

Short Movement of Relativization

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ABSTRACT In Chinese, the functional form *suo* is always base-generated as sister of a transitive verb. It either relativizes a clause if it undergoes an A-bar movement, or detransitivizes the verb if it is incorporated into the verb. When it relativizes a clause, it lands between the subject and the verb. This short relativization movement supports Fox's (1997) claim that A-bar movement also targets a clause-internal position. In addition, the absence of the Condition C reconstruction effect in both shifted objects and the head nominal of relatives suggests that they two, both of which are related to *suo*, exhibit the same type of A-bar dependency relation. We therefore provide one argument for Kayne's (1994) promotion analysis of relativization.

1. Introduction

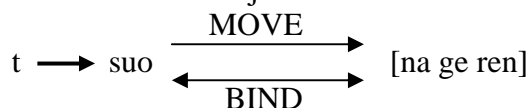
The main claim of this paper is that the functional word *suo* in Chinese is a link of a movement chain in relatives. The tail link of the chain is at the base-position of an Accusative object.

It is generally assumed that relative pronouns undergo A-bar movement, and when they are absent, a null operator does the same job:

- (1) a. the book_j [_{CP} **which_j** John has read **t_j**]]
b. the book_j [_{CP} **Op_j** (that) John has read **t_j**]]

I will argue that *suo* functions as a relative pronoun and undergoes the same movement as the relative pronouns in English, but landing at a lower position:¹

- (2) a. wo renshi [[_{CP} Baoyu **suo** tidao **t** de] na ge ren].
I know Baoyu suo mention de that cl person
'I know the person whom Baoyu mentioned.'
b. the chain of the object in the relativization:



The crucial part of my claim is the movement chain from the base-position of the embedded object, *t*, to the position between the subject and the verb. Relative pronouns in English have *wh*-features, they thus land at CP, whereas *suo* in Chinese does not have a *wh*-feature, it thus does not land at CP.

The exact syntactic status of *suo* depends on how one views the relation between *suo* and the head noun of the relative, such as *na ge ren* in (2a): In the MOVE approach, which assumes that the nominal heads a movement chain (Kayne 1994), *suo* is an overt trace or the so-called apparent resumptive pronoun in the sense of Aoun et al. (2001). In the BIND approach, which assumes that the relation between the nominal and the relative pronoun is binding, as in Chomsky (1977), Safir (1986), Browning (1991), and Demirdache (1991), *suo* is a bound pronoun.

The significance of this study is the following. On the one hand, our conclusion shows that the type of the movement in (1) can target a lower position, i.e., a clause-internal A-bar

¹ The abbreviations used in the Chinese examples are: EXP: experience aspect, PRF: perfect aspect, PRT: sentence-final aspect particle, CL: classifier, DE: modification marker.

position. This supports Fox's (1997) claim that A-bar movement targets every maximal projection (more accurately, every derivational phase). On the other hand, this study shows that Chiu's (1995) claim that *suo* heads an object clitic projection (SuoP) is wrong.

Now we present some background information about the functional form *suo*. It occurs in only two contexts. First, it occurs in relatives, including free relatives, as shown in the following. I call this *suo* the relative *suo*.

- (3) a. wo renshi [[_{CP} Baoyu **suo** tidao e de] na ge ren].
I know Baoyu suo mention de that cl person
'I know the person whom Baoyu mentioned.'
- b. Wo tongyi [[_{CP} ni gangcai **suo** shuo e de] hua].
I agree you just.now suo say de speech
'I agree with the words which you said just now.'
- c. [[_{CP} ni gangcai **suo** shuo e de] hua], wo tingjian le.
you just.now suo say de speech I hear prf
'The words which you said just now, I heard.'
- d. [[_{CP} ta **suo** queshao de] e] shi danliang.
he suo lack de be courage
'What he lacks is courage.'

Second, it occurs as a prefix of transitive verbs and with the preposition phrase headed by the preposition *wei* 'by', forming the construction [*wei* DP *suo*-V] (Lü et al. 1980). The object of the preposition encodes either a non-agent causer, as in (4), or an experiencer, as in (5).² Following Wang (1958), I call this *suo* the prefix *suo*.

