ON THE SYNTAX OF THE SUO CONSTRUCTION IN CLASSICAL CHINESE

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ABSTRACT

This paper investigates the suo construction in Classical Chinese and attempts to provide a proper syntactic analysis of it by comparing it with its modern Chinese counterpart. I extend and modify Ting's (2003a) analysis of the modern suo construction to account for the Classical suo construction. Like its counterpart in modern Chinese, the Classical suo is a clitic in overt syntax, raising from N0 to I0 in overt syntax. This explains its fixed position with respect to other elements in the clause, as well as the fact that it may stand for grammatical object, location, but not grammatical subject. The reason why it may stand for manner and reason as well as grammatical object of a preposition, in contrast to the modern suo, is due to different categorial status of coverbs in modern and Classical Chinese; namely, that modern Chinese prepositions are in fact verbs in Classical Chinese. Unlike the modern suo, which is a variable, the Classical suo undergoes further movement from I0 to C0 at LF to fulfill its operator status. I argue that this explains why suo is optional in modern Chinese, but obligatory in Classical Chinese. This analysis echoes the conventional wisdom, which may be traced back to Ma (1898) that the classical suo is a relative pronoun. But crucially I argue that suo is such a pronoun, not in the overt syntax, but at LF.

1. INTRODUCTION

Studies of relative clauses in Mandarin Chinese have long noticed the optional occurrence of the particle suo before a transitive verb in relatives (Chao (1968), Li (1947), T. Tang (1977), among others), exemplified in (1).
This usage of *suo*, in fact, is a remnant from Classical Chinese, as illustrated by the underlined *suo* sequences in (2).

(2) min suo shi zhi su (adapted from Mengzi.Tengwengong)
people SUO eat ZHI barley
‘the barley that people eat’

In this article, which compares the classical *suo* with its remnant in modern Chinese, I’m taking an approach along the lines of Ma’s (1898), i.e. the classical *suo* is a relative pronoun, but contra his in two important respects: first, *suo* behaves like a relative pronoun, not in the overt syntax, but at LF; second, *suo* is an X^0 pronominal element, rather than simply a pronoun. This analysis is an extension of Ting’s (2003a) analysis of the modern *suo*. More specifically, I propose that *suo* in Classical Chinese is an X^0 pronominal element, heading an NP in the corresponding theta-position of the head noun of the relative clause in the overt syntax, and that it is a relative operator at LF, technically characterized as bearing a [+wh] feature. Due to a morphological requirement, *suo* undergoes subsequent raising to I^0 in the overt syntax and then further raises to C^0 at LF in order to check off the [+wh] feature. This analysis will be shown to provide a proper analysis of *suo* in Classical Chinese and account for its syntactic behavior which would be otherwise left mysterious in previous analyses. This article is organized as follows: Section 2 presents basic facts of the classical *suo* and previous analyses of it. Section 3 lays out more patterns of the classical *suo* construction and suggests they also involve a relative clause structure. Before arguing that the classical *suo* also undergoes N^0 to I^0 movement like its modern counterpart in Section 5, I review the A’-bound clitic analysis of the modern *suo* put forth by Ting (2003a) in Section 4. Section 6 presents arguments for the further I^0 to C^0 movement of the classical *suo* at LF, which contrasts with requirement of the modern *suo* to stay in the I^0 position. Section 7 then deals
with some apparent problems of the proposed LF operator analysis of suō in Classical Chinese relatives and points out a promising approach to suō in Classical Chinese passives. Section 8 concludes this article.

2. BASIC FACTS AND PREVIOUS ANALYSES

The modern suō and classical suō are like and unlike each other in many respects. Consider the similarities first. Like the modern suō, which is most typically licensed in a relative clause modifying a nominal, the classical suō also occurs in a nominal. The nominal status of the classical suō construction is generally agreed on (e.g. Qi (1992, p. 6) and Yi (1989, p. 196), as evidenced by its distribution as a regular nominal phrase. For example, like a regular nominal phrase, it may be a grammatical subject (3a), nominal predicate (3b), grammatical object of a verb (3c) and of a preposition (3d), or a nominal modifier followed by zhi (3e). (The examples below taken from Yi (1989))

(3) a. 他的 SUO thick ZHE thin ER his SUO thin ZHE thick not ZHI you ye (Liji.Daxue)
   ‘Treating what is close to him unimportant, but treating what is far from him precious, there is no such thing.’

   b. 这六个 SUO person ZHE world ZHI SUO admire YE
   ‘These six people *(are) people the world admire.’ (Zhuangzi.Daotuo)

   c. 他的行为 SUO behavior legitimate will determined like correct he SUO
   ‘His behavior is reasonable and his will is determined; he likes to correct what he heard in order to modify his nature.’

   d. 他的行为 SUO behavior ZHE world ZHI SUO admire YE

(2) a. qi suo hou zhe bo er qi suo bo zhe hou wei zhi
   his SUO thick ZHE thin ER his SUO thin ZHE thick not ZHI you ye (Liji.Daxue)
   ‘Treating what is close to him unimportant, but treating what is far from him precious, there is no such thing.’
yi qi suo shou bei qi suo ci ze neng jin zhi yi
with his SUO bear violate his SUO words so can forbid ZHI Yi
(Xunzi.Zhengming)

‘He uses what he receives to contradict what he speaks, so it is possible to
rid him of this weakness.’

(3) Classical Chinese:

fan shuo zhe zhi wu zai zhi shi suo shuo zhi suo
all persuade ZHE ZHI tip exist know modify SUO say ZHI SUO
jia er mie qi suo chi (Hanfeizi.Shuonan)
proud ER eliminate his SUO shame

‘The tip of persuading depends on knowing to boast (for him) what he
feels proud of and cover what he feels ashamed of.’

Given the closely similar interpretations between (1) and (2), I tentatively
assume that the classical suo construction, as a nominal, is also modified by a
relative clause, which licenses the occurrence of suo, just like its modern
Chinese counterpart. Later in Section 3, I will elaborate on this suggestion.

