

Topic Drop and MCP

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1. Introduction

Since the null topic was identified in the early 1980s as a significant point of parametric variation (Huang 1984, i.a.), much work has investigated the construction mainly in Chinese- and German-type languages, but less work has addressed the question of what makes a null topic possible cross-linguistically, and what ties together (and what distinguishes between) the two types.

- (1) [null subject] and [null topic] parameters: 4 language types
- a. +pro drop, -null topic = Italian, Spanish, etc.
 - b. +pro drop, +null topic = Chinese, Japanese, etc.
 - c. -pro drop, -null topic = English, French, etc.
 - d. -pro drop, +null topic = German, etc.

One major difference between them is that the Chinese type allows extensive other types of argument drop (pro-drop, argument ellipsis, ‘true empty category’ (Li 2007, et seq), etc.) which led to the undifferentiating term ‘radical pro drop’, while the German-type is quite limited beyond the existence of a null topic.

German: filling the gap = -pro drop, +null topic

- (2) a. ich habe ihn gestern schon gesehen
 I have him yesterday already seen
b. ihn habe ich gestern schon gesehen
c. gestern habe ich ihn schon gesehen
d. __ habe ihn gestern schon gesehen
e. __ habe ich gestern schon gesehen
f. *ich habe __ gestern schon gesehen
g. *ihn habe __ gestern schon gesehen
h. *gestern habe __ ihn schon gesehen
i. *gestern habe ich __ schon gesehen
j. *__ habe __ gestern schon gesehen
k. *gestern habe __ __ schon gesehen

Chinese: +pro drop, +null topic

Both null subjects and null objects are allowed, with subject-object asymmetries (Huang 1984):

- (3) a. Zhangsan_i shuo [_{e_{i/j}} bu renshi Lisi]
 Zhangsan say not know Lisi
 ‘Zhangsan_i said [_{he_{i/j}}] did not know Lisi.
b. Zhangsan_i shuo [Lisi bu renshi _{e_{*i/j}}]
 Zhangsan say Lisi not know
 ‘Zhangsan said Lisi did not know [_{him_{*i/j}}].

(4) [Top e_j] [Zhangsan said [Lisi did not know e_j]]

- The null object in (3b) is a variable bound by a null topic, as a variable is A-free.
- The null subject in (3a) may be a variable (A-free) or a pro (may be A-bound).
- Deriving the subject-object asymmetry: Generalized Control Rule (GCR) and BT-B.

Research by scholars on the asymmetry has led to various categorizations on the status of the null object:

- (5) a. a variable bound by topic that is itself a pro
 b. a pro
 c. an elliptical VP-in-disguise
 d. an elliptical NP
 e. a “true empty category” (TEC)

We argue with evidence of locality effects:

- a) that it is necessary to distinguish among phenomena that have sometimes been referred to with the undifferentiating term ‘radical pro drop’;
- b) that the null topic is restricted to domains roughly corresponding to the MCP;
- c) that the Chinese-type null topic requires licensing at the CP/edge by internal merge, i.e. movement (cf. Sigurðsson 2011; Sigurðsson and Maling 2010);

2. Topics and Islands

Chinese is a topic-prominent language which, as the term suggests, heavily uses structures involving topics and comments (Li & Thompson 1976, 1981, Tsao 1979, 1990), as opposed to subject-prominent languages.

- (6) a. Na-chang da-huo, xingkuai xiaofang-dui lai-de-kuai.
 that-CL big-fire fortunately fire-brigade come-DE-quickly
 Lit. ‘That big fire, fortunately the fire brigade came quickly.’
- b. Zhe ci kaoshi, women yiding hui renzhen xuexi.
 this CI exam we definitely will earnest study
 ‘This exam, we definitely will study hard.’
- c. Hua (a), ta zhi xihuan meigui hua.
 flower Top she only like rose flower
 ‘Flower, she only likes rose.’

It is also this topic-prominent characteristic that makes Chinese a discourse *pro*-drop language whose dropped elements can be recovered from the topics in the context as in (7) or in the same sentence as in (8).

- (7) a. Speaker A: Zhangsan zenme mei lai?
 Zhangsan how not come
 ‘How come Zhangsan does not come?’
- b. Speaker B: e lai le.