- (4) a. Baoyu wei haoqixin suo-qushi, dakai-le na ga hezi.
Baoyu by curiosity suo-motivate open-prf that cl box
'Baoyu was driven by (his) curiosity, thus he opened that box.'
- b. Baoyu wei biao-mian-xian-xiang suo-mengbi.
Baoyu by surface-phenomenon suo-deceive
'Baoyu was deceived by the superficial phenomenon.'
- c. zhe ge jielun yijing wei shijian suo-zhengming.
this cl conclusion already by practice suo-prove
'This conclusion has already been proved to be true by the practice.'
- (5) a. zhe ge shishi wei qian-ren suo-wei-zhi.
this cl fact by past-people suo-un-know
'This fact was unknown to the people in the past.'
- b. zhe bu beiju zao wei guanzhong suo-shuxi.
this cl tragedy long.ago by audience suo-familiar
'This tragedy has been familiar to the audience for a long time.'

Wang (1958: 297) explicitly claims that the relative *suo* is a pronoun, whereas the prefix *suo* is not a pronoun. Historically the latter was developed later than the former.

The prefix status of the *suo* in the [*wei* DP *suo*-V] construction can be seen in its adjacency to the verb. For instance, unlike the relative *suo*, as in the a-sentences below, this *suo* cannot be separated from the verb by either an adverb or a sentential negation word, as shown in the b-sentences below:³

² Occasionally, but not always, *wei* in the [*wei* DP *suo*-V] construction can be replaced by *bei* 'by'.

³ The prefix *wei*- 'un-' in the word *wei-zhi* 'un-know' in (5a) is a constituent negation rather than a sentential negation form. This *wei*- also occurs in the nominal compound *wei-zhi-shu* 'unknown number.'

- (6) a. Daiyu **suo** renzhende kan-guo de shu
 Daiyu suo carefully read-exp de book
 ‘the books that Daiyu read carefully’
 b. zhe bu dianying zao wei naxie ren **suo**-(*kuangrende) milian.
 this cl movie long.ago by those people suo crazily like
 ‘This movie has long been liked by those people crazily.’
- (7) a. Baoyu(*meiyou) **suo** (meiyou) kan-guo de shu
 Baoyu not suo carefully read-exp de book
 ‘the books that Baoyu (did not) read’
 b. Baoyu (meiyou) wei biao-mian-xian-xiang **suo**-(*meiyou) mengbi.
 Baoyu not by surface-phenomenon suo not deceive
 ‘Baoyu was (not) deceived by the superficial phenomenon.’

I conclude that these two *suo*s are syntactically different. In this paper I will mainly discuss the relative *suo*. In section 2 I review the previous studies of the issue. In section 3 I present the properties of the relative *suo*. The computation of the prefix *suo* is discussed in section 4. Then in section 5 I present the absence of the Condition C reconstruction effect in both the shifted object and the head nominal of relatives, suggesting that they two, both of which are related to *suo*, exhibit the same type of A-bar dependency relation. Section 6 is a brief summary.

2. Review of the previous studies of the issue

More than one hundred years ago, Ma (1898) claims that *suo* is a relative pronoun. Wang (1958: 295) gives the comment on this claim that Ma follows the Western grammarians in an impropriety way (“zheyang mofang xiyang yufa bu tuo”). However, he does not say in what aspect Ma’s claim is wrong. Chiu’s (1995: 89), however, asks: “Is it [= *suo*] an XP, like a relative pronoun, as some traditional grammarians of Classical Chinese have assumed? The answer must be ‘no’ because, in contrast to relative pronouns in English, which must move to the highest SpecCP, *suo* must remain within the clause containing the extraction site.” Her observation is right to the point. However, based on this observation, we make the opposite claim: *suo* is a relative pronoun, although it does not move as far as those in English do.