Moreover, suo in both modern and Classical Chinese may be licensed in a
clause, where a grammatical object, location, but not grammatical subject, is
relativized.

(4) Modern Chinese:

a. Lisi suo ai de ren (grammatical object)
   Lisi SUO love DE person
   ‘the person that Lisi loves’

b. Lisi suo fuwu/gongzuo de jigou/difang ; women suo
   Lisi SUO serve/work DE organization/place ; we SUO
   shengeu de shehui (location)
      live DE society
   ‘the organization/place where Lisi serves/works; the society that we live’

c. * suo ai Lisi de ren ; * suo meiyou touzou naxie
   SUO love Lisi DE person; SUO haven’t steal:away those
   shoushi de xiaotou (grammatical subject)
   jewelry DE thief
‘the person that loves Lisi; the jewelry that wasn’t stolen by the thief’

(5) Classical Chinese:

a. 
liang ren zhe suo yangwang er zhongshen ye jin ruo ci
  good person ZHE SUO admire and all:life YE now like this
(Mengzi.Qiren you yi qi yi qie) (grammatical object)
‘Good person *(is) someone that one admires and relies on for the whole life; now it is like this.’

b. 
Qi bei ling Wen wang suo bi feng yu ye
  that north mountain WEN king SUO avoid storm rain YE
(Zuozhan.Xigong sanshier nian)
‘That mountain in the north *(is) where King Wen sheltered from the storm.’

c. *
  (grammatical subject)

suo geng tian zhi niu; suo shi su zhi min
  SUO plow field ZHI cattle; SUO eat barley ZHI people
‘the cattle that plowed the rice field; the people that eat the barley’

Another similarity between the modern and classical suo is its position with respect to other elements in the clause. As pointed out by Chiu (1995), suo in modern Chinese must occupy a position lower than NP-subjects and sentential adverbs, but higher than negation, manner adverbs and verbs, as indicated in (6a) with the example in (6b).

(6)  a. NP-subject S-level-adv SUO Neg manner-adv verb NP-object (Chiu (1995, p.84))

b. [Lisi (*suo) dagai suo meiyou (*suo) henhende (*suo)
  Lisi SUO probably SUO not-have SUO severely SUO piping [e]] de naxie ren
  criticize DE those person
‘the people that Lisi probably didn’t severely criticize’
(adapted from Chiu (1995), (30, 31), p. 84)
Likewise, *suo* in Classical Chinese and the verb may be intervened by adverbs (7a), negation markers in (7b), auxiliary verbs in (7c), or preposition phrases (7d), and may be preceded by temporal adverbs, a type of sentence-level adverb, in (8).

(7) a. alez luo bi tianxia suo gong chuan bao ye  
He shì bi tianxia suo gong chuan bao ye  
HE surname jade the:world SUO together recognize treasure YE  
(Shiji.Lianpo Linxiangru Liezhuan)  
‘The jade Heshi *(is) the treasure that is unanimously recognized by the world.’

b. ście yi wu suo wu suo wu you shen yu si zhe gu  
death also I SUO hate SUO hate have more YU death ZHE so huan you suo bu bi  
(Mengzi.Gaozishang)  
fear have SUO not avoid  
‘Death is what I hate. But there is something that I hate more than death. Thus, when disaster comes, I don’t avoid it.’

c. ru shi zhi shi ye yan ze zhong bu zhong fei chen suo  
if make place ten leaves YAN ZE hit not hit not I SUO neng bi yi  
(Yulizi.Qiudao)  
can certain YI  
‘If the leaves are placed there, in that case whether to hit the target or not is not what I am certain of.’

d. fa zhe tianzi suo yu tianxia gonggong ye  
law ZHE emperor SUO with the:world share YE  
(Hanshu.Zhangshizhi zhuan)  
‘The law *(is) what the king shares with the world.’

(8) Wuzixu chu suo yu ju wang (Shiji.Wuzixu liezhuan)  
Wuzixu early SUO with together die  
‘the people that Wuzixu died with earlier’
Despite these similarities, the modern and classical *suo* also contrast in several respects. First, the modern *suo* does not occur in a clause where reason (9a), manner (9b) or grammatical object of a preposition (9c), is relativized, in contrast to the classical *suo* in (10), (11) and (12).

(9)  

a. *[Lisi suo piping Zhangsan] de yuanyin (reason)

   Lisi SUO criticize Zhangsan DE reason
   ‘the reason that Lisi criticized Zhangsan’

b. *[Lisi suo zuo shi] de fangfa (manner)

   Lisi SUO do thing DE method
   ‘the way that Lisi does things’

c. *[jian suo cong___ diaoxialai] de difang

   sword SUO from fall:down:come DE place
   (grammatical object of a preposition)
   ‘the place which the sword fell down from’

(10)  

xie hui zai shen yuan zhi suo gou (Xunzi.Quanxue)

‘The evil and dirtiness are in the body. This is the reason why hatred is accumulated.’

(11)  

tari Zixia Zizhang Ziyou yi Youruo si shengren

   the:other:day Zixia Zizhang Ziyou because Yourou resemble saint

yu yi suo shi Kongzi shi zhi (manner)

   want with SUO serve Confucius serve he(Mengzi.Tengwengong)

‘The other day, Zixia, Zizhang and Ziyou wanted to serve Yourou in the way they served Confucius because he resembled him.’

(12)  

a. *wei you zhi qi suo you lai ye (Xunzi.Zhenglun)

   not have know it SUO from come YE
   ‘No one knows where it came from.’

b. *shi wu jian zhi suo cong zhui (Lushichunqiu.Chajin)

   is my sword ZHI SUO from fall
‘It is the place where my sword fell from.’

Another difference between suo in Classical and modern Chinese concerns its optionality. In modern Chinese, the occurrence of suo is optional, as shown by the well-formedness of (13).

(13) renmin (suo) chi de sumi
    people SUO eat DE barley
    ‘the barley that people eat’

In contrast to its optionality in modern Chinese (see Dong (1998) for similar remarks), suo is obligatory where it is licensed in Classical Chinese, as shown in (14) (see Yao (1998)), (15) (see S. Xu (1963)) and (16).