- come Perf.
‘[He] came.’
- (8) a. Zhangsan_i (a), e_i bu renshi Lisi.
Zhangsan Top not know Lisi
‘Zhangsan_i, [he_i] does not know Lisi.’
b. Lisi_i (a), Zhangsan renshi e_i.
Lisi Top Zhangsan know
‘Lisi_i, Zhangsan knows [him_i].’

The topic phrase is not clause-bounded:

- (9) Zhangsan_i (a), Wangwu shuo [e_i hui lai].
Zhangsan Top Wangwu say will come
‘Zhangsan_i, Wangwu said [he_i] would come.’

And it can be dropped (i.e., a null topic construction):

- (10) [∅]_i Wangwu shuo [e_i hui lai].
Wangwu say will come
‘Wangwu_i said [he_j] would come’

Overt topics: apparent island violations:

- (11) Zhangsan_i (a), [xuduo [e_i xie] de shu] dou hen chang.xiao.
Zhangsan Top many write DE book all very well.sell
‘Zhangsan_i, many books that [he] writes sell very well.’
(12) Zhangsan_i (a), [yinwei e_i mei lai shangxue], laoshi hen shengqi.
Zhangsan Top because not come go.to.school teacher very upset
‘Zhangsan_i, because [he_i] didn’t come to the school, the teacher was very upset.’

But there is a systematic left-right asymmetry showing that island violations occur only when extraction takes place from a subject or preposed island, but not from a post-verbal island.

CNPC: Left-right asymmetries:

- (13) a. Zhangsan, [[e chang-ge de shengyin] hen haoting].
Zhangsan, sing-song de voice very good-to-hear
‘Zhangsan, his voice of singing is very good.’
b. *Zhangsan, [wo hen xihuan [e chang-ge de shengyin]].
Zhangsan I very like sing-song de voice
‘Zhangsan, I like [his] voice of singing.’
c. Zhangsan, [e chang-ge de shengyin]_i [wo hen xihuan t_i].
Zhangsan sing-song de voice I very like
‘Zhangsan, I like [his] voice of singing.’
(14) a. Zhangsan, [[e xie de shu] bu shao]
Zhangsan write de book not few
Zhangsan, books that he has written are numerous.

- b. *Zhangsan, [wo nian le bu shao [e xie de shu]]
 Zhangsan I read le not few write de book
 Zhangsan, I have read many books that [he] has written.
- c. Zhangsan, [e xie de shu]_i [wo nian le bu shao *t_i*]
 Zhangsan write de book I read le not few
 Zhangsan, I have read many books that [he] has written.
- (15) a. Zhangsan, [[piping e de ren] bu shao]
 Zhangsan criticize de person not few
 Zhangsan, people who criticize [him] are numerous.
- b. *Zhangsan, [wo renshi hen duo [piping e de ren]]
 Zhangsan I know very many criticize de person
 Zhangsan, I know many people that criticize [him].
- c. Zhangsan, [piping e de ren]_i [wo renshi hen duo *t_i*]
 Zhangsan criticize de person I know very many
 Zhangsan, I know many people that criticize [him].

LBC: Subject-object asymmetry:

- (16) a. Zhangsan, [e baba] hen youqian.
 Zhangsan, father very rich
 ‘Zhangsan, [his] feature is very rich.’
- b. *Zhangsan, wo kanjian [e baba].
 Zhangsan, I saw [his] father.
- c. Zhangsan, [e baba]_i wo kanjian le *t_i*.
 Zhangsan, [his] father, I saw.
- (17) a. nage nühai, [e yanjing] hen haokan.
 that girl, eyes very pretty.
 ‘That girl, [her] eyes are very pretty.’
- b. *nage nühai, wo xihuan [e yanjing].
 That girl, I like [her] eyes.
- c. nage nühai, [e yanjing]_i, wo xihuan *t_i*.
 That girl, [her] eyes, I like.

Account for the asymmetry: Availability of pro and GCR: Co-index PRO/pro with the closest potential antecedent:

- The (a) and (c) sentences with apparent island violations are grammatical when Topic is directly merged at Spec of TopP, and is related to the main clause by coindexing with the closest available *pro* below.
 - The (b) sentences cannot be obtained through this non-movement route, because the *pro* is located within a post-verbal constituent, too far to be coindexed with the topic.
 - Since the movement option is also excluded by island constraints, the (b) cases are ill-formed.
- Some apparent counterexamples to the left-right asymmetric pattern. Xu and Liu 2003

show that extraction is possible from some post-verbal islands.