Wang (1958: 295, 296) assumes that *suo* is a pronoun, occurring to the left of a transitive verb, and its function is to make the verb, the whole predicate, or the whole clause into a modifier of a noun (*dingyu*). This classical observation follows our intuition of *suo*. The goal of this paper is to give a syntactic representation of this intuition.

The most recent study of *suo* is Chiu (1995). She claim that *suo* heads an object clitic projection (SuoP), which is below NomP and higher than TP, and the head of SuoP assigns Accusative Case to its Spec position.

- (8) [NomP [SuoP [TP [NegP [AspP [VP]]]]]]

In this structure, she assumes, subjects move from VP to NomP, while objects move from VP to SuoP and they move further away, in relatives. This analysis, however, cannot account for, firstly, why the head of SuoP is overt only in relatives; secondly, why *suo* never interact with other heads, if it were a head element; and finally, why *suo* attracts objects rather than subjects, which are obviously closer to *Suo*. If there is any Case-feature clash between *suo* and subjects, the derivation should crash. Her derivation violates the Minimality condition.

We thus need a different analysis of *suo* which can capture both Ma-Wang’s classical observation and Chiu’s comment that “in contrast to relative pronouns in English, which must move to the highest SpecCP, *suo* must remain within the clause containing the extraction site.” In contrast to Paris’ (1976) claim that there is no relative pronoun in Chinese (cited by

Tsao 1986: 15), we claim that *suo* is a relative pronoun landing at a clause-internal position. In order to defend our claim, we present the syntactic properties of *suo* in next section.

3. The syntactic properties of the relative *suo*⁴

• 3.1 *Suo* occurs in relatives only

Suo occurs in relative clauses only (Tang 1976). Relative pronouns in English do not occur in complement clauses, as shown in (9a). Similarly, *suo* never occurs in complement clauses (Tang 1976) either, as shown in (9b):

- (9) a. the claim {that/*which} John left
 b. Daiyu zhidao-le [[_{CP} [Baoyu_i (*suo) zhong-le jiang] de] xiaoxi]
 Daiyu know-prf Baoyu suo get-prf prize de news
 ‘Daiyu knew the news that Baoyu had got a prize.’

Nor does *suo* occur in the so-called gapless relatives, such as those in (10), which are argued to be complement clauses of N in Li et al. (2000) and Law (2001):

- (10) a. [Baoyu (*suo) kao-shi de jieguo] wo yijing zhidao-le.
 Baoyu suo take-exam de result I already know-prf
 Lit: ‘The result that Baoyu took the exam, I already know.’
 b. Daiyu hen xinshang [Baoyu (*suo) chang ge de shengyin].
 Daiyu very admire Baoyu suo sing song de voice
 Lit: ‘Daiyu admires the voice that Baoyu sings songs.’
 c. Baoyu renshidao le [ta (*suo) zuo e de houguo].
 Baoyu realize prf he suo do evil de consequence
 Lit: ‘Baoyu realized the consequence that he did evils.’

• 3.2 *Suo* & other pronouns

Suo occurs in the position where other pronouns cannot occur (11). Alternatively, regular pronouns occur in the positions where *suo* cannot occur, for instance, post-verbal direct object (12a), indirect object (12b), genitive nominal (12c), the object of a preposition (12d), and other islands (12e) (Chiu 1995: 79).

- (11) Akiu {suo/*ta} jian-guo de na ge ren
 Akiu suo/he meet-exp de that cl person
 ‘the person whom Akiu has met’
- (12) a. Akiu jian-guo {ta/*suo} de na ge ren (in situ direct object)
 Akiu meet-exp he/suo de that cl person
 ‘the person whom Akiu has met’
 b. Akiu gei {ta/*suo} yi ben shu de na ge ren (indirect object)
 Akiu give he/suo one cl book de that cl person
 ‘the person to whom Akiu gave a book’
 c. Akiu renshi {ta/*suo} baba de na ge ren (genitive nominal)
 Akiu know he/suo father de that cl person
 ‘the person whose father Akiu knows’
 d. Akiu gen {ta/*suo} tiaowu de na ge guniang (object of a prep)
 Akiu with her/suo dance de that cl girl
 ‘the girl with whom Akiu danced’

⁴ Paul Law’s very helpful comments and criticism led to improvements of my argumentation of this section. I am grateful to him.