(14) □ *(□ )□ □
    min suo shi zhe
    people SUO eat ZHE
    ‘what people eat’
(15) □ *(□ )□ □
    min suo shi zhi su
    people SUO eat ZHI barley
    ‘the barley people eat’
(16) □ *(□ )□
    min suo shi
    people SUO eat
    ‘what people eat’

The proper analysis of the suo construction in classical Chinese has long been a controversial issue. There have been two main approaches: suo as a pronoun of some sort and suo as a construction particle (i.e. jie gou zhu ci). The former is taken by Ma (1898), according to whom suo is a jie du dai zi “connective pronoun”, ding jie qian wen “connecting to the previous text”. This analysis is further developed by Liu (1937) to be that suo is an equivalent of relative pronouns such as who or which in English. Likewise, L. Wang (1958),
Yi (1989) and S. Zhou (1993), among others, also consider *suo* a special pronoun. The latter approach, on the other hand, is pursued by F. Zhou (1961), S. Lu (1974), K. Wang (1982), D. Zhu (1983), ³ Yang and He (1992), Ye et al. (1992), among others, who all regard *suo* as a particle of some sort preceding verbs or verb phrases to form nominal constructions, referring to the object of the predicate. In addition to these two main approaches, *suo* is considered to be an affix by Yang (1955) and Xu (1966). Along this line of reasoning, it must be the case that *suo* attaches to either a verbal stem or a preposition stem in the lexicon. Those facts in (8) and (12), however, indicate that *suo* cannot be derived this way. If *suo cong zhui* in (12b) is a lexical word, it means *suo* is affixed to *cong zhui* in the lexicon, but it is not clear what lexical rule may link *cong* and *zhui* together in the lexicon. Also, in spirit with the (extended) lexical hypothesis, put forth by Jackendoff (1972), no syntactic rules have access to formation of words. Thus, a *fast employ-ee* does not have the intended meaning that the person was employed fast, with *fast* modifying *employ*. Given this, it then looks surprising that an adverb in (8) may modify the verb in the *suo* string, which should not be allowed if the *suo* string is a word formed in the lexicon. I will thus dismiss the affix approach.

In this article, then, which compares the classical *suo* with its remnant in modern Chinese, I’m taking an approach along the lines of Ma’s (1898), i.e. the classical *suo* is a relative pronoun, but contra his in two important respects: first, in my view *suo* behaves like a relative pronoun, not in the overt syntax, but at LF; second, *suo* is an *X⁰* pronominal element, rather than simply a pronoun. This analysis, an extension of Ting’s (2003a) analysis of the modern *suo*, will be shown to provide a proper analysis of *suo* in Classical Chinese and account for its syntactic behavior which would be otherwise left mysterious in previous analyses.

3. STRUCTURES OF A RELATIVE CLAUSE INVOLVED

In this section, I propose that the classical *suo* construction also involves structures of a relative clause, like its modern Chinese counterpart. To begin with, consider relatives with an empty head noun in modern Chinese, the other type of relative clause where *suo* is licensed:
The head noun of the relative clause in (17) is not overtly expressed, thus constituting a parallel with free relatives like in English (18).

(17) ni suo zuo de
   you SUO do DE
   ‘what you did’

(18) [What people eat] is not expensive.

Taking into consideration the optionality of *suo* in modern Chinese, we get the basic patterns in (19):

(19) (N) (suo) V de (N)

Next, consider more patterns where the classical *suo* is licensed. We have seen the *suo* V sequences containing a *zhi* NP illustrated in (2). The particle *zhi*, actually, need not occur, as in (20). The presence of *zhi* is noted by Qi (1992) to emphasize the nominal following it. According to Yi (1989), this pattern, not common in the pre-Qin period, did not get popular until the Han dynasty.

(20) bi xian you suo chu shi er nai yi cheng ta
    that obviously have SUO out thing ER thus with accomplish other
gu
    reason (Hanfeizi.Suonan)
   ‘He apparently achieved things that he did, yet then using it to accomplish other things.’

   The *suo* V sequence may also consists of only *suo* and a verb in (21).

(21) suo sun yi ke zhi ye (Lunyu.Weizheng)
    SUO lose gain can know YE
   ‘What is lost and gained can be known.’
Furthermore, the *suo* V sequence may be preceded by a nominal standing for the agent, with an optional *zhi* in between, as in (22). This is noted by Qi (1992) as a rather typical pattern of the *suo* construction in Classical Chinese.

(22) ilitation (Hanfeizi.Wudu)  

*officials ZHI SUO kill top ZHI SUO keep YE  

‘The people that the officials want to kill *(are) those the king keep.’

Another type of element that may follow the *suo* V sequence is *zhe*, a pronoun according to Pulleyblank (1995). In this case, the occurrence of *zhi* between *suo* and *zhe* is not attested. This pattern, as Qi (1992) notes, is rare in the literature.5

(23)  

*jun da nu yue suo qiu zhe sheng ma an shi si ma er  

*king big rage say SUO ask ZHE living horse where buy dead horse ER jian wubai jin (Zhanguoce.Yance)  

*lose five: hundred money  

‘The king said with rage, “I asked for a living horse. Why did you buy dead horses? And I lost five hundred Jin.’

The above-mentioned elements which may precede or follow the *suo* V sequence in the *suo* construction may occur simultaneously.

(24)  

a. *Yiya xian de wo kou zhi suo shi zhe ye  

Yiya first get my mouth ZHI SUO like ZHE YE  

‘Yiya got what my mouth likes first.’ (Mengzi.Gaozishang)

b. *Zhongzi suo ju zhi shi Boyi zhi suo zhu hu  

Zhongzi SUO live ZHI room Boyi ZHI SUO build HU (Mengzi.Tengwengongxia)
‘the room that Zhongzi lives, the place Bouyi built?’

‘The Han soldiers that were killed by Ji alone are a few hundred.’

