Revisit Relative Clause Islands in Chinese

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There are two inconsistencies regarding the violation of relative clause islands that challenge current analyses for relative clauses in Chinese. First, the violation is acceptable only when the relative clause island is located in the subject-modifying position, but not in other positions. Second, when the island is in the subject-modifying position, the violation is sometimes acceptable and sometimes unacceptable. This paper argues that when the extraction out of relative clause islands is permissible, there is actually no island violation, because the target of relativization is located outside of the island in the underlying structure. In addition, a pragmatic condition is proposed to play a role in allowing the target of movement to be a topic in the underlying structure. When the target NP cannot be properly characterized by the following clause, it cannot be a topic NP in the underlying structure. In this case, the target of relativization must be located inside the island, and extracting it out of the island causes ungrammaticality. This analysis provides a unifying analysis based on movement and can account for the inconsistencies successfully. It suggests that pragmatics affects syntax, and that all relative clauses in Chinese can be derived via syntactic movement.

Key words: relative clauses, movement, complex NP island, topics

1. Introduction

Complex NPs are islands for syntactic movements. As stated in the Complex NP Constraint in (1), movements out of a complex NP are banned (Ross 1967). This constraint accounts for the ungrammaticality in (2). In (2), the wh-phrase, who, is extracted from inside a complex NP whose head noun (rumor, claim) takes a sentential complement, and the sentences are ungrammatical.

\[(1) \quad \text{Complex NP Constraint} \]
\[
\text{No element contained in an S dominated by an NP with a lexical head noun may be moved out of that NP by a transformation. (Ross 1967:70)}
\]

* I thank Dr. Benjamin Bruening and Dr. Gabriella Hermon for their helpful comments on the earlier versions of this paper. All remaining errors are mine.
(2)  a. *Who did [IP you hear [NP the rumor [CP that Mary kissed ti]]]?
   b. *Who did [IP John make [NP the claim [CP that he saw ti yesterday]]]?

In the structure of a relative clause, the head noun and the relative clause together form a complex NP, and thus create an island for movement. In (3a), the object NP, the boy, is relativized to be the head noun of a relative clause. Movement out of the complex NP headed by the noun the boy violates the Complex NP Constraint, and results in ungrammaticality, as shown in (3b) and (3c). This type of complex NP islands is also termed as relative clause islands, and is the focus of this paper.

(3)  a. I saw [NP the boyi [CP whoi [IP ti likes the car]]].
   b. *What did you see [NP the boyi [CP whoi [IP ti likes ti]]]?
   c. *I bought the car [that I saw [NP the boyi [CP whoi [IP ti likes ti]]]].

In Chinese, some inconsistencies regarding the violation of relative clause islands have been observed (Li 2002). When the relative clause modifies the matrix subject NP, forming a complex NP in the subject position, as in (4a), overt extraction out of this relative clause island is acceptable, as shown in (4b). On the other hand, when the relative clause modifies the matrix object NP, forming an island in the object position, as in (5a), movement out of this island causes ungrammaticality, as shown in (5b). In short, the position of the relative clause (subject-modifying position vs. object-modifying position) matters in the acceptability with regard to the violation of relative clause islands in Chinese.

(4) Relative clause island in the subject position
   a. [[Na-ge nühai chuan ti de] yifu] hen piaoliang.
      that-CL girl wear DE dress very pretty
      ‘The dress that the girl wears is very pretty.’
   b. [[[e ti de] yifu] hen piaoliang de] na-ge nühai,
      wear DE dress very pretty DE that-CL girl
      ‘[the girl x that [the dress that [x wears] is very pretty]]’

(5) Relative clause island in the object position
   a. Wo xihuan [[na-ge ren chuan ti de] yifu].
      like that-CL person wear DE dress
      ‘I like the dress which the person wears.’

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1 The exact nature of the relativization, i.e. head-raising movement or operator movement, does not matter here because it does not make a difference in terms of forming a complex NP.
Several researchers have proposed a non-movement analysis based on the Generalized Control Rule (GCR) to account for the lack of island violations in cases such as (4b) (Huang 1984, 1989, Li 2002, Tsai 1997). According to this analysis, there is a base-generated pro inside the relative clause, and the identification of this pronominal empty category is subject to the Generalized Control Rule (Huang 1984:552), as stated in (6) below:

(6) Generalized Control Rule (GCR):  
Co-index an empty pronominal with the closest nominal element (NP or Agr).

According to this analysis, when the complex NP is in the subject position, as in (7) (from (4b)), there is a base-generated pro in the embedded subject position. This empty pronoun is properly identified with the base-generated operator, which is the most local c-commanding antecedent for this empty pronoun. The noun yifu ‘dress’ is the antecedent for the trace (tj) in the object position inside the relative clause, and cannot be a possible antecedent for the empty pronoun. Since there is no movement, there is no island violation and the sentence is grammatical.

(7) [Opi [[proi chuan tj de] yifu] hen piaoliang de] na-ge nühaii  
wear DE dress very pretty DE that-CL girl  
‘[the girl x that [the dress that [x wears] is very pretty]’

When the complex NP is in the object position, as in (8) (from (5b)), the base-generated pro in the embedded subject position cannot be identified with the operator properly, because the intervening NP, wo ‘I’, in the subject position of the higher clause is the closest c-commanding antecedent, not the operator. Therefore, the sentence is ungrammatical.