- e. Akiu yinwei jian-le {ta/*suo} er wu-le huoche de na ge ren (adjunct island)
 Akiu because meet he/suo so.that miss-prf train de that cl person
 ‘the person that because Akiu met him he missed the train’

3.3 *Suo* shows the properties of object relative pronouns

On the one hand, like the object relative pronoun *whom* in English, as in (13), which requires an object gap in the relative, when *suo* occurs, the gap of the relative must be that of the object. In (14), where only a subject gap occurs in the relatives, *suo* is not allowed.

- (13) the person whom {[John likes e]/*[e likes John]}
- (14) a. [e zai chufang-li (*suo) chi fan] de ren shi wo-zhangfu.
 at kitchen-in suo eat meal de person be I-husband
 ‘The person who is eating meal in the kitchen is my husband.’
- b. wo hen chongbai [e (*suo) xie na ben xiaoshuo] de zuozhe.
 I very admire suo write that cl novel de author
 ‘I admire the author who wrote that novel very much.’

On the other hand, like a relative pronoun for an object in English, which can be null, as in (15), *suo*, as noted by Lü et al. (1980), is optional in colloquial speech, and no difference in meaning arises when *suo* is absent.

- (15) the person (whom) John mentioned

The above three aspects that *suo* occurs in relatives only, occurs in the position where other pronouns do not occur, and shows properties of object relative pronouns indicates that it is a relative pronoun.

The following three aspects will show the shared properties between *suo* and shifted objects, which surface between a subject and a transitive verb, and usually bear a contrastive focus (Ernst & Wang 1995, among others).

- 3.4 Like a shifted object, *suo* occurs only when the object of the verb is a gap:

Neither shifted objects nor *suo* allows an in situ object in the clause where they occur, as shown in (16a) and (16b), respectively.

- (16) a. Akiu **na ben shu** du-guo (*ta) le.
 Akiu that cl book read-exp it prt
 ‘Akiu has read that book.’
- b. Akiu **suo** du-guo (*ta) de na ben shu
 Akiu suo read-exp it de that cl book
 ‘the book which Akiu has read’

- 3.5 Like the verb for shifted objects, *suo* occurs only when the verb of the clause is transitive (Chiu 1995: 81). Specifically, on the one hand, it does not occur if the verb is unergative, as shown below:

- (17) a. Zai nali (*suo) ku de ren shi yi ge waiguo xiaohai.
 At there suo cry de person be one cl foreign child
 ‘The person who is crying there is a foreign child.’
- b. wo kanjian-le (*suo) zhengzai paobu de yundongyuan.
 I see-prf suo prog run de sportsman
 ‘I saw the sportsman who is running.’

On the other hand, it does not occur if the verb is unaccusative:

- (18) a. wo renshi na ge gangcai (*suo) lai de ren.
I know that cl just.now suo come de person
'I know the person who came just now.'
- b. tamen zai xunzhao na tiao (*suo) chen dao hai-di de chuan.
They prog seek that cl suo sink to see-bottom de ship
'They are seeking that ship which sank into the see.'

• 3.6 Its position is that of shifted objects

The surface position of *suo* is exactly that of shifted objects. This can be seen in five aspects. First, it must be between a subject and the verb. In (19b), the shifted object *na ben shu* 'that cl book' occurs between the subject *wo* 'I', and the verb *kan* 'watch'. Similarly, in (19c), *suo* can only occur between the subject *Baoyu* and the verb *tidao* 'mention'

- (19) a. wo kan-guo **na bu dianying** le. (canonical)
I watch-exp that cl movie prt
'I have watched that movie.'
- b. wo **na bu dianying** kan-guo le. (object shift)
I that cl movie watch-exp prt
'I have watched that movie.'
- c. wo renshi [[_{CP} (*suo) Baoyu (**suo**) tidao (*suo) de (*suo)] na ge ren].
I know Baoyu mention de that cl person
'I know the person whom Baoyu mentioned.'