Taking into consideration the obligatory occurrence of suo we have mentioned in Section 2, the basic patterns of the classical suo are summarized in (25):

(25) \((\text{N (zhi)}) \, \text{suo} \, V \, (\text{zhe}) \, ((\text{zhi}) \, \text{N})\)

Given the close similarity in terms of interpretation, it is thus reasonable to postulate that the suo construction in Classical Chinese also has the structure of relative clauses. More specifically, I propose the (partially relevant) structures in the overt syntax as in (26):

(26) a. \([\text{NP} \, [\text{CP} \, \text{ } \text{ } \text{ } \text{ } \text{ } ] \, (\text{N}) \, (\text{zhi}) \, \text{su}]\)

   people SUO eat ZHI barley

   ‘the barley that people eat’

b. \([\text{NP} \, [\text{CP} \, \text{pro} \, \text{ } \text{ } ] \, \text{pro}]\)

   SUO eat

   ‘what someone eats/what some people eat’

c. \([\text{NP} \, [\text{CP} \, \text{ } \text{ } \text{ } \text{ } ] \, \text{pro}]\)

   people SUO eat

   ‘what people eat’

d. \([\text{NP} \, [\text{CP} \, \text{ } \text{ } \text{ } \text{ } \text{ } ] \, \text{pro}]\)

   people SUO eat ZHE

   ‘what people eat’

Instances like (26a) have an explicit head noun su “barley” and min suo
shi is in a CP modifying the head noun. I assume the optional zhi to be inserted at PF. Instances like (26b-d), on the other hand, involve relative clauses with an interpretation of free relatives as in English (18) above. According to Alexiadou, Law, Meinunger and Wilder (2000), it has been generally agreed that the wh-phrase in free relatives occupies Spec CP; contra the early proposals to take the wh-phrase as the head in a Case-marked position (Bresnan and Grimshaw (1978)), they claim that the structure with an abstract head is conceptually favored. For the purpose of concreteness, I adopt the pro-head hypothesis (Borsley (1984), Harbert (1983), Suner (1985).) Thus, free relatives (26c) and (26d) have an empty pronoun zhe and an overt pronoun as the head noun of relatives respectively. Finally, the free relative (26b) has both an empty head noun and an empty subject in the relative clause.

Having established that the suo construction in Classical Chinese, like its modern Chinese counterpart, also has a structure of relative clauses, I will extend and modify the analysis of the modern suo proposed by Ting (2003a) to account for the similar and contrasting behaviors of the classical suo. It is, therefore, necessary for us to consider the facts and analysis of the modern suo put forth in Ting (2003a), where suo is analyzed as an A′-bound resumptive clitic.

4. THE A′-BOUND RESUMPTIVE CLITIC ANALYSIS OF THE MODERN SUO

The existence of such elements in natural languages can be found in colloquial Czech (27), taken from Comrie (1981).

(27) muz co ho to deves uhodilo
    man that him that girl hit
    ‘the man that that girl hit’

Now consider the structure in (28) which I suggest underlies a relative clause containing suo. Since de is obligatory even in free relatives, I assume, with Sybesma (1999), D. Xu (1997), that it is a complementizer.
Here *suo* is base-generated as the head of the NP in the complement of verb position, and bound by a null operator base-generated in SpecCP. Assuming that a head and its maximal projection share the same set of features, *suo* carries the same index as the null operator and is thus A'-bound. Due to a morphological requirement, *suo* undergoes cyclic movement out of the NP it heads and adjoins to I°, just as Romance clitics do (Burzio (1986), Kayne (1989) and Pollock (1989), among others, cf. Baltin (1982)). Such movement will importantly be subject to the Head Movement Constraint (29) (Travis (1984), which can be reduced to the Empty Category Principle as in Chomsky (1986) and Baker (1988)(30):

(29) Head Movement Constraint (HMC)

An X° may only move into the Y° which properly governs it.

(30) Empty Category Principle (ECP)

a. Traces must be properly governed.

b. A properly governs B iff A lexically governs or antecedent-governs B.
For ease of presentation, the intermediate steps to I₀ are not indicated. And note that suo moves by itself without taking the adjoined heads along with it, just as French VP-related clitics do. Possible accounts for such a phenomenon include Y. Li (1990) and Roberts (1991). Note further that in structure (28), the modern suo is A’-bound by a null operator in the overt syntax (and at LF). More arguments in favor of this A’-binding structure are to be given in Section 6.

This A’-bound clitic analysis of the modern suo explains a wide range of its features. Those relevant to the current discussion are reviewed below.

First of all, the A’-bound clitic analysis immediately accounts for the fixed position of suo in the clause in (6a), as observed by Chiu (1995), illustrated in (6b). Assuming that there is no overt V-to-I movement in Chinese unlike languages such as French (J. Tang (1990), Cheng and Li (1991), S. Tang (2001)), and that sentential adverbs and manner adverbs are respectively licensed by the I projection and a functional category immediately dominating VP (J. Tang (1990, 2000), Bowers (1993) cf. (Travis (1988)), the surface position of suo as indicated in (6) can be taken to correctly reflects that of I₀.

The A’-bound clitic analysis of suo in modern Chinese also accounts for the asymmetry that the modern suo may stand for locative (4b), but for reason or manner expressions (9a, b), or for the grammatical object of a preposition (9c-e). This asymmetry arises because the locative (and temporal) phrases are selected by the predicate, whereas the reason and manner phrases, as well as a prepositional phrase, are not. The former thus do not constitute a barrier for the head movement of suo to I₀, but the latter do. Evidence in support of the selectional contrast among these adjuncts is based on the paradigm in (31): locative and temporal phrases (31a, b) pattern on a par with argument NPs (32) (cf. (Huang (1982)), but in contrast with reason and manner phrases (31c, d), in that they are capable of moving to the sentence-initial position from inside an indirect question.