(8) *[Opi [wo xihuan [[proi chuan tj de] yifu de]] na-ge reni  
I like wear DE dress DE that-CL person  
‘[the person x that [I like the dress that [x wears]]’

This non-movement analysis can explain the contrast found between (4b) and (5b), and thus captures the subject-object asymmetry in terms of the violation of relative clause islands. Nevertheless, this analysis is not unproblematic.
First, assuming that movement occurs, the violation of relative clause islands (located in the subject-modifying position) is acceptable in (4b). Yet, such violation is not always acceptable and there are counter examples. An example is given in (9) (Also see Huang 1982). In (9a), the relative clause is located in the subject position to modify the matrix subject, *xiaojie* ‘lady’, forming a relative clause island. In (9b), moving *na-ge ren* ‘that person’ out of the relative clause island violates the island constraint and makes the noun phrase ungrammatical.

(9) a. 

\[
[\text{[Na-ge ren bangmang t\textsubscript{j} de] xiaojie\textsubscript{j} mai-le yixie shu.}]
\]

\text{that-CL person help DE lady buy-APS some book}

‘The lady who the person helps bought some books.’

b. *\[
[\text{[[[e\textsubscript{i} bangmang t\textsubscript{j} de] xiaojie\textsubscript{j} mai-le yixie shu de] na-ge ren,}]
\]

\text{help DE lady buy-APS some book DE that-CL person}

‘[the person x such that [the lady who [x helps] bought some books]]’

The non-movement analysis incorrectly predicts (9b) to be grammatical, because according to this analysis, there is no movement violation and the base-generated *pro* can be properly identified with the base-generated operator, as shown in (10), just as in the case of (7). That is, under this analysis, the use of *pro* should be available to save the sentence in (9b).

(10) *\[
[\text{[O\textsubscript{p} [RC pro bangmang t\textsubscript{j} de] xiaojie\textsubscript{j} mai-le yixie shu de] na-ge ren,}]
\]

\text{help DE lady buy-APS some book DE that-CL person}

‘[the person x such that [the lady who [x helps] bought some books]]’

To account for the difference between (7) and (10), the non-movement analysis must provide an account as to when *pro* is available and when it is not. However, currently, this analysis does not specify the licensing condition for the use of *pro*, and thus is unable to explain the contrast.

The second problem with the non-movement analysis concerns the Generalized Control Rule, which the analysis crucially hinges upon. In (11a) and (12a), the relative clauses are embedded inside a complement clause selected by the matrix verb *renwei* ‘think’. Moving *na-ge ren* ‘that person’ in (11a) and *na-ge n\textsubscript{ihai}* ‘that girl’ in (12a) to form (11b) and (12b) should be ungrammatical because such movement violates the Complex NP Constraint. However, (11b) and (12b) are grammatical. To explain why (11b) and (12b) are good, the non-movement analysis would say that there is no movement and there is a base-generated *pro* in the embedded subject position inside the island. Following (6), the Generalized Control Rule predicts that the base-generated *pro*
must be identified with the subject NP, wo ‘I’ in (11b) and Zhangsan in (12b), of the higher clause because they are the most local c-commanding NPs for the empty pronouns. However, this prediction is wrong because the putative empty pronoun is actually identified with the base-generated operator in both cases (and hence coindexed with the head noun of the relative clause, na-ge ‘that person’ in (11a) and na-ge nühai ‘that girl’ in (12a)).

(11) a. Wo renwei [\[NP [IP na-ge ren tan qin]] hen heshi].
I think that-CL person play piano very appropriate
‘I think [(that) that the person plays piano] is very appropriate.’
b. [\[NP [Opj [Wo renwei [\[NP [IP proi tan qin]] hen heshi]] de] play piano very appropriate DE
na-ge ren,] jintian meiyou lai.
that-CL person today not come
‘[The person x that [I think [that [NP [IP x plays piano]] is appropriate]] did not come today.’

(12) a. Zhangsan renwei [\[CP [NP [RC na-ge nühai chuan ti de] yifu]]
Zhangsan think that-CL girl wear DE dress
hen piaoliang].
very pretty
‘Zhangsan thinks that the dress that the girl wears is very pretty.’
b. Wo bu xihuan [\[Opj [Zhangsan renwei [\[NP [RC proi chuan ti de] I not like Zhangsan think wear DE
yifu] hen piaoliang]] de] na-ge nühai,].
dress very pretty DE that-CL girl
‘I do not like [the girl x who [Zhangsan thinks that [NP the dress [RC that x wears] is pretty]]].’

Tsai (1997) suggests that the null operator is first base-generated in the Spec of the embedded CP to control the subject pro inside the island, and then it moves overtly to the Spec of the matrix CP. Although this stipulation is able to explain (11b) and (12b) using the GCR, the motivation for having the operator base-generated in the lower position and moving it up seems questionable as it is proposed only to get the facts right. Such stipulation requires more supporting evidence.

Building on the observation of the inconsistencies regarding relative clause island violation and the inadequacy of the previous analysis, some thoughts are given to re-examine the data in question. In this paper, an alternative analysis was proposed to address the following two inconsistent patterns:
(13) a. The violation of relative clause islands is permissible when the island is located in the subject-modifying position (at least in some cases), but is impermissible when the island is located in the object-modifying position (i.e. (4b) vs. (5b))

b. When the relative clause island is located in the subject-modifying position, the extraction out of the island is sometimes permissible and sometimes impermissible (i.e. (4b) vs. (9b))

These two issues are treated separately. Section 2 provides an alternative analysis to account for the inconsistent pattern when the relative clause island is located in different positions (13a). Section 3 is devoted to the discussion of the inconsistent pattern when the relative clause island is located in the same position (13b).

2. An alternative analysis for subject-object asymmetry in Chinese

Before going into the details in Chinese, let us look at some similar patterns regarding the violation of relative clause islands in Japanese and Korean. Analyses in these languages bring us helpful insights in analyzing their counterparts in Chinese.