Second, it occurs to the left of VP-adverbials, if there is any. In (20a), the shifted object *zhe ben shu* 'this cl book' must precede the adverb *jingchang* 'often', and in (21a), the shifted object *zhe ge wenti* 'this question' must precede the manner adverbial *zixide* 'carefully'. Similarly, in (20b), *suo* must precede the adverb *jingchang* 'often', and in (21b), it must precede the manner adverbial *renzhende* 'seriously'.

- (20) a. Baoyu (*jingchang) **zhe ben shu** (jingchang) kan.
Baoyu often this cl book often read
'Baoyu often reads this book.'
- b. wo renshi [[_{CP} Baoyu (*jingchang) (**suo**) (jingchang) tidao de] na ge ren].
I know Baoyu often suo often mention de that cl person
'I know the person whom Baoyu often mentions.'
- (21) a. Baoyu **zhe ge wenti** zixide zuanyan-guo.
Baoyu this cl question carefully study-exp
'Baoyu has studied this question carefully.'
- b. [[_{CP} Baoyu **suo renzhen** zuo de] shiqing] wangwang hen chuse.
Baoyu suo seriously do de thing always very excellent
'The things which Baoyu does seriously are always very excellent.'

Third, it can only occur to the left of the distributive marker *dou* 'all'. In (22), the shifted object *na ben shu* 'that cl book' precedes *dou*. Similarly, in (23), *suo* precedes *dou*.

- (22) a. tamen **na ben shu** dou kan-guo le.
they that cl book all read-exp prt
'They all have read that book.'

- (23) b. *tamen dou **na ben shu** kan-guo le.
 a. tamen **suo** dou kan-guo de na ben shu
 they suo all read-exp de that cl book
 'the book that they all have read.'
 b. *tamen dou **suo** kan-guo de na ben shu.

Fourth, it occurs to the left of the sentential negation. In (24a), the shifted object *zhe ben shu* 'this cl book' precedes *meiyou* 'not.' Similarly, in (24b), *suo* precedes *meiyou* 'not.'

- (24) a. Baoyu **zhe ben shu** meiyou kan-guo.
 Baoyu this cl book not read-exp
 'Baoyu has not read this book.'
 b. Baoyu **suo** meiyou zuo de shiqing hen duo.
 Baoyu suo not do de thing very many
 'The things which Baoyu has not done are very many.'

Fifth, *suo* is clause-bound unless in a restructuring construction. In (25a), the shifted object *zhe ben shu* 'this cl book' is related to the object gap in the embedded clause. The sentence is unacceptable. However, (25b), where the matrix verb is the control verb *dusuan* 'plan,' and the same shifted object which is related to the embedded verb, is acceptable. The same contrast is seen in *suo*. In (26a), *suo* occurs with an object gap in the embedded clause. The sentence is not acceptable. However, (26b), where the matrix verb is the control verb *dusuan* 'plan,' *suo* occurs with an object gap in the embedded clause, is acceptable.

- (25) a. *Baoyu **zhe ben shu** tingshuo [Daiyu kan-guo le]
 Baoyu this cl book hear Daiyu read-exp prt
 b. Baoyu **zhe ben shu** dusuan [mingtian kan]
 Baoyu this cl book plan tomorrow read
 'Baoyu plan to read this book tomorrow.'
 (26) a. *[Baoyu **suo** tingshuo [Daiyu tidao]] de na ge ren
 Baoyu suo hear Daiyu mention de that cl person
 b. [Baoyu **suo** yizhi dasuan [zuo]] de shiqing
 Baoyu suo always plan do de thing
 'the thing that Baoyu always plans to do'

The above three aspects and the fact that *suo* does not occur in islands (3.2) suggest that *suo* is a link of a movement chain, and the type of the chain is that of object shift.