(31) a. ?(Zai) nei yi tian, ta xiang zhidao [shei t₁ shu-le qiu]
   at that day he want know [who lose game]
   ‘On that day, he wonders who lost the game.’

   b. Zai neige difang, ta xiang zhidao [shei t₁ zuo-le henjiu]
at that place he want know who sit-ASP for-a-long-time

‘At that place, he wonders who sat for a long time.’

c. *Yinwei neige yuanying1, ta xiang zhidao [shei t1 ku-le
because that reason he want know who weep-ASP
henjiu] for-a-long-time

‘Because of that reason, he wonders who wept for a long time.’

d. ??Yong neige fangfa1, ta xiang zhidao [shei t1 jiejue-le nanti]
with that method he want know who solve-ASP problem

‘With that method, he wonders who solved the problem.’

(32) Neige ren1, ta xiang zhidao [shei piping-le t1 ]
that person he want know who criticize-ASP

‘That person, he wonders who criticized [him].’

In the structure (33), if suo is base-generated in a selected PP (headed by an empty P), its extraction from the PP and movement to I0 will not violate the
ECP. Reason and manner expressions, on the other hand, are not selected and will introduce barriers for the trace of an extracted suo, so that raising of suo to I$^0$ in such cases will be ill-formed. This explains why suo in modern Chinese may stand for locative expressions, but not manner and reason expressions.

Another fact that follows from the A'-bound clitic analysis of the modern suo is its failure to stand for a grammatical subject: the so-called subject/object asymmetry as illustrated by the contrast between (4a) and (4c). Syntactic cliticization in the sense of Kayne (1975, 1983), as a sub-case of head movement, shows subject/ object asymmetry. Thus there are object and dative clitics, but no syntactic subject clitics in French (Kayne (1983: 123-24)) and in Italian (Rizzi (1986: 392)). The subject/object asymmetry in fact holds generally for head movement, e.g. noun incorporation in Baker (1988).

The above arguments are thus in favor of an A'-bound clitic analysis of the modern suo. Given the close semantics between the suo construction in modern and Classical Chinese, it will be desirable if the analysis of the modern suo can be extended to the classical suo. I will suggest that this expectation is fulfilled only partially. Like its modern counterpart, the classical suo also occurs in structures of a relative clause (discussed in Section 3) and undergoes N$^0$ to I$^0$ movement in the overt syntax (to be discussed in Section 5); but unlike in modern Chinese, suo further moves from I$^0$ to C$^0$ at LF to realize its operator status (to be discussed in Section 6).

5. N$^0$ TO I$^0$ MOVEMENT OF THE CLASSICAL SUO IN OVERT SYNTAX

I now extend the A'-bound clitic analysis of the modern suo to account for the facts of the classical suo. If suo in Classical Chinese raises from an NP it heads to the I$^0$ position, like its modern Chinese counterpart, we immediately account for two types of facts of it; namely, that it may stand for grammatical object (5a), location (5b, c), but not grammatical subject (5d), as well as its position with respect to other elements in the clause, exemplified in (7) and (8). The facts of the classical suo exactly parallel those of the modern suo. The N$^0$ to I$^0$ movement analysis of suo in the overt syntax thus readily carries over to its counterpart in classical Chinese.

It may, however, appear surprising that the classical suo, in contrast to its modern Chinese counterpart, may stand for manner/reason phrases in (10) and
(11) and the grammatical object of a preposition in (12). I will argue that these facts also follow from the clitic analysis of *suo* if a certain independent syntactic difference between the Classical and modern Chinese is taken into consideration; namely, that prepositions in modern Chinese are actually of the verbal status in Classical Chinese. The so-called prepositions in Classical Chinese, a closed class of morphemes also termed as coverbs, are claimed to be transitive verbs at earlier stages of the language, according to Li and Thompson ((1974), citing L. Wang (1958)). (The following examples are quoted from Li and Thompson (1974)).

(34) bi cao er zhang yi cong zhi. (Li ji)
    must use your stick to follow (it)
    ‘You must wield your stick to follow it.’

Although as one of the reviewers points out, not all the prepositions in Classical Chinese behave uniformly, there is good reason to think that at least some of them behave like verbs. I will present two arguments. The first is based on the fact that the objects of coverbs like *yi* (以), *wei* (為) and *yu* (與), which may be inferred from the context, can be dropped ((Yi, (1989), Q. Xu (1997)) in (35). This is a behavior of verbs in (36) (Yi, (1989)).

(35) a. xiao ren you mu jie chang xiao ren zhi shi yi
    small:person have mother all taste small:person ZHI food YI
    wei chang jun zhi geng qing yi wei ZHI
    not:yet taste king ZHI soup ask with give zhi
    (Zuozhuan.Yingong yuannian)
    ‘I have a mother, who eats my food all the time and hasn’t tasted your majesty’s soup. I’m asking you to give *(it) to her.’

(36) Simaniu you yue ren jie you xiong di wo du wu
    Simaniu worry say person all have brother I only no
‘Simaniu said worriedly, “people all have brothers, but I don’t have *(brothers).’ (Lunyu.Yanyuan)

Coverbs also behave on a par with verbs in that they require their interrogative pronominal object to be preposed before them in (37), a behavior, again, of verbs, as shown in (38).

(37) zi gui he yi bao wo (ZuoZhu. Chenggong sannian)  
you return how YI reward I  
‘When you go back, how are you going to pay me back?’

(38) wu shui qi qi tian hu (1Lunyu.Zihan)  
I who cheat cheat sky HU  
‘Who did I deceive? I deceived the heaven.’

Given that coverbs belong to the category of verbs in Classical Chinese, now it should be clear why *suo may stand for the object of a preposition in Classical Chinese. The structure is exactly on a par with the structure with *suo moving from the complement position of a verb. Consider the representation in the overt syntax in (39).

(39) [[wu jian zhi suoyi cong t1 zhu] pro1]  
my sword ZHI SUO from fall  
‘the place where my sword fell from’

The trace left by the head movement of *suo in the object position of the preposition can be properly governed, and thus licensed.