- Zhang, Min (2009) shows that extraction is possible from a post-verbal island if the island domain is itself focalized: as in the environment of *zhi* ‘only’, *lian* ‘even’, negation, or when in contrast with another constituent.

- (18) a. *Zhangsan, wo kanjian le [e hou naoshao]
Zhangsan, I saw Perf. [his] back-of-head.
b. Zhangsan, wo zhi kanjian le [e hou naoshao]
Zhangsan, I only saw Perf. [his] back-of-head.
- (19) a. *na-ge nühai, wo xihuan [e yanjing]
That girl, I like [her] eyes.
b. na-ge nühai, wo xihuan [e yanjing]; zhe-ge nühai, wo xihuan [e bizi].
That girl, I like [her] eyes; this girl, I like [her] nose.
c. na-ge nühai, wo zhi xihuan [e yanjing].
That girl, I only like [her] eyes.
- (20) a. *na-ge xuesheng, wo jide [e mingzi]
that student, I remember [his] name.
b. na-ge xuesheng, wo jide [e mingzi]; bu jide [e zhangxiang]
That student, I remember [his] name; don't remember [his] looks.
c. na-ge xuesheng, wo zhi jide [e mingzi].
That student, I only remember [his] name.
d. na-ge xuesheng, wo lian [e mingzi] dou wang le.
That student, I even [his] name all have forgotten.

Zhang, Min's proposal:

- (21) a. Both the extraction target and the extraction site must be in a state of being “activated” (receiving attention).
b. The target must be higher in potential topicality, the extraction site must be lower in potential topicality and higher in being a focus.
c. Definiteness of DP and specificity of events contribute to topicality of target, and relative opacity of the extraction site. Indefiniteness, focus particle, negation, contrast, etc., contribute to focus.
d. Subjacency applies to topicalization extractions.
e. Violation of Subjacency is tolerated only if the extraction site receives ‘extra activation’.

Translating Zhang's observations into generative terms:

Focused elements are “activated” → They trigger LF movement to the left periphery, to [Spec, FocusP].

Focus:

- a. Overt movement: clefts, pseudo-clefts, etc. Overt trigger by F^0 .
b. Focus-in-situ: *shi*, *only*, focal stress, etc. → LF movement.

Focus → alternatives → quantification → operator position

Chomsky 1976's account of weak crossover:

- (22) a. *Who does his mother love?
 b. *His mother loves everyone.
 c. *His mother loves someone.
 d. His mother loves John.
 e. *His mother loves JOHN.

- (23) a. The woman he loved betrayed John.
 b. *The woman he loved betrayed everyone.
 c. *The woman he loved betrayed someone.
 d. *Who does the woman he loved betray e?
 e. *The woman he loved betrayed JOHN.

- (24) a. For x = John, his_i mother loves x_i.
 b. For x = John, the woman he_i loved betrayed x_i.

- The LF representations (24a-b) are cases of 'weak crossover' in LF. They are ruled out by the "Leftness Condition": a variable cannot be the antecedent of a pronoun to its left.

- (25) Zhangsan₂, [zhi + [e₂] hou naoshao]₃, wo kanjian-le t₃.
 Zhangsan, only back-of-head, I have-seen.

- (26) [_{TopicP} ZS₂] [_{FocusP} [*pro* back-of-head]₃] [_{TP} I have seen t₃]
-

Summary: Overt topicalization in Chinese may be formed by co-indexing *pro* with a base-generated topic. Coindexing is subject to minimality/intervention, thus resulting in a systematic left-right asymmetry of apparent island violations. English: no similar apparent island violations possible due to the unavailability of the *pro* option. The only way to relate target to the topic position is by movement, which is restricted by Subjacency.

3. Null Topics vs. Overt Topics

In general, a topic may be overt or null:

- (27) (Lisi a), Zhangsan shuo [e mei du-guo yuyanxue]].
 Lisi Top Zhangsan say not study-Exp. linguistics
 '(Lisi,) Zhangsan said [he] had not studied linguistics before.'