3.7 Summary

The fact that *suo* occurs in relatives only, occurs in the position where other pronouns do not occur, and shows properties of object relative pronouns indicates that it is a relative pronoun.⁵

⁵ Zhang (2001) concludes that relative pronouns can license an apposition relation between a DP and another DP which contains a beheaded relative. However, *suo* cannot, as shown in (ib):

- (i) a. Baoyu suo ri-ye sinan de e shi Daiyu.
 Baoyu suo day-night miss de be Daiyu
 'The person Baoyu missed day and night was Daiyu.'
 b. Daiyu, Baoyu suo ri-ye sinian de *(na ge guniang), shi ge nanfang-ren.
 Daiyu Baoyu suo day-night miss de that cl girl be cl southern-person
 'Daiyu, the girl whom Baoyu missed day and night, was from the south.'

Presumably, the licensing of apposition has a locality condition. Unlike the CP-peripheral relative pronouns in English, *suo*, which is vP-peripheral, is never adjacent to the null head of beheaded relatives. I leave this for future research.

The fact that *suo* is related to an object gap, does not occur in islands, and occurs only where shifted objects do shows that it is a link of a movement.

Object shift in Chinese is an operation associated with a surface semantic effect (e.g. contrastive focus), in the sense of Chomsky (2001). Thus shifted objects land at a clause-internal A-bar position. Presumably, it is a vP-phase peripheral position. Accordingly, *suo* also occurs in this clause-internal A-bar position. This follows the general assumption that the movement of relative pronouns land at an A-bar position.

4. The prefix *suo*

Unlike the relative *suo*, we showed in section 1 that the prefix *suo*, which occurs in the [wei DP suo-V] construction, must be adjacent to the verb. We repeat our example (4a) below:

- (27) Baoyu wei haoqixin suo-qushi, dakai-le na ga hezi.
 Baoyu by curiosity suo-motivate open-prf that cl box
 ‘Baoyu was driven by (his) curiosity, thus he opened that box.’

In this section we argue that the prefix *suo* is an internal argument of the hosting verb and is incorporated into the verb. The operation is similar to that of unergative verbs assumed by Hale & Keyser (1993 & their later works). There are three facts to support our claim.

Fact-1: The hosting verb of the prefix *suo* must be transitive. This fact suggests that the verb must have an internal argument. In (28a), the verb is unaccusative, and in (28b) the verb is unergative. In both cases, the [wei DP suo-V] construction is not acceptable.

- (28) a. *Akiu wei {qian/Baoyu} suo lai. (unaccusative)
 Akiu by money/Baoyu suo come
 b. *Akiu wei na bu dianying suo ku. (unergative)
 Akiu by that cl movie suo cry

Fact-2. There is no post-verbal object in the [wei DP suo-V] construction. As we see in (29), the occurrence of an in situ object *ta* ‘he’ makes the sentence unacceptable.

- (29) Baoyu wei haoqixin suo-qushi (*ta), dakai-le na ga hezi.
 Baoyu by curiosity suo motivate he open-prf that cl box
 ‘Baoyu was driven by (his) curiosity, thus he opened that box.’

The above two facts can be accounted for if we assume that *suo* is the internal argument of the hosting transitive verb, and the post-verbal object gap is the trace of the incorporation of *suo* into the verb. The effect of this incorporation is that one the one hand, after the incorporation, the verb functions like an unergative rather than transitive verb, and thus is not able to assign any theta role and Case to an argument (Hale & Keyser). The nominal in the *wei*-PP gets its theta role and Case from the preposition *wei*, and the subject of the construction, like the subject of a regular unergative verb, get its theta role and Case externally. On the other hand, after the incorporation, *suo* is not able to move alone as it does in relatives. Thus we see that *suo* in this construction has to be adjacent to the verb.

Fact-3: Unlike regular unergatives, whose subject is always agentive, the subject of the [wei DP *suo*-V] construction is always semantically related to the patient of the verb. This fact can be accounted for by the assumption that *suo* is a bound pronoun, base-generated in the object position, and needs a c-commanding binder. The subject is the binder.

