Lit. ‘(About) daughters, he does not know the person who gave birth to one [daughter].’

Note that in (19a), the empty category is inside of a PP adjunct, and in (19b), it is inside of a complex nominal, which are structural islands that are sensitive to movement operation. The association between the sentence-initial NP and the empty category in examples in (19) incurs ungrammaticality, which is similar to the well-known island effect observed in movement operations. Therefore, contrary to Tang’s (1996) base-generated analysis, I argue that the phenomenon of NP inversion is derived by topicalizing NP to the nominal periphery.

We also have good reason not to adopt Tang’s “dual PrP/VP-shell” analysis of the construction in question. Firstly, although the structure in (18) has two PrPs, adverbs cannot modify the lower PrP between the topicalized NP and Num-CL (e.g., (20a)), but can only modify the higher PrP (e.g., (20b)).

(20) a. *Ta [mai-le [bi turan [shi zhi]]],
  he buy-Perf pen suddenly ten CL
  ‘He suddenly bought pens, ten of them.’

b. Ta [turan mai-le [bi [shi zhi]]],
  he suddenly buy-Perf pen ten CL
While such a restriction on the distribution of adverbs would remain mysterious under Tang’s dual PrP analysis, it in fact is predicted under the current proposal. That is, if we consider that the movement of NP takes place within the nominal domain, we naturally predict that adverbs cannot occur to the right of the topicalized noun.

Secondly, if the NP is base-generated as a specifier of VP as in (18), it is not clear why such “object NPs” can never appear as a larger phrase, such as a demonstrative phrase (e.g., 21b), although normal objects in a ditransitive sentence can appear in such a form (e.g., 21c).

(21) a. Ta mai-le  bi shi zhi.
   he buy-Perf pen ten CL
   ‘He bought pens, ten of them.’

   he buy-Perf this CL pen ten CL
   ‘He bought these pens, ten of them.’

c. Ditransitive
   Ta mai-le [zhe xie bi] gei [na qun xiaohai].
   he buy-Perf this CL pen to that CL kid
   ‘He bought these pens to that group of kids.’

The contrast shown here can be explained under the proposed analysis of nominal internal topicalization. Since the preposed NP has been moved from under the classifier, this nominal itself should not be able to occur with another sequence of Num-CL or demonstrative within the original nominal.

In addition to the NP topicalization discussed so far, the NP inversion construction can express the co-occurrence of Topic and Focus with nominal. The status of Topic and Focus in question is shown clearly when we examine a wh-question and its answer, as in (22).

(22) A: How many pieces of chinaware do we need to prepare for tonight’s party?
   B: Qing zhunbei [panzi]_top [sishi ge]_foc, [[wan]_top [ershi ge]_foc],
      please prepare plate 40 CL bowl 20 CL
      [beizi]_top [ershi ge]_foc.
      cup 20 CL
      ‘Please prepare: (as for) plates, 40 of them, (as for) bowl, 20 of them, and
      (as for) cups, 20 of them.’

The discourse in (22) shows that the preposed NPs in nominal expressions of chinaware partition the previous mentioned NP chinaware, and thus, they serve as Contrastive Topic in this mini discourse. The number-classifier sequences following the preposed NPs are answers to the wh-question in (22A), and therefore, they are Focus. For cases like these, I propose that the focalized Num-CL is moved to Spec,FocP, and the NP is further topicalized to Spec,TopP, under the proposed structure (7a), repeated below.

(7) a. Nominal periphery: [TopP Topic [FocP Focus [Dem …]]]

3 Nominal Internal Topic and Focus

3.1 NP Ellipsis

Following Merchant (2001) that ellipsis is a pragmatic phenomenon, Corver and Koppen (2009) and Cornilesucu and Nicolae (2012) argue that NP ellipsis involves a common Topic (i.e., the elided NP) and a Focus (i.e., the remnant). However, following the general assumption of information packaging that Topic usually cannot be embedded within the background of Focus syntactically (see Neeleman, Titov, van de Koot and Vermeulen 2009), I thus depart from Corver and Koppen (2009) and Cornilesucu and Nicolae (2012) but suggest that the phenomenon of NP ellipsis expresses Contrastive Focus (i.e., the remnant) by deleting the tail portion of background of Focus (i.e., the elided NP that is part of the presupposition), as illustrated in (23).
(23) a. John bought two books, but Mary bought [four]Contrastive Foc [ec].
   b. John went to Bill’s talk, but he missed [Mary’s]Contrastive Foc [ec].

In the following discussion, I take this assumption and attempt to show that Contrastive Focus can be realized in the nominal internal domain through a specific syntactic structure, i.e., (7b).