Ban on Null Topics:

When the topic is dropped, an embedded null subject can be coindexed with either the matrix subject (hereafter, the subject-reading) or the dropped topic (hereafter, the topic-reading):

- (28) a. Zhangsan_i shuo [e_{i/j} mei du-guo yuyanxue]].
 Zhangsan say not study-Exp. linguistics
 ‘Zhangsan_i said [he_{i/j}] had not studied linguistics before.’
 b. Zhangsan_i shuo [e_{i/j} hen xihuan na-fu hua]].
 Zhangsan say very like that-Cl painting
 ‘Zhangsan_i said [he_{i/j}] liked that painting very much.’

But when preceded by an intervening topic phrase as in (29) the topic-reading is gone.

- (29) a. Zhangsan_i shuo [CP yuyanxue_k [e_{i/*j} mei du-guo e_k]].
 Zhangsan say linguistics not study-Exp.
 ‘Zhangsan_i said [he_{i/*j}] had not studied linguistics before.’
 b. Zhangsan_i shuo [CP na-fu hua_k [e_{i/*j} hen xihuan e_k]].
 Zhangsan say that-Cl painting very like
 ‘Zhangsan_i said [he_{i/*j}] liked that painting very much.’

Note that the intervention effect is observed only when construal with a null topic is intended. With another overtly realized topic phrase merged to the front as in (30), the topic-reading surfaces again.

- (30) a. Lisi_j (a), Zhangsan_i shuo [CP yuyanxue_k [e_j mei du-guo e_k]].
 Lisi_j Top Zhangsan say linguistics not study-Exp.
 Lit. ‘Lisi_j, Zhangsan_i said he_j had not studied linguistics before.’
 b. Lisi_j (a), Zhangsan_i shuo [CP na-fu hua_k [e_j bu xihuan e_k]].
 Lisi Top Zhangsan say that-Cl painting not like
 Lit. ‘Lisi_j, Zhangsan_i said he_j didn’t like that painting.’

Generalization:

- a) Generally speaking, the embedded null subject can be coindexed with either the matrix subject (the subject-reading) or the empty discourse topic (the topic-reading) (see (28)).
- b) When preceded by an intervening topic phrase, the topic-reading is gone (see (29)).
- c) The topic-reading is recovered if an overt discourse topic is available in the sentence-initial position (see (30)).

- (31) a. *[CP₁ [ϕ]_j [... [CP₂TopicP_k [e_j ...]]]]
 b. [CP₁ TopicP_j [... [CP₂TopicP_k [e_j ...]]]]

- In other words, a null topic is banned by an intervening topic; an overt topic does not show intervention effects.

Null topics and island effects: no left-right asymmetries

Null topics are banned where they are related to a gap within an island—regardless of the position of the island—no left-right asymmetries (unlike the examples from (13)-(17)). In

each (a)-sentence below, the empty subject cannot be understood as referring to a null topic, but with an overt topic, the (b)-sentences are fine. For example, none of the (a)-sentences can be used as a reply or a continuation of a sentence like “Now, let me talk about Lisi”.

Relative clause

- (32) a. *[_{DP} xuduo [_{CP} e xie] de shu] dou hen changxiao.
 many write DE book all very well.sell
 ‘Many books that [he] writes sell well.’
- b. Lisi (a), [_{DP} xuduo [_{CP} e xie] de shu] dou hen changxiao.
 Lisi Top many write DE book all very well.sell
 ‘Lisi, many books that [he] writes sell well.’

Factive predicate

- (33) a. Zhangsan_i fajue/zhidao/dezhi [_{e_{i/*j}} kao-shang daxue le].
 Zhangsan realize/know/learn exam-up university Perf.
 ‘Zhangsan realizes/knows/learns that [he_{i/*j}] has passed the exam to university.’
- b. Lisi_j (a), Zhangsan_i fajue/zhidao/dezhi [_{e_{*i/j}} kao-shang daxue le].
 Lisi Top Zhangsan realize/know/learn exam-up university Perf.
 ‘Lisi_j, Zhangsan_i realizes/knows/learns that [he_{*i/j}] has passed the exam to university.’