If the above analysis is right, we claim that in the [wei DP *suo*-V] construction not only the hosting verb is changed from a transitive to an unergative verb, but also *suo* is not

able to move to an A-bar position to relativize a clause, after it undergoes the head movement of incorporation.

To conclude, first, *suo* is always base-generated as sister of a verb. Second, it either relativizes a clause if it undergoes an A-bar movement, or detransitivizes the verb if it is incorporated into the verb. In the former case, it lands between the subject and the verb. This short relativization movement supports Fox's (1997) claim that A-bar movement also targets a clause-internal position. In the latter case, however, it lands to the immediate left of the verb. Third, it always has the properties of a bound pronoun, requiring a binder. In relatives, like relative pronouns in English (Demirdache 1991), its binder is the head noun of the relative: whereas in the [wei DP suo-V] construction, its binder is the subject of the construction.

5. Object Shift, the head of relatives, and the Condition C reconstruction effect

5.1 The absence of the Condition C reconstruction effect in relative heads⁶

In English, heads of relatives do not show the Binding Condition C reconstruction effect (Munn 1994: 402, Sauerland 2000). In (30a), the head of the relative, *the picture of Bill*, contains a proper noun, and the relative contains the pronoun *he* which is coreferential with the proper noun. Similarly, in (30b), the head of the relative, *the relative of John*, contains a proper noun, and the relative contains the pronoun *he* which is coreferential with the proper noun.

- (30) a. the picture of Bill_i that he_i likes (Munn's (15))
b. The relative of John_i that he_i likes lives far away. (Sauerland's (2a))

This fact seems to challenge Kayne's promotion hypothesis of relativization, which assumes that the head noun of a relative clause is raised from the relative clause. For instance, if *the picture of Bill* in (30a) is base-generated in the relative clause, before it raises, it is coreferential with *he*, a c-commanding pronoun. This co-referential relation violates the Binding Condition C. So, theoretically, the sentence should be illegal, contrary to the fact.

To explain this fact, Munn (1994) adopts the traditional matching assumption that the head of relatives is generated external to the relatives, and the dependency between the head and the chain created by relative pronouns or their covert counterpart is binding rather than movement. Sauerland (2000), however, considering facts such as the obligatory reconstruction effects of Binding Condition A and idiom chunks, claims that both Kayne's promotion and the traditional matching hypotheses are possible, and the absence of the Condition C reconstruction effect in the head of relatives crucially excludes the promotion possibility in the relevant data, such as (30) above.

In Chinese, we see the same absence of the Condition C reconstruction effect in the head of relatives. In (31a), the head of the relative, *Baoyu de zhaoxiangji* 'Baoyu's camera,' contains a proper noun, and the relative contains the pronoun *ta* 'he' which is coreferential with the proper noun. As in (30) above, the sentence is acceptable. In contrast, in (31b), where no relative clause occurs, the proper noun *Baoyu* cannot be co-referential with the c-commanding *ta* 'he', a Condition C effect. The data in (32) show the same contrast. In this case, the position of the relative clause with respect to the head noun plays no role. In (32a), the relative clause is not at the peripheral position of the hosting nominal, whereas in (32b), it is. In both cases, the proper noun *Lao Li*, which is contained in the head noun, can be coreferential with the subject of the relative clause, *ta* 'he.' In (32c), the co-referential

⁶ I am grateful to Hans-Martin Gaertner, Roland Hinterhoelzl, and Paul Law for discussion of the theoretical issue of this section with me, and to Audrey Li for discussion of the relevant Chinese facts with me. Note that in her works she never admits or denies the presence of this type of reconstruction effect in Chinese relativization.

relation between the subject *ta* ‘he’ and the object-internal *Lao Li* is not allowed, as expected from the condition C.