2.1 Japanese and Korean

Similar subject-object asymmetrical patterns with regard to the violation of relative clause islands are also observed in Japanese and Korean. The violation is acceptable when the complex NP is located in the subject position, as shown in (14a) and (15a). In these two cases, the complex NP is marked with the nominative case, -ga in Japanese and -ka in Korean, and movement out of the complex NP island is fine. The violation is unacceptable when the complex NP is in the object position, as exemplified by (14b) and (15b). In these two cases, the complex NP is marked with the accusative case, -o in Japanese and -ul in Korean, and the relativization movement out of the complex NP island is bad. This asymmetry is parallel with the examples in (4b) and (5b) in Chinese.

(14) Japanese (Sakai 1994)

a. [RC [RC e_j e_i Kawaigat-te-ita] inu-ga, shin-de-shimat-ta]
take-care-of-STAT-PAST dog-NOM die-PERF-PAST
kodomo_j
child
‘the child x who [the dog that [x took care of] died]’
b. \[\text{RC John-ga} \ [\text{RC ej ei oshie-ta}] \text{sensei-o shit-te-iru}\]  
John-NOM teach-PAST teacher-ACC know-STAT-PRES  
gakusei_i_j  
student  
‘the student x who [John knows the teacher [who taught x]]’

(15) Korean (Han & Kim 2004)

a. \[\text{RC [RC ej ei cohaha-nun] kangaci-ka_i cwuk-un} \] ai_j  
like-ADN dog-NOM die-ADN kid  
‘the kid x who [the dog which [x liked] died]’

b. *\[\text{RC wuli pan haksayng-I [RC ej ei ip-un] yangpok-ul po-n}\]  
out class student-NOM wear-ADN suit-ACC see-ADN  
sinsa_j  
gentlemen  
‘the gentlemen x who [a student from our class saw the suit [which x wore]]’

Non-movement analyses with or without the use of empty pronouns have been proposed to account for the lack of island effects in (14a) and (15a) in Japanese and Korean (i.e. Murasugi 1991, Comrie 1998, Han 1992, Na & Huck 1993, Kim 1998, etc.). However, non-movement analyses were challenged by other researchers, because the island violation effects were also observed in other cases. Sakai (1994) and Han & Kim (2004) argue that (14a) and (15a) are derived from sentences with double nominative constructions, and the movement does not cause island violation because the target of the operation is located outside of the complex NP island. Hence, they are grammatical.

It is well known that Japanese and Korean have double nominative constructions, as shown below in (16). It is suggested that the first nominative is adjoined to the IP formed by the second nominative NP and the predicate, as in (16c) (see Kuroda 1987, Yoon 1986, Yoon 1989, Heycock & Lee 1989, Kim 2001, etc., and references therein for discussion of the syntax and semantics of multiple nominative constructions in Japanese and Korean).

(16) a. Japanese

\text{Bill-ga ronbun-ga omoshiroi.}  
\text{Bill-NOM paper-NOM be-interesting-PRES}  
‘Bill’s paper is interesting.’
According to Sakai (1994) and Han & Kim (2004), cases like (14a) and (15a) are derived from double nominative constructions, as exemplified in (17). In the tree (17c), relativizing the first NP (the major subject), ‘kid-NOM’, does not violate the Complex NP Constraint because this NP is located in the major subject position outside of the relative clause island.

(17)  

a. Japanese  
John\(_j\)-ga [RC pro\(_j\) e\(_i\) ki-te-iru] yoohuku\(_j\)-ga yabure-te-ita.  
John-NOM wear-STAT-PRES jacket-NOM be-torn-STAT-PAST  
‘John, the jacket which he was wearing was torn.’  

b. Korean  
Aij-ka [RC pro\(_j\) e\(_i\) cohaha-nun] kangaci-ka xwuk-ess-ta.  
kid-NOM like-ADN dog-NOM die-PAST-DECL  
‘As for the kid, the dog that he liked died.’  

c.  

Therefore, the structure in (14a) and (15a) can be mis-analyzed. The structure under the movement analysis is illustrated in (18). They are grammatical because there is no
movement violation.

(18) a.  
\[
\begin{array}{c}
[\text{RC tj} \quad [\text{RC proj ei} \ kawaigat-te-ita] \quad \text{inu-ga}_i \quad \text{shin-de-shimat-ta}] \\
\text{take-care-of-STAT-PAST} \quad \text{dog-NOM} \quad \text{die-PERF-PAST}
\end{array}
\]
\[\text{kodomo}_j\]  
\[\text{child}\]  
\[\text{‘the child x who [the dog that [x took care of] died’}\]
b.  
\[
\begin{array}{c}
[\text{RC tj} \quad [\text{RC proj ei} \ cohaha-nun] \quad \text{kangaci-ka}_i \quad \text{cwuk-un}] \quad \text{ai}_j \\
\text{like-ADN} \quad \text{dog-NOM} \quad \text{die-ADN} \quad \text{kid}_i
\end{array}
\]
\[\text{‘the kid x who [the dog which [x liked] died’}\]

This movement analysis argues that all relative clauses in Korean and Japanese can be derived via movement. The seeming island violations do not result in ungrammaticality because there is actually no movement violation.