This property of coverbs behaving as verbs in Classical Chinese is also crucial to explain the contrast why *suo may stand for reason or manner in Classical Chinese, but not in modern Chinese. According to L. Wang (1976, p. 68), K. Wang’s (1982, p. 92) and Yi’s (1989, p. 199) observations, all the instances of *suo standing for manner, reason or locative can be followed by an
appropriate coverb, and may be interpreted as containing a dropped coverb. Given that coverbs belong to the category of verbs in Classical Chinese, I will translate the dropped coverb to be an empty verb. These instances at issue can thus be analyzed on a par with those where suo stands for grammatical object of the predicate, as in the representations in (40).

(40) a. [ [ [ [ [ V_e \ t_1 \ ] \ ] \ ] \ ] \ ] pro \_1 ] (reason) [ [ [ [ fa zhi suo \_1 V_e \ t_1 wu yong ] pro \_1 ] ye law ZHI SUO no use YE ‘the reason why the law is of no use’

b. [ [ [ [ V_e \ t_1 ] \ ] \ ] \ ] pro \_1 ] (manner) da guan da yi [ [ [ [ [ shen zhi suo \_1 V_e \ t_1 bi ] pro \_1 ] big official big territory body ZHI SUO shelter ye YE ‘High rankings and big territories *(are) what the life is sheltered by.’

6. I^0 TO C^0 MOVEMENT OF THE CLASSICAL SUO AT LF

We are now left with the last and also a crucial difference between suo in modern and Classical Chinese, namely, that it is optional in the former, but obligatory in the latter. To account for this fact, I propose that the classical suo undergoes further movement from I^0 to C^0 at LF. Since it lands in an operator position, it has an operator status. The modern suo, in contrast, stays in I^0 and is A’-bound by a null operator in overt syntax, and thus a variable.

Let’s first consider how we are led to such a proposal by considering the (non)-optionality contrast of suo in modern and Classical Chinese. In Modern Chinese, both movement and binding of null operator operation are available in the derivation of relative clause, as illustrated in (41).

(41) a. [Op \_1 [renmin chi __\_]] de sumi \_1 operator movement

b. [Op \_1 [renmin suo \_1 chi __\_]] de sumi \_1 operator binding
c. [Op \_1 [__\_ chi sumi]] de ren \_1 operator movement
d. *[Op \_1 [__\_ svo \_1 chi sumi]] de ren \_1 clitic movement not allowed
The clauses containing a gap in (44a, c) involve operator movement from grammatical object and subject position respectively. The clause containing suo and a gap in grammatical object position involves binding by a base-generated operator in (41b). The one containing suo, but with a gap in grammatical subject position in (41d), is not allowed, because clitics in general are not associated with a grammatical subject.

Turning to Classical Chinese, we see that operator movement from grammatical subject position is possible in (42a). If the classical suo construction is exactly parallel to its modern counterpart, then (45b) involves operator binding just as (41b). And in (42c), like (41d) in modern Chinese, clitics are not allowed to be associated with grammatical subject. But now (42d) becomes a problem. Given that both the movement and binding of null operator operations are available, the question arises why null operator movement from grammatical object position is not allowed in Classical Chinese.

(42) a. $[\text{Op}_1 [\_\_ \Box \Box ]] \Box \Box$ 
   $[\text{Op}_1 [\_\_ \text{shu } \text{zhi } \text{min }]]$ 
   
   operator movement

   $[\text{Op}_1 [\_\_ \text{shi } \text{su } \text{zhi } \text{min }]]$ 
   $[\text{Op}_1 [\_\_ \text{shu } \text{zhi } \text{min }]]$ 
   $[\text{Op}_1 [\_\_ \text{shi } \text{su } \text{zhi } \text{min }]]$ 
   people SUO eat ZHI barley

b. $[\text{Op}_1 [\Box \Box \Box \Box ]]$ 
   $[\text{Op}_1 [\_\_ \text{shu } \text{zhi } \text{min }]]$ 
   $[\text{Op}_1 [\_\_ \text{shu } \text{zhi } \text{min }]]$ 
   $[\text{Op}_1 [\_\_ \text{shu } \text{zhi } \text{min }]]$ 
   $[\text{Op}_1 [\_\_ \text{shu } \text{zhi } \text{min }]]$ 
   operator binding

   $[\text{Op}_1 [\text{min } \text{suo } \text{shi } \_\_]]$ 
   $[\text{Op}_1 [\_\_ \text{shi } \_\_]]$ 
   $[\text{Op}_1 [\_\_ \text{shi } \_\_]]$ 
   $[\text{Op}_1 [\_\_ \text{shi } \_\_]]$ 
   $[\text{Op}_1 [\_\_ \text{shi } \_\_]]$ 
   $[\text{Op}_1 [\_\_ \text{shi } \_\_]]$ 
   people SUO eat ZHI barley

c. $*[\text{Op}_1 [\_\_ \Box \Box \Box ] ] \Box \Box \Box$ 
   $*[\text{Op}_1 [\_\_ \text{shi } \text{su } \text{zhi } \text{min }]]$ 
   $*[\text{Op}_1 [\_\_ \text{shi } \text{su } \text{zhi } \text{min }]]$ 
   $*[\text{Op}_1 [\_\_ \text{shi } \_\_]]$ 
   clitic movement not allowed

   $*[\text{Op}_1 [\_\_ \text{shi } \text{su } \text{zhi } \text{min }]]$ 
   $*[\text{Op}_1 [\_\_ \text{shi } \_\_]]$ 
   $*[\text{Op}_1 [\_\_ \text{shi } \_\_]]$ 
   $*[\text{Op}_1 [\_\_ \text{shi } \_\_]]$ 
   $*[\text{Op}_1 [\_\_ \text{shi } \_\_]]$ 
   $*[\text{Op}_1 [\_\_ \text{shi } \_\_]]$ 
   SUO eat ZHI barley

d. $*[\text{Op}_1 [\Box \Box \Box \Box ]]$ 
   $*[\text{Op}_1 [\_\_ \Box \Box \Box ] ] \Box \Box \Box$ 
   Why isn’t operator movement allowed?