- (31) a. Zhuo-shang fang-zhe [Baoyu_i de [ta_i zuotian xiuli de] zhaoxiangji].
table-on put-prg Baoyu de he yesterday fix de camera
‘On the table is Baoyu’s camera that he fixed yesterday.’
b. ta_i zuotian xiuli-le Baoyu_{j/*i} de zhaoxiangji.
he yesterday fix-prf Baoyu de camera
‘He fixed Baoyu’s camera yesterday.’
- (32) a. meiyi ben Lao Li_i de [ta_i cong-xiao jiu xihuan de] shu
every cl Lao Li de he from-childhood then like de book
‘Lao Li’s every book that he has liked since his childhood’
b. [ta_i cong-xiao jiu xihuan de] meiyi ben Lao Li_i de shu
he from-childhood then like de every cl Lao Li de book
‘Lao Li’s every book that he has liked since his childhood’
c. ta_i cong-xiao jiu xihuan meiyi ben Lao Li_{j/*i} de shu
he from-childhood then like every cl Lao Li de book
‘He has liked Lao Li’s every book since his childhood’

We thus see that relatives in the two languages behave the same with respect to the absence of the condition C reconstruction effect.

5.2 The absence of the Condition C reconstruction effect in shifted objects

Both Qu (1994) and Shyu (1995: 105) note that displaced objects occurring between a subject and a transitive verb do not show the Condition C binding reconstruction effect. In addition to their data, I provide the pair in (33) to show the same point. The two sentences differ only in that the embedded object *Baoyu de zixingche* ‘Baoyu’s bike’ undergoes an object shift in (33a), but not in (33b). Since the matrix verb is the restructuring or control verb *quan* ‘advise’, the object lands in the matrix clause. In (33b), the object, which contains the proper noun *Baoyu*, cannot be co-referential with the c-commanding PRO, which is controlled by *ta* ‘he’. This is the Condition C effect, as expected. In (33a), however, the effect disappears: *Baoyu* and *ta* can be co-referential, indicating that there is no Condition C reconstruction effect on the shifted object.

- (33) a. Wo Baoyu_i de zixingche quan ta_i PRO_i qi-zou-le.
I Baoyu de bike advise he ride-away-prf
‘I advised Baoyu to ride his bike away.’
b. Wo quan ta_i PRO_i qi-zou-le Baoyu_{j/*i} de zixingche.
I advise he ride-away-prf Baoyu de bike
‘I advised Baoyu to ride his bike away.’

Based on this absence of the reconstruction effect, both Qu and Shyu claim that object shift in Chinese is A-movement rather than A-bar movement. However, as generally assumed, A-movement is obligatory and driven by a Case requirement. Object shift in Chinese, in contrast, is optional on the one hand, and shows no evidence of a Case-relation on the other. Moreover, such a movement usually brings about a focus reading of the moved object, a typical property of A-bar movement. We conclude that object shift in Chinese is A-bar movement rather than A-movement.

The absence of the reconstruction effect needs an account.

5.3 An argument for the promotion analysis of relativization

It is possible that the following two facts are related: the fact that both the head of relatives and shifted objects show no Condition C reconstruction effect, and the fact that both *suo*, which we have argued to be an object relative pronoun, and shifted object undergo the same type of movement (section 3). We conclude that there is a type of A-bar movement seen in relativization (Kayne's analysis) and object shift in Chinese. This type of A-bar movement shows no Condition C binding reconstruction effect consistently, for whatever reason. Moreover, the A-bar movement chain in relativization has a clause-internal intermediate link, seen in *suo*, which undergoes the movement of object shift.

6. Summary

We have argued that the functional form *suo* is always base-generated as sister of a transitive verb. It either relativizes a clause if it undergoes an A-bar movement, or detransitivizes the verb if it is incorporated into the verb. When it relativizes a clause, it lands between the subject and the verb. This short relativization movement supports Fox's (1997) claim that A-bar movement also targets a clause-internal position. In addition the absence of the Condition C reconstruction effect in both shifted objects and the head nominal of relatives suggests that they two, both of which are related to *suo*, exhibit the same type of A-bar dependency relation. We therefore provide one argument for Kayne's promotion analysis of relativization.

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