(7) b. Nominal internal domain: […] CL [Topp Topic [Focp Focus [NP N]]]

To begin, in some languages, the Contrastive Focus is overtly marked in sentences with NP ellipsis. Corver and Koppen (2009) point out that Dutch adjectives are always marked by -e, except for those followed by indefinite neuter singular nouns. Therefore, when the head noun is indefinite neuter singular, its associated adjectives cannot be marked with -e, as exemplified in (24).

   I have yesterday a black rabbit see walk
   ‘I have seen a black rabbit yesterday.’
   b. *Ik heb gisteren [een zwart-e konijn] zien lopen.
   I have yesterday a black-E rabbit see walk
   ‘I have seen a black rabbit yesterday.’

However, Corver et al. report that in colloquial Dutch, this -e marker is required in nominal internal ellipsis, even when the head noun is indefinite neuter singular, e.g., (25).

(25) Over Konijnen gesproken … (Colloquial Dutch)
    ‘Speaking of rabbits…’
       I have yesterday a black-E see walk
       ‘I have seen a black rabbit yesterday.’
       I have yesterday a black see walk
       ‘I have seen a black rabbit yesterday.’

The contrast between (24b) and (25a) with -e marker and the contrast between (24a) and (25b) suggest that this -e suffix licenses NP ellipsis, marking Focus expression that precedes the elided NP.

Interestingly, Mandarin shows a phenomenon that is very similar to Dutch. Recall that NP adjectives in Mandarin may occur with or without the -de marker (see (3)). This -de marker, however, is required in NP ellipsis. The examples in (26) show that when the NP is elided, the contrastively focalized NP adjective heise ‘black’ must be accompanied by -de.

(26) a. Shuodao tuzi, wo zuotian kandaole yi zhi [[heise-de]Foc[ec]].
    Speaking.of rabbit I yesterday see-PERF one CL black-DE
    ‘Speaking of rabbits, I saw a black [one] yesterday.’
    b. *Shuodao tuzi, wo zuotian kandaole yi zhi [[heise]Foc[ec]].
    Speaking.of rabbit I yesterday see-PERF one CL black

Assuming ellipsis is a pragmatic phenomenon (Merchant 2001) and following Lobeck’s (1991) proposal that ellipsis is licensed by a functional head requiring spec-head agreement, I argue that the NP adjective which expresses Focus is analyzed as under the FocP in the nominal internal domain, as shown in (27). Based on this functional head licensing proposed by Lobeck, we can explain why Mandarin de-less adjectives can never license NP ellipsis, unlike de-marked adjectives.

(27) Nominal internal Focus: […] CL [Focp Focus [NP N]]

The Focus status of de-marked NP adjectives in the nominal internal domain can be made
clearer through *wh*-questions. The discourse in (28) indicates that a nationality-adjective is an answer to a *wh*-question, i.e., it is Focus.

Zhangsan like which country-DE antique Q-PART
‘Antiques from which countries does Zhangsan like?’
B: Ta xihuan [NP [Faguo he Xila de]Foc gudong].
he like French and Greek DE antique
‘He likes French and Greek antiques.’

Again, if NP ellipsis is involved in the answer to (28A), the -de marker is required, as shown in the contrast between (29B) and (29B’).

(29) B: Ta xihuan [NP [Faguo he Xila de]Foc gudong],
he like French and Greek DE antique
bu.xihuan [NP [Zhongguo de]Foc [ec]].
not.like Chinese DE
‘He likes French and Greek antiques but does not like Chinese ones.’
B’: Ta xihuan [NP [Faguo he Xila de]Foc gudong],
he like French and Greek DE antique
bu.xihuan [NP [Zhongguo]Foc [ec]].
not.like Chinese

Furthermore, if the current proposal is on the right track, taking the joint approach of syntax and information structure provides us a more formal way to explain and to categorize native speakers’ intuitions that have been reported in the literature. According to Ting-Chi Tang (1979) and Dexi Zhu (1984), it has been reported although the distinction is subtle that the adjective *congming-de* ‘intelligent’ in (30) is focalized and may imply a contrast between “an intelligent person” and “a non-intelligent person.”

(30) Yi ge [congming-de]Foc ren bu hui zheyang hutu-de shiqing.
One CL intelligent-DE person not will do such muddle.headed-DE matter
‘An intelligent person would not do such a muddle-headed thing.’ (Paul 2010:126)

It has also been noted that the same focalized flavor in (30) disappears when the NP adjective is used without -de, as shown in (31).