   $*[\text{Op}_1 [\text{min } \text{shi } \_\_]]$ 
   $*[\text{Op}_1 [\text{min } \text{shi } \_\_]]$ 
   $*[\text{Op}_1 [\text{min } \text{shi } \_\_]]$ 
   $*[\text{Op}_1 [\text{min } \text{shi } \_\_]]$ 
   $*[\text{Op}_1 [\text{min } \text{shi } \_\_]]$ 
   $*[\text{Op}_1 [\text{min } \text{shi } \_\_]]$ 
   people SUO eat ZHI barley

The derivation in (42b) apparently blocks that in (42d). Since the former involves operator binding and the latter involves operator movement, it is tempting to adopt Tsai’s (1994, 1999) Lexical Courtesy Hypothesis, which states in essence that the binding operation is preferred to that of movement. This approach, however, does not work, since it would wrongly rule out operator movement from grammatical object position in modern Chinese (41c). Let’s now
take a different approach, still along the line of having the representation containing *suo* in (42b) blocking that without *suo* in (42d), but this time from the perspective of fundamental difference between the nature of *suo* in modern and Classical Chinese. Suppose that instead of staying in I₀, the classical *suo* is an operator and has to further move to C₀ at LF to realize its operator status. The two-stage derivation is illustrated in (43).

(43) a. Before Spell-out: \[ CP \square \square t_1 \square C^0 \square \]
\[ [CP [min \; suo_1 \; shi \; t_1 \; ] [C^0 \; ] \; zhi \; su_1 \]
\[ \text{people SUO eat ZHI barley} \]

b. At LF: \[ CP \square \square t_1 \square C^0 \square \]
\[ [CP [min \; t_1 \; shi \; t_1 \; ] [C^0 \; seu_1 \; ]] \; su_1 \]

Now how does the further LF movement of *suo* from I₀ to C₀ in (43b) block the overt null operator movement in (44)?

(44) \[ CP \; Op_1 \; [C \square \square t_1 \; ] \; [C^0 \; ] \; \square \; \square \]
\[ [CP \; Op_1 \; [C \; \text{min} \; shi \; t_1 \; ] \; [C^0 \; ] \; zhi \; su_1 \]
\[ \text{people eat ZHI barley} \]

Since both *suo* and the null operator move into CP, they qualify as operator of some sort. The crucial difference between them is that *suo* is a head and moves at LF, while the null operator is an XP and moves in the syntax. According to the economy principle (Chomsky (1991)), overt syntactic movement is more costly than LF movement. Let’s further assume that moving a phrase is more costly than moving a head. This assumption is not unreasonable: whenever one can move a head, one would never move a phrase because phrasal movement always “pied-pipes” more stuff with it, and is thus less economical. As a result, the derivation in (43b) that involves head movement at LF blocks the derivation in (44), which involves XP movement in the syntax.

The modern *suo*, in contrast, stays in the I₀ position in the overt syntax and at LF. Being A’-bound by the null operator, it is a variable. The optionality of the modern *suo* follows from its variable status. To see this, let’s assume Chao and Sells’ (1983) and Sells’ (1984) analysis that Hebrew-type resumptive pronouns are true variables, but English-type resumptive pronouns are not, but
E-type pronouns (following Evans (1980)). The former, but not the latter, may alternate with gaps and not restricted within islands (45), and in addition may have a quantificational NP as head noun of the relative clause (46).

(45)  a. Hebrew: ze ha-?is se (?oto) ra?iti ?etmol
    this the-man that him saw-I yesterday
    “This is the man that I saw (*him) yesterday.”
    b. English: I’d like to meet the linguist that Mary couldn’t remember if she had seen *(?him) before.

(46)  a. Hebrew: kol gever se dina xosevet se hu ?ohev et rina
    every man that Dina thinks that he loves Rina
    “Every man that Dina thinks loves Rina.”
    b. English: *I’d like to meet every linguist that Mary couldn’t remember if she had seen him before.

It is clear that the proposed resumptive clitic suo behaves on a par with the Hebrew-type, but not the English-type, resumptive pronouns. As shown in (47), suo may be optional and have a quantificational head noun. These facts support the proposed analysis of the resumptive clitic suo in modern Chinese as a variable.9

(47) meiyige Lisi (suo) jiao-guo san nian de xuesheng
    every Lisi SUO teach-ASP three year DE student
    ‘Every student that Lisi taught (*him) three years.’

To reiterate, the modern suo is a variable, staying in I0 (after raising from N0), A’-bound by a null operator; the classical suo is an operator and must undergo further movement to C0 at LF to realize its operator status. In the latter case, the relative containing suo does not contain a null operator base-generated in SpecCP; so it is the further movement of suo to C0 that establishes an operator-variable relation for interpreting the structure as a relative. Moreover, the further movement of suo is also forced by its being an operator: it must move to an A’-position in order to bind a variable like any other operator. This analysis, in a sense, echoes the conventional wisdom which may be traced back to the idea
of “connecting pronoun” in Ma (1898). Liu (1937), pursuing Ma’s insight, treats suo as a relative pronoun like who or which in English. My analysis here crucially differs from such a line of reasoning in that suo is such a pronoun, not in the overt syntax like English, but at LF. This difference can be seen by comparing the classical suo, which has been argued to be a relative operator at LF, with the English relative pronoun, a relative operator in the overt syntax:

(48) a. ].'This is what I heard that Lisi ate.’
   b. *.’This is the thing which [I heard [Lisi ate]]
   c. This is the thing which [I heard [Lisi ate]]

As shown in (48a), suo must remain in the clause containing the gap and cannot occur in a higher clause in (48b). This behavior clearly differs from the syntactic relative pronoun in English, which must move to a higher clause, as shown in (48c).

7. FURTHER DISCUSSION

In this section, I’d like to first consider some apparent counterexamples for the proposed analysis of suo in Classical Chinese and then examine the possibility of extending this analysis to suo in classical passive constructions. The first set of counterexamples concern the instances where a grammatical object is seemingly relativized without the occurrence of suo, as in (49).