2.2 An alternative analysis for Chinese

The movement analysis proposed by Sakai (1994) and Han & Kim (2004) provides an alternative perspective in looking at the similar patterns in Chinese. Following their line of analysis, I suggest an analysis that depends on whether the target of relativization can be a topic (or a major subject) in the underlying structure to account for the subject-object asymmetry regarding relative clause island violations in Chinese.² For (4b), repeated in (19a), I argue that the correct underlying structure for (19a) is a construction with a topic NP, as shown in (19b). In this structure, \textit{na-ge nühai} ‘that girl’ is a topic NP located outside of the relative clause, and \textit{yifu} ‘dress’ is the matrix subject NP modified by a relative clause. An empty pronoun is base-generated in the subject position of the relative clause, and is co-indexed with the topic NP. The tree structure is in (19c).³

² In this paper, I do not distinguish topics and major subjects for two reasons. First, the analysis proposed here does not hinge upon the difference between topics and major subjects. Both topic NPs and major subject NPs are located outside of the subject-predicate constituent (the constituent formed by the subject NP and the main verb), and this suffices for purposes of the current analysis. Second, although topic NPs and majors subject NPs can be distinguished by different syntactic properties such as reflexive-binding and honorification, Yoon (1986) suggests that these tests may not be reliable. Finer studies are necessary to differentiate topic NPs from major subject NPs in Chinese.

³ The string like (i) can of course be analyzed as in (ii) where ‘that girl’ is the subject of the relative clause. My point here is to suggest that there is an alternative structure for the string, as given in (19b, c).
The alternative structure in (19b, c) is plausibly supported. First, sentential adverbs like *xianran-di* ‘obviously’ which modify the whole sentence usually appear sentence-initially before the subject NP, as shown in (20a). In (20b), *xianran-di* ‘obviously’ can occur after the first NP, suggesting that ‘that-girl’ is *not* part of the relative clause which modifies the matrix subject *yifu* ‘dress’. Second, the empty pronoun inside the relative clause can be replaced by a lexical NP, as in (21). This suggests that there can be a null pronoun inside the relative clause, because if the position were occupied by a gap, it should not be replaceable by other NPs.

(20) a. *Xianran-di*, na-jian yifu hen piaoliang.
   obviously that-CL dress very pretty
   ‘Obviously, the dress is very pretty.’

   that-CL girl obviously wear DE dress very pretty
   ‘That girl, unexpectedly, the dress she wears is very pretty.’

(21) Na-ge nühai, [[ta-de pengyou chuan tøj de] yifu] hen piaoliang.
   that-CL girl her friend wear DE dress very pretty
   ‘As for that girl, the dress her friend wears is very pretty.’

(i) Na-ge nühai chuan de yifu hen piaoliang.
   that-CL girl wear DE dress very pretty
(ii) [Na-ge nühai chuan tøj de] yifu hen piaoliang.
    that-CL girl wear DE dress very pretty
Topic NPs can be relativized. Two classical examples of topic constructions in Chinese are given in (22).\(^4\) Relativizing the frame topic NP, \textit{nei-chang huo} ‘that fire’ in (22a) and the instance topic NP \textit{zhe-ke shu} ‘this tree’ in (22b), as shown in (23), are acceptable. Note that not all types of topic NPs can be relativized. Range topic NPs, like \textit{shuigu} ‘fruit’ in (24), cannot be relativized (Li & Thompson 1976, 1981, Chen 1996, etc.).\(^5\)

(22) a. \textit{Nei-chang huo, xingkui xiaofangdui lai de kuai.}  
\hspace{1cm} that-CL fire fortunately fire-brigade come DE fast  
\hspace{1cm} ‘As for that fire, fortunately, the fire brigade arrived promptly.’  
\hspace{1cm} b. \textit{Zhe-ke shu yezi hen da.}  
\hspace{1cm} this-CL tree leaf very large  
\hspace{1cm} ‘This tree has very large leaves.’

(23) a. [t;i xingkui xiaofangdui lai de kuai de] nei-chang huo i  
\hspace{1cm} fortunately fire-brigade come DE fast DE that-CL fire  
\hspace{1cm} ‘the fire which fortunately the fire brigade arrived promptly’  
\hspace{1cm} b. [t;i yezi hen da de] zhe-ke shu i  
\hspace{1cm} leaf very large DE this-CL tree  
\hspace{1cm} ‘the tree which has large leaves’

(24) a. \textit{Shuigu, wo zui ai chi xiangjiao.}  
\hspace{1cm} fruit I most like eat banana  
\hspace{1cm} ‘As for fruits, I like bananas best.’  
\hspace{1cm} b. *[t;i wo zui ai chi xiangjiao de] shuigu  
\hspace{1cm} I most like eat banana DE fruit

The topic NP ‘that girl’ in (19b) is an instance topic. It represents an instance of object about which the following predication is made and can be relativized (Chen 1996). Importantly, relativizing the topic NP ‘that girl’ in (19b, c) to derive (19a) does not violate the Complex NP Constraint, because the moved element is located outside of the relative clause island and such extraction is legitimate, as shown in (25). Therefore, the

\(^4\) (22b) is sometimes treated as double subject constructions (Teng 1974). In most cases of double subject constructions, a possessive marker ‘de’ can occur between the first and the second NPs, as shown in (i).

(i) \textit{Zhe-ke shu-de yezi hen da.}  
\hspace{1cm} this-CL tree-POSS leaf very big  
\hspace{1cm} ‘This tree’s leaves are very big.’

\(^5\) Chen (1996) classifies the topic NPs in Chinese into three types according to their pragmatic functions and interpretations: instance topics, frame topics, and range topics. For precise definition of each type of topic, please refer to his paper.
sentence is grammatical.

(25)  

Now, turn to the ungrammatical case in (5b), repeated below in (26), where the relative clause island is in the object-modifying position. Unlike the previous case in (19), the relevant underlying structure does not have a relevant topic NP (or a major subject NP).