Object topicalization

- (34) a. Zhangsan_i shuo daxue_k [_{e_{i/*j}} kao-shang e_k le].
 Zhangsan say university pass-up Perf.
 ‘Zhangsan_i said [he_{i/*j}] has passed the university entrance exam.’
- b. Lisi_j (a), Zhangsan_i shuo daxue_k [_{e_{*i/j}} kao-shang e_k le].
 Lisi Top Zhangsan say university pass-up Perf.
 ‘Lisi, Zhangsan_i said [he_{*i/j}] has passed university entrance exam.’

NP complement clause

- (35) a. *[_{DP} [_{CP} e cizhi] de yaoyan] man-tian fei.
 resign DE rumor full-day fly
 ‘The rumor that [he] has resigned spreads everywhere.’
- b. Lisi (a), [_{DP} [_{CP} e cizhi] de yaoyan] man-tian fei.
 Lisi Top resign DE rumor full-day fly
 ‘Lisi, the rumor that [he] has resigned spreads everywhere.’

Adjunct clause

- (36) a. *[yinwei e_i mei lai shangxue], laoshi_j hen shengqi.
 because not come go.to.school teacher very upset
 ‘Because [he_i] didn’t come to the school, the teacher_j was very upset.’
- b. Lisi_i (a), [yinwei e_i mei lai shangxue], laoshi_j hen shengqi.
 Lisi Top because not come go.to.school teacher very upset
 ‘Lisi_i, because [he_i] didn’t come to the school, the teacher_j was very upset.’

- (37) a. *[meidang e_i du shu shi], women_j dou bu neng chu sheng.
 whenever read book then we all not can make noise
 ‘Whenever [he_j] is studying, we_j cannot make noise.’
- b. Lisi_i (a), [meidang e_i du shu shi], women_j dou bu neng chu sheng.
 Lisi Top whenever read book then we all not can make noise
 ‘Lisi_i, whenever [he_j] is studying, we_j cannot make noise.’

Wh-interrogative

- (38) a. Zhangsan_i xiang-zhidao [$e_i/*_j$ mai-le shenme].
 Zhagnsan want-know buy-Perf. what
 ‘Zhangsan_i wonders what [he_j] bought.’
- b. Zhangsan_i xiang-zhidao [$e_i/*_j$ qu-le nali].
 Zhagnsan want-know go-Perf. where
 ‘Zhangsan_i wonders where [he_j] went.’
- (39) a. Lisi_j (a), Zhangsan_i xiang-zhidao [e_j mai-le shenme].
 Lisi Top Zhagnsan want-know buy-Perf. what
 ‘Lisi_j, Zhangsan_i wonders what [he_j] bought.’
- b. Lisi_j (a), Zhangsan_i xiang-zhidao [e_j qu-le nali].
 Lisi Top Zhagnsan want-know go-Perf. where
 ‘Lisi_j, Zhangsan_i wonders where [he_j] went.’

That is, there is a clear contrast between overt and null topics. Whereas an overt topic may side-step Subjacency by being coindexed with a *pro* within an island under the GCR, a null topic cannot be licensed in the same way.

Generalization: An asymmetry between overt and null topics

- 1) Overt topicalization exhibits left-right asymmetries: no island effects when the island occurs on the left—because of the possibility of *pro*, which may license the merged topic under GCR.
- 2) Null topics, however, exhibit full island effects, with no left-right asymmetries. This means that the *pro*-GCR option is not available for null topics.
- 3) An overt Topic may be formed by EM (merge), but a null topic can be created only by IM (move).

4. Null topic as an MCP:

Topicalization in English: an MCP (data from Haegeman 2010, 2012)

- (40) a. *When this song I heard last week, I remembered my first love. (temporal adverbial)
 b. *If these exams you don't pass, you won't get the degree. (conditional clause)
 c. *Mary realizes [that this book, John read]. (factive predicate)
 d. *John raised the possibility that Mary, your antics would upset. (appositive clause)
 e. *These are the students to whom, your book, I would recommend in the next semester. (relative clause)
 f. *That this book, Mary read thoroughly is true. (sentential subject)

g. *Robin knows where, the birdseed, you are going to put. (wh-interrogative)

Chinese appears to allow overt topics to occur in embedded positions:

- (41) a. dang zhege timu Zhangsan bu zai yanjiu de shihou,
 when this topic Zhangsan not again study DE time
 Lisi jiu jieshou le. (temporal adverbial)
 Lisi then take-over Perf.
 ‘When, this topic, Zhangsan did not study any more, Lisi took it over.’
- b. ruquo zheci kaoshi ni mei tongguo, ni jiu bei dang le. (conditional)
 if this exam you not pass you then BEI flunk Perf.
 ‘If, this exam, you do not pass, you will then be flunked.’
- c. Zhangsan fajue zheben shu Lisi zao jiu du-guo le. (factive)
 Zhangsan found this book Lisi early then read-Exp. Perf.
 ‘Zhangsan found, this book, Lisi had read before.’
- d. Zhangsan bu xiangxin nadong fangzi Lisi yijing maidiao de xiaoxi.
 Zhangsan not believe that house Lisi already sell DE news.
 ‘Zhangsan does not believe the news that, that house, Lisi has sold. (appositive)
- e. Laoshi xiang-zhidao zuoye shei mei jiao. (wh-interrogative)
 teacher want-know homework who not submit
 ‘The teacher wants to know, homework, who did not submit.’

However, as we have seen, a null topic is ungrammatical if the associated empty category is located within an island. This means that a null topic cannot be formed at some position within an island, and be interpreted in-situ as marking a discourse topic. A null topic must be moved to the Spec position of the Root CP, hence any island on the path of movement will rule out its derivation.

→ Null topic is an MCP.

5. Checking the [*u*Top] Feature

The null topic construction is formed by movement:

(42) * $[C_{P1} \ C_{[uTop]} \dots \ [island \dots \ pro \dots]$
 $\uparrow \text{-----} \downarrow$

- Discourse-oriented: The paradigm in the above observation is related to the (non-)existence of an overt topic phrase which is very much discourse-oriented, as is common to discourse-configurational languages (Kiss 1995) such as Chinese.
- Discourse licensing: Being an “agreementless” language, Chinese typically has to resort to discourse context to recover its empty subjects/objects.
- Definiteness/Specificity requirement: The referents must be “old”, presupposed, or “given” in the discourse or commonly assumed in the knowledge background. They are definite or specific.

Checking the topic feature [*u*Top]

In the spirit of Miyagawa (2010) we assume the existence of topic/focus feature at C. The topic feature [*u*Top] at C is uninterpretable and is pending for valuation (Chomsky 2000). We propose that null topic licensing in Chinese is carried out via the checking of the [*u*Top] feature at C.

Two ways to check/value the [*u*Top] feature:

- Merge (external merge)

When an overt topic phrase with interpretable [*i*Top] feature is available, it directly merges to CP and checks/values the [*u*Top] feature at C.

$$(43) \quad [CP \quad \text{---} C_{[uTop]}, [IP \quad pro \quad \dots]]$$

↑
TopicP_[*i*Top]

The merged topic needs to be licensed in some way to satisfy “aboutness” (e.g., by coindexing with a *pro* under the provisions of the GCR).

- Move (internal merge)

When the overt topic is not available, the uninterpretable [*u*Top] feature on C probes into its domain to find an appropriate *pro* and attracts it (or a certain feature of it, e.g., the [+D] feature (Roberts 2010)) (due to the requirement of EPP-/D-feature checking).

$$(44) \quad [CP \quad C_{[uTop]} \quad [IP \quad pro \quad \dots]]$$

↑
-----↓

Movement is subject to locality conditions, hence full range of island effects as shown.

The two types of scope-taking strategies have a direct bearing on the intervention effects in Vietnamese.

(data from Bruening & Tran 2006)

- (45) a. Ai cūng thích bóng đá.
 Who CUNG like football
 ‘Everyone likes football.’
- b. *Ai cūng thích cái gì?
 Who CUNG like what
 ‘What does everyone like?’
- c. Ai cūng thích cái gì thế?
 Who CUNG like what PRT
 ‘What did everyone like?’

6. Conclusion

- *Pro* drop is a cover term of various categories of the null elements.
- The null topic is restricted to root (C/edge) based on its island properties.

- The Chinese-type null topic requires licensing at the CP/edge by internal merge due to the checking of [*u*Top] at C.
- Null topic provides a gate for syntax to refer to discourse (cf. Sigurðsson 2011; Sigurðsson and Maling 2010).

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