(31) Ni shi ge congming ren, wo bu bi duo jieshi.
You be CL intelligent person I not must much explain
‘You are somebody intelligent, I don’t need to explain much.’ (T.-C. Tang 1979:147)

Following Paul (2005a, 2010), I propose that “A N” sequences denote a new type/subcategory of N (i.e., a natural, plausible subclass of N), whereas “A-de N” sequences express an accessory property of N that the speaker chooses to emphasize and may contrast with other properties of N in a relevant discourse. Therefore, no specific contrast or Focus interpretation is required in (31), as *congming ren* ‘intelligent people’ refers to a subcategory of people. However, *congming-de* ‘intelligent-de’ in (30) is used to show that the property of “intelligence” is chosen and emphasized to modify the NP at issue. This subtle difference between de-marked and de-less NP adjectives coincides with our findings from NP ellipsis and *wh*-questions of NP adjectives. That is, Focus is available in the nominal internal domain, immediately above NP, and that when NP adjectives are Focus, the -de marker is required.

3.2 Nominal Internal Topic and Focus

In addition to Focus expressions, in this section I would like to propose that Topic and Focus are both available and they can co-occur at the nominal internal domain.
More than one NP adjective may occur to modify an NP. When multiple adjectives appear at the left periphery of an NP, some of them may carry different discourse functions. The mini-discourse in (32) shows that one of the NP adjectives expresses Topic and the other, Focus.

(32) A: Haoxiang Zhangsan zhi xihuan
   seemingly Zhangsan only like
   [na yi xie [NP [piaoliang-de] [gaotiao-de] [NP nusheng]]]
   that one CL beautiful-DE tall-DE girl
   ‘It seems that Zhangsan only likes those tall girls that are beautiful.’

B: Shuodao piaoliang-de Top nusheng,
   speaking.of beautiful-de girl
   ta qishi zhi xihuan [NP [piaoliang-de]Top [jiaoxiao-de]Foc nusheng].
   he in.fact only like beautiful-DE short-DE girl
   ‘Speaking of beautiful girls, he actually only likes short ones among them (, not tall ones).’

In (32B), the NP adjective piaoliang-de ‘beautiful-de’ is part of the discourse Topic as within the expression Shuodao piaoliang-de nusheng ‘speaking of beautiful girls’, and the NP adjective jiaoxiao-de ‘short-de’ expresses Focus. Under the same discourse, we found that the NP adjective piaoliang-de ‘beautiful-de’ in (32B) can be replaced by a silent ec, as shown in (33B), but its meaning is still available in this utterance, under this discourse, as indicated in the translation.

(33) B: Shuodao piaoliang-de Top nusheng,
   speaking.of beautiful-de girl
   he in.fact only like short-DE girl
   ‘Speaking of beautiful girls, he actually only likes short ones among them (, not tall ones).’

Therefore, I propose that the NP adjectives at issue when expressing specific discourse functions, such as Topic and Focus, are licensed at the nominal internal domain. In other words, TopP and FocP can co-occur at the NP periphery to encode specific information packaging of an utterance, in addition to nominal external Topic and Focus that are realized at the periphery of the whole nominal expression as discussed in Section 2.

4 Concluding Remarks

In this paper, I argued that Topic and Focus are available within nominal expressions in Mandarin: at the nominal periphery (Section 2) as well as at the nominal internal domain (Section 3).

Firstly, this study showed that similar to the CP domain, the nominal periphery can host Topic and/or Focus phrases. The peculiar distributions found with superlative NP adjectives and duome ‘how’ exclamatory expressions are instances of nominal peripheral Focus, and that they have to surface at the nominal periphery rather than at the NP periphery as other neutral NP adjectives do. I further argued that the NP inversion construction in Mandarin should be derived through nominal internal topicalization that moves NP to the nominal periphery, contrary to the base-generated analysis proposed by Tang (1996).

Based on the similarities observed between the CP domain and the nominal periphery concerning information packaging, I proposed to extend the “internal” information structure from sentences to nominals. In Section 3, I examined how information packaging can be realized in the nominal internal domain. I argued that the phenomenon of NP ellipsis in Mandarin shows that NP adjectives can serve as (Contrastive) Focus in the nominal internal domain, that the -de marker is required for Focalized NP adjectives, and that such a functional head, Focus, is required to license NP ellipsis (cf. Lobeck 1991). I also discussed examples that are related to the occurrence of Topic and Focus at the nominal internal domain under specific discourses.

The result of the current study proposed a novel perspective to examine the parallelisms between clauses and noun phrases in regard to the interaction between syntax and information structure. This study presented theoretical consequences to the sentential domain, discussed new data, and showed a neat parallelism between sentences and nominal expressions.
References


Foreign Languages, Cultures, and Literatures
Bard College
Annandale-on-Hudson, NY, 12504-5000
yhsu@bard.edu