(49) a.  you bu su zhi ke san ren lai (Yijing.Xupian)  ‘There are three guests that were not invited coming.’
   b.  )

As shown in (48a), suo must remain in the clause containing the gap and cannot occur in a higher clause in (48b). This behavior clearly differs from the syntactic relative pronoun in English, which must move to a higher clause, as shown in (48c).
you zui zhe bi zhu zhu zhe bu yuan
have crime ZHE must kill kill ZHE not hate
king zui zhi suo sheng ye (Hanfeizi.Nansan)
shang crime ZHI SUO reach YE
‘People who get the blame must be killed and they don’t hate the king,
because their offenses caused it.

Examples with zhe in (49b), taken from D. Zhu (1983), are regarded by
him as problems for his analysis that the particle zhe is used to “extract” subject,
while the particle suo is used to “extract” object, since in these examples an
object is “extracted” but the concurring particle is zhe, instead of suo. These
examples and the one with a zhi NP in (49a) also pose problems for my analysis
that suo must be obligatory in clauses with object relativized. I will argue that in
these examples, the relativized elements in fact start from the grammatical
subject position, not the grammatical object position. As L. Wang (1958) (also
see Qi, (1989, p. 213) (cf. D. Zhu (1983), Dan Xu (2002)) points out, the same
verbal forms can be employed to convey passive sense, as in (50).

(50) a. 總 (Mengzi.Liluo xia)
    jian xing yan ting (Mengzi.Liluo xia)
    advice follow words hear
    ‘When I was in the country, the advice I gave to the king was followed
    and the comments I made were heard.’
b. 魯 (Zhuangzi)
    Lu jiu buo er Handan wei (Zhuangzi)
    Lu wine mild ER Handan siege
    ‘The Lu wine was mild and the Handan city got under siege.’

As shown in (50), the patient NP is in the grammatical subject position
and the verb does not carry any passive markers. Given this fact, there is good
reason to believe that the examples in (49) both involve relativization from the
subject position, but not from the object position. If they involved object
relativization, the occurrence of suo would be required. This analysis predicts
relative clauses which have an overt grammatical subject and have the
grammatical object relativized, but do not contain *suo* to be ill-formed. This is exactly what we see earlier in Section 5 and 6. That is, forms like \[NP \ V \ zhe\] and \[NP \ V \ zhi \ NP\] (with the intended meaning of *zhe* and *zhi* NP standing for the patient argument) are never attested.\(^{11}\)

Another set of potential counterexamples are concerned with examples in (51).

\[
\text{(51) \text{不完 \ he \ suo \ si \ wen \ nu \ he \ suo \ yi (Mulanci)}}
\]
\[
\text{ask woman what SUO think \ ask \ woman what SUO remember}
\]
\[
\text{‘I asked the woman what she thought of and what she recalled.’}
\]

Such examples seem to pose problems for the proposed analysis in that if the question word is the grammatical object of the predicate preceded by *suo*, it would have to compete with *suo* for the same grammatical object position to be generated in, and thus we’d expect their ill-formedness, contrary to fact. This problem, however, may receive a reasonable explanation if we adopt Qi’s (1989, p. 55) and K. Wang’s (1982, p. 96) suggestion that the question word *he* ‘what’ is a nominal predicate, fronted before \[suo \ V\], which is the subject of a judgment construction. Therefore, the sequence \[*he \ suo \ V\] in (51) actually is derived from \[suo \ V \ (wei) \ he\]. Such a sequence as [NP (wei) he] is well attested, as in (52), taken from Liu (1937).

\[
\text{(52) \text{元 \ nian \ zhe \ he \ jun \ zhi \ shi \ nian \ ye (Gongyang.Yingong.yuannian)}}
\]
\[
\text{first \ year \ ZHE \ what \ king \ ZHI \ start \ year \ YE}
\]
\[
\text{‘What’s the first year? It is the beginning year of the king. What’s spring?}
\]
\[
\text{It’s the beginning of a year.’}
\]

If, instead, *he* in the sequence \[*he \ suo \ V\] were an object, then its occurrence before the nominal \[suo \ V\] would be mysterious, because (grammatical) object question words, after the Han period, may optionally come before a verb, but never before a nominal (see, for example L. Wang (1976) for discussion). We thus conclude that the sequence \[*he \ suo \ V\] does not pose problems for the proposed analysis of the classical *suo*.
In addition to its presence in a relative-type construction, \textit{suo} is also well-known to have optionally occurred in classical passive constructions, most notably the \textit{wei} passives since the Han period according to Wang (1958) as shown in (53a), and (53b).

(53) a. \texttt{Wei taizi \textit{wei} Jiangchong \textit{suo} bai (Hanshu.Huoguang Zhuan)}

\textit{Wei prince WEI Jiangchong SUO defeat}

‘Prince Wei was defeated by Jiangchong.’

b. \texttt{Dai bu \textit{cong} sui yu \textit{zhan} guo \textit{wei} \textit{suo} sha (Sanguozhi.Weishu.Wudiji)}

\textit{Dai not follow then with fight indeed WEI SUO kill}

‘Dai didn’t follow the order, then fought with (him) and indeed got killed.’

Given the optionality of \textit{suo} in Classical \textit{wei} passives, we are led to the conclusion that \textit{suo} in classical passives should be analyzed as a variable on a par with \textit{suo} in modern Chinese, rather than as an operator like \textit{suo} in classical relatives. In other words, \textit{suo} in classical passives is a resumptive clitic, which is not required to undergo further $I^0$ to $C^0$ raising at LF. Using the distribution of \textit{suo} as an important clue, I compare the structural differences between the classical passive constructions and the modern Chinese \textit{bei}-constructions that I studied in Ting (1998) in a separate paper (see Ting (in preparation) for details).

8. CONCLUSION

In this article, I have compared the distribution of \textit{suo} in modern and Classical Chinese and argued that \textit{suo} is a variable in modern Chinese, but