(26) *[wo xihuan [[e chuan ej] de] yifu j] de na-ge ren,  
I like wear DE dress DE that-CL person  
‘[the person x that [I like the dress that [x wears]]]’

The attempt to put the NP, na-ge ren ‘that person’, in (26) outside of the relative clause to coindex with a base-generated proi, as shown in (27), was not possible. (27b) with the use of a sentential adverb and (27c) with an overt NP replacing the null pronoun demonstrate clearly that na-ge ren ‘that person’ cannot appear outside of the relative clause.

(27) a. *Wo xihuan na-ge ren, [[proi chuan tj de] yifuj].  
I like that-CL person wear DE dress  
‘I like the dress which the person wears.’
b. *Wo xihuan na-ge ren, xianran-di, [[pro; chuan t de] yifu].
   I like that-CL person obviously wear DE dress
   ‘I like the person, obviously, the dress which the person wears.’

c. *Wo xihuan na-ge ren, [wo-de pengyou chuan t de] yifu].
   I like that-CL person my friend wear DE dress
   ‘I like the person, dress which my friend wears.’

One possibility is to have an alternative topic-comment sentence as the underlying structure, as in (28). (28a) is also a topic-comment sentence, and the adjective ta-de ‘his’ was coindexed with ‘that person’ to specify the relation between the topic and the comment clause. In (28b), there is an overt pronoun, ta ‘he’, in the subject position of the modifying relative clause, and it is coindexed with the topic ‘that person’. Replacing ta ‘he’ with a null pronoun, however, yields ungrammaticality, as shown in (28c).  

\[(28) \text{a. Na-ge ren, wo xihuan ta-de yifu.} \]
\[
\text{that-CL person, I like his dress}
\]
\[
\text{‘As for that person, I like dress.’}
\]

\[\text{b. Na-ge ren, wo xihuan [[ta; chuan t de] yifu].} \]
\[
\text{that-CL person, I like he wear DE dress}
\]
\[
\text{‘As for that person, I like the dress that he, wears.’}
\]

\[\text{c. *Na-ge ren, wo xihuan [[pro; chuan t de] yifu].} \]
\[
\text{that-CL person, I like wear DE dress}
\]
\[
\text{‘As for that person, I like the dress that he, wears.’}
\]

Since (28c) was ungrammatical, it is impossible to be the underlying structure for (26). Now, the only underlying source left for (26) is (29). Extracting the NP na-ge ren ‘that person’ out of the complex NP violates the CNPC constraint, making (26) ungrammatical.

\[(29) \text{Wo xihuan [[na-ge ren chuan t de] yifu].} \]
\[
\text{I like that-CL person wear DE dress}
\]
\[
\text{‘I like the dress which the person wears.’}
\]

Now, the explanation to the subject-object asymmetry with regard to violation of relative clause islands falls out naturally: Only when the relative clause island is located

\[\text{6 The ungrammaticality of this sentence suggests that the subject empty category in this relative clause cannot be a base-generated pro, but has to be a trace derived via topicalization movement. Since topicalization movement out of a relative clause violates the subjacency condition, the sentence is ungrammatical.} \]
in the subject-modifying position, is there a relevant topic NP (or major subject NP) in the underlying structure. Relativizing the topic NP is legitimate because it is located outside of the island and this movement does not violate island conditions. When the relative clause island is located in the object-modifying position, there is no possibility of having a relevant topic NP in the underlying structure and the target NP of the movement must occur inside the relative clause. Therefore, relativizing this element violates the complex NP constraint and causes ungrammaticality. One important question here is why (28c) is ungrammatical and unable to be the underlying topic-comment sentence for derivation. There are two possibilities. One is that the topic NP is derived from movement, and such movement violates island constraints (see footnote 6). The other possibility is related to the pragmatic condition proposed in (47) in §3.2. The head noun, na-ge ren ‘that person’ cannot be naturally characterized by the following clause. The pragmatic conditions for licensing topics will be discussed in more detail in §3.2.7

2.3 Supporting data

There are two supporting arguments for the movement analysis proposed in the previous section. First, as mentioned in §1, one of the problems with the non-movement analysis is that the Generalized Control Rule makes wrong predictions for the identification of the null pronoun when it is embedded inside a complement clause. In (12a), repeated below in (30a), there is a relative clause embedded in the complement clause selected by the matrix verb renwei ‘think’. Relativizing the subject ‘that-girl’ out of the relative clause is grammatical, as shown in (30b), though such movement violates island conditions. To account for the grammaticality of (30b), the non-movement analysis argues that there is no movement, and there is a base-generated pro in the subject position of the relative clause. The Generalized Control Rule, however, incorrectly predicts that the empty pronoun must be identified with the matrix subject, Zhangsan, because it is the most local c-commanding NP for the empty pronoun. The empty pronoun is actually coindexed with the operator and refers to the head noun ‘that girl’, not Zhangsan.

   ‘Zhangsan thinks that the dress that the girl wears is very pretty.’

7 Thanks to one of the reviewers who brought up this question.
b. Wo bu xihuan [NP [Op] [Zhangsan renwei]
I not like Zhangsan think
[[NP [RC pro] chuan t_i de] yifu_i] hen piaoliang] de] na-ge nühai].
wear DE dress very pretty DE that-CL girl
‘I don’t like [the girl x who [Zhangsan thinks that [NP the dress [RC that x wears] is pretty]]].’

The movement analysis proposed in the previous section can account for the grammaticality of (30b) easily. Since major subjects are allowed inside embedded clauses, as argued by Shyu (1995), it is possible to have a major subject position in the complement clause in (30a). The current analysis suggests that na-ge nühai ‘that girl’ is a major subject NP located outside of the relative clause. It is coindexed with the base-generated null pronoun which is in the subject position of the relative clause, as shown in (31).

(31) a. Zhangsan renwei [CP [na-ge nühai_i [RC pro_i chuan t_i de] yifu_i]
Zhangsan think that-CL girl wear DE dress
hen piaoliang].
very pretty
‘Zhangsan thinks that [for that girl, the dress which [she_i wears] is very pretty].’

b. 

Suppose (31) is the structure for (30a). To derive (30b), the major subject NP in
the embedded complement clause is relativized. This long-distance movement does not violate the CNPC, and so the sentence is grammatical. Since the proposed movement analysis can successfully account for the data, it is superior to the non-movement analysis.

The other piece of supporting data is related to movement. The major difference between the movement analysis and the non-movement analysis is that in the movement analysis, the relativization is derived via movement, whereas in the non-movement analysis, there is no movement but a base-generated *pro* inside the relative clause island. To support the movement analysis, I show that relativizing the major subject in Chinese obeys island conditions. In (32a), there is a complex NP headed by the noun *xiaoxi* ‘news’. The complement clause has a double subject construction. In this case, the major subject is embedded inside the complex NP island. Relativizing the major subject, *na-ge nühai* ‘that girl’, out of the complex NP island should violate movement constraints, causing ungrammaticality. Indeed, this is a correct prediction, as shown by the ungrammatical sentence in (32b). This suggests that movement of the major subject obeys island constraints.

(32) a. [[na-ge nühai tou shoushang de] xiaoxi] rang xuexiao that-CL girl head get-hurt DE news make school chongxin jiantao xiaoyuan anquan. again examine campus safety ‘[The news [that the girl’s head got hurt]] made schools to re-examine campus safety.’

b. *[[tou shoushang de] xiaoxi] rang xuexiao chongxin head get-hurt DE news make school again jiantao xiaoyuan anquan de] na-ge nühai, examine campus safety DE that-CL girl ‘[the girl, such that [the news that [tou her head got hurt] made schools to re-examine campus safety]]’

To conclude this section, the data presented here support a movement analysis to form relative clauses in Chinese, and the availability of relevant topic NPs (or major subject NPs) in the underlying structure account for the subject-object asymmetry regarding the relative-clause island violations.
3. Island violation and pragmatic conditions for licensing topics

3.1 Violation of relative clause islands in the subject-modifying position

Now, turning to the other inconsistent pattern in (13b), that is, when the relative clause island is located in the subject-modifying position, the extraction out of the island is sometimes permissible and sometimes impermissible (i.e. (4b) vs. (9b)), repeated in (33).

(33) a. [[[e; chuan t_i de] yifu_j] hen piaoliang de] na-ge nühai_i
    wear DE dress very pretty DE that-CL girl
    ‘[the girl x that [the dress that [x wears] is very pretty]]’

b. *[[[e; bangmang t_i de] xiaojie_j] mai-le yixie shu de] na-ge ren_i
    help DE lady buy-APS some book DE that-CL person
    ‘[the man x such that [the lady who [x helps] bought some books]]’

Recall that, as discussed in §1, this inconsistency was one of the problems with the non-movement analysis. The non-movement analysis is unable to explain the contrast between (7) and (10), repeated in (34). The non-movement analysis incorrectly predicts (34b) to be acceptable because the use of a null pronoun should have saved the sentence.

(34) a. [Op_i [[RC pro_i chuan t_i de] yifu_j] hen piaoliang de] na-ge nühai_i
    wear DE dress very pretty DE that-CL girl
    ‘[the girl that [the dress that [x wears] is very pretty]]’

b. *[Op_i [[RC pro_i bangmang t_i de] xiaojie_j] mai-le yixie shu de]
    help DE lady buy-APS some book DE
    na-ge ren_i
    that-CL person
    ‘[the man x such that [the lady who [x helps] bought some books]]’

Under the movement analysis proposed here, the contrast in (33) can be explained, depending on whether the target of the relativization can be a topic or not in the underlying structure. For cases like (33a), there is no CNPC island violation because, as argued in §2.2, the target of relativization is a topic NP located outside of the relative clause island in the underlying structure. On the other hand, for cases like (33b), it will be argued here that the target of relativization is in the embedded subject position located within the island, and such extraction violates island conditions, leading to ungrammaticality.
In §2.2, it is argued that the underlying structure for (33a) contains a topic NP and a base-generated null pronoun inside the relative clause, as in (35a). An important piece of data which suggests that na-ge nüehai ‘that girl’ can be a topic located outside of the island is that it can precede the sentential adverb ‘obviously’, as shown in (35b). Therefore, whether the NP can appear before the sentential adverb can be an indicator as to whether it can occupy the topic position.

that-CL girl wear DE dress very pretty
‘As for that girl, the dress she wears is very pretty.’
that-CL girl obviously wear DE dress very pretty
‘That girl, obviously, the dress she wears is very pretty.’

For (33b) which exhibits island effects, the current analysis predicts that the target of movement must be from inside the island and it cannot be a topic. Thus, na-ge ren ‘that person’, which is the target NP, is predicted not to be able to appear before the sentential adverb (since it cannot be a topic). The prediction is correct, as shown in (36).

(36) *Na-ge ren, xianran-di, [[proi bangmang tj de] xiaojie_j]
that-CL person obviously help DE lady
mai-le yixie shu.
buy-APS some book
‘As to that person, obviously, the lady who he helped bought some books.’

Some more examples are given below. The relative clause island in all of these cases is located in the subject-modifying position. Examples in (37) are like (33a). In these cases, the target of relativization can be a topic NP in the underlying structure, as shown in (38). The sentences in (37) are good because the target of movement is located outside of the island.

(37) Sentences like (33a)
a. [[[e_i xie tj de] shu_j] hen youqu de] na-wei zuojia_i
write DE book very interesting DE na-CL writer
‘[the writer x such that [the books which [x wrote] are interesting]]’
b. [[[e_i zhunbei tj de] liaoli_j] hen haochi de] na-jia canting_i
prepare DE dish very delicious DE that-CL restaurant
‘[the restaurant x such that [the dishes that [x prepares] is very delicious]]’
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(38) a. Na-wei zuojia, \textit{xianran-di,} [[pro\(i\) xie t\(j\) de] shu\(j\)] hen youqu. \\
that-CL writer obviously write DE book very interesting \\
‘That writer, obviously, the books she wrote are very interesting.’

b. Na-jia canling, \textit{xianran-di,} [[pro\(i\) zhunbei t\(j\) de] liaoli\(j\)] hen haochi. \\
that-CL restaurant obviously prepare DE dish very delicious \\
‘That restaurant, obviously, the dishes it prepares are very delicious.’

Examples in (39) are like (33b). In these cases, the target of the relativization cannot be 
a topic NP in the underlying structure. This is supported by (40), which shows that these 
NPs cannot appear before the sentential adverb.

(39) Sentences like (33b)

a. *[[[ei kanjian t\(j\) de] xiaohai\(j\)] zhengzai paobu de] na-wei lao-popo\(i\) 
see DE child in-process-of run DE that-CL old-lady 
‘[the old lady x such that [the kid who [x saw] is running]]’

b. *[[[ei shouyang t\(j\) de] xiao-gou\(j\)] yao-shang-le luren de] 
keep-raise DE little-dog bite-hurt-APS pedestrian DE 
na-ge nanhai, 
that-CL boy 
‘[the puppy x that [the girl who [x likes] bit the pedestrian]]’

(40) a. *Na-wei lao-popo\(i\), \textit{xianran-di,} [[pro\(i\) kanjian t\(j\) de] xiaohai\(j\)] 
that-CL old-lady obviously see DE child 
zhengzai paobu. 
in-process-of run 
‘As to that old-lady, obviously, the kid who she saw was running.’

b. *Na-ge nanhai\(i\), \textit{xianran-di,} [[pro\(i\) shouyang t\(j\) de] xiao-gou\(j\)] 
that-CL boy obviously keep-raise DE little-dog 
yao-shang-le luren. 
bite-hurt-APS pedestrian 
‘As to that boy, obviously, the dog which he kept and raised bit the pedestrian.’

Therefore, the derivation of (39) involves moving the embedded subject NPs within the 
relative clause island, as shown in (41), making the sentences in (39) ungrammatical.

(41) a. [[Na-wei lao-popo\(i\) kanjian t\(j\) de] xiaohai\(j\)] zhengzai paobu. 
that-CL old-lady see DE child in-process-of run 
‘The kid who the old lady saw was running.’
b. [[Na-ge nühaii, shouyang tj de] xiaogoui] yao-shang-le luren. 
that-CL boy keep-raise DE little-dog bite-hurt-APS pedestrian

‘The dog he kept and raised bit the pedestrian.’

To summarize, the current analysis provides an account to explain the inconsistency regarding island violation when the relative clause is located in the subject-modifying position. For cases like (33a) and (37), the target of relativization is a topic NP underlingly; for cases like (33b) and (39), the target of relativization is not a topic NP but an embedded subject NP in the underlying structure. Now, one question needs to be addressed: When can the target of relativization be a topic NP in the underlying structure?

3.2 Pragmatic conditions for licensing topics

Understanding the conditions for licensing topic constructions is not an easy matter. Here, I do not attempt to provide a thorough discussion. Instead, I will point out the pragmatic aspects that are relevant to the issue in question. Let us examine cases where the topic-comment sentences are good (42) and cases where sentences with similar structure are bad (43).

that-CL girl obviously wear DE dress very pretty

‘That girli, obviously, the dress shei wears is very pretty.’

that-CL writer obviously write DE book very interesting

‘That writeri, obviously, the books shei wrote are very interesting.’

that-CL restaurant obviously prepare DE dish very delicious

‘That restauranti, obviously, the dishes iti prepares are very delicious.’

(43) a. *Na-ge reni, xianran-di, [[pro bangmangi tj de] xiaojije] 
that-CL person obviously help DE lady
mai-le yixie shu. 
buy-APS some book

‘As to that person, obviously, the lady who he helped bought some books.’
b. *Na-wei lao-popo, xianran-di, [[pro, kanjian t_t de] xiaohai,] that-CL old-lady obviously see DE child zhengzai paobu. in-process-of run
‘As to that old-lady, obviously, the kid who she saw was running.’
c. *Na-ge nanhai, xianran-di, [[pro, shouyang t_t de] xia-gou,] that-CL boy obviously keep-raise DE little-dog yao-shang-le luren. bite-hurt-APS pedestrian
‘As to that boy, obviously, the dog which he kept and raised bit the pedestrian.’

At first, it seems that the clear distinction between the two groups is that in (42) the higher predicates are all stative predicates (piaoliang ‘pretty’, youqu ‘interesting’, and haochi ‘delicious’), whereas in (43), they are all non-stative predicates (mai ‘buy’, paobu ‘run’, and yao-shang ‘bit-hurt’). In Chinese, a typical stative verb can and often does co-occur with a degree adverb such as hen ‘very’, as shown in (42), but non-stative predicates cannot be modified by the degree adverb hen ‘very’, as shown in (44) (Tai 1984, Lin 2004, etc.).

(44) *Ta hen mai-le yixie shu / zhengzai paobu / yao-shang-le luren.
he very buy-APS some book / in-process-of run / bit-hurt-APS pedestrian

In addition, stative predicates are incompatible with progressive markers/indicators since they do not encode a process of an event, as shown below in (45).

(45) a. *Zhe-ben shu zhengzai youqu.
this-CL book in-process-of interesting
‘This book is being interesting.’
b. *Zhe-jian yifu zhengzai piaoliang.
this-CL clothes in-process-of pretty
‘The clothes are being pretty.’

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8 Chinese, like many other languages, has two classes of predicates, adjectives and verbs. Yet, unlike adjectives in English, adjectival predicates do not appear under a copular verb, and some can be directly inflected for tense and aspect. See Lin (2004) for more details. Since the distinction between adjectives and verbs is unclear in Chinese, I use the semantic feature [+/-stative] to distinguish all the predicates (including both adjectives and verbs) here.
c. *Zhe-dao cai zhengzai haochi.
   this-CL dish in-process-of delicious
   ‘This dish is being delicious.’

However, using [+/-stative] feature of the predicate as a condition for licensing topics seems too narrow, and there are counter-examples, such as (46). In (46), the predicates, *qu ‘go’ and *lai ‘come’, are non-statives and they do allow topics.

   that-CL school student all go-APS America
   ‘As for that school, its students all have been to the U.S.’

   b. Nei-chang huo, xingkui xiaofangdui lai de kuai.
      that-CL fire fortunately fire-brigade come DE fast
      ‘As for that fire, fortunately, the fire brigade arrived promptly.’

Since the notion of ‘topic’ is pragmatically relevant, following (Takami & Kamio 1996, Jang 1998, Suh 2003), I suggest a pragmatic condition for licensing topics (including major subjects) in Chinese—Characterization Condition, as stated in (47).

(47) Characterization Condition (CC) for [NP, S] construction:
   (i) An utterance with the structure of [NP, S] is acceptable if and only if the topic ‘NP’ is characterized by ‘S’.
   (ii) ‘S’ can characterize ‘NP’ if and only if it allows at least one pragmatically natural property of NP to be readily derived. That is, the NP’s properties/characteristics can be defined by S.

Pragmatic knowledge plays an important role in deciding whether or not a given comment clause provides a pragmatically natural property of the topic or the major subject. Following Takami & Kamio (1996), a clause cannot provide relevant information in characterizing the topic if: (i) It is independent of the topic NP; (ii) It does not affect the NP at all; (iii) It does not serve to differentiate the NP from the others. Now, we can apply the condition in (47) to examine the sentences in (42) and (43) again.

In (42), the topic-comment sentences are good, because, in each case, the topic NP can be clearly characterized by the following clause: a girl can be naturally characterized by the way she dresses (42a); a writer can be naturally characterized by the books he/she writes; a restaurant can be naturally characterized by the dishes it serves. In (43), the situation is quite the opposite. The topic NPs in these cases cannot be characterized by the following clauses because no pragmatically natural property of the NP can be
easily derived: a person is usually not characterized by the person who he helps; an old lady is usually not characterized by the thing she sees; a boy is usually not characterized by the behavior of his pet. Therefore, the sentences in (43) are not good, in comparison to the cases in (42).

To conclude this section, the pragmatic condition plays a role in determining whether a topic (major subject) can be licensed properly. Importantly, this correlates with the acceptability of relative clause island violations in Chinese. When the target of relativization cannot be licensed properly to be a topic in the underlying structure, it is then located inside the relative clause island. Moving this element violates island constraints and results in ungrammaticality, as in the cases of (33b) and (39). On the other hand, if the target NP can be an appropriate topic NP in the underlying structure, relativizing this NP does not violate island constraints because the NP is located outside of the island.

4. Concluding remarks

This paper intends to provide a unifying analysis to account for the inconsistent patterns with regard to the violation of relative clause islands in Chinese. On the surface, it seems that violation of Complex NP Constraint is permissible in some cases but is impermissible in others. These inconsistencies create challenges to current analyses about relative clause formation and movement constraints. The analysis proposed here is based on movement and is partly related to pragmatic conditions. It argues that when the extraction out of relative clause islands is permissible, there is actually no island violation, because the target of relativization is located outside of the island in the underlying structure. In addition, a pragmatic condition is proposed to play a role in allowing the target of movement to be a topic in the underlying structure. When the target NP cannot be properly characterized by the following clause, it cannot be a topic NP in the underlying structure. In this case, the target of relativization must be located inside the relative clause island, and extracting it out of the island causes ungrammaticality. The current analysis is able to explain the inconsistencies, and thus is superior to the non-movement analysis. It also suggests that pragmatic conditions play a role in determining underlying structures, and that all the relative clauses can be derived via syntactic movement in Chinese.


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在中文裡，有兩個對於關係子句孤島限制違反的不一致性。第一，只有當關係子句孤島在形容主語的位置時，違反孤島限制是可接受的，其他位置皆不行。第二，當關係子句孤島在形容主語的位置，違反孤島限制有時可接受而有時不可接受。這篇文章論證當位移出自關係子句孤島是可接受時，這實際上並沒有違反孤島限制，這是因為在深層結構裡，被移動的名詞是在孤島的外面。此外，本文也提出語用條件會影響是否被移動的名詞在深層結構裡是主題詞。

關鍵詞：關係子句，孤島限制，位移，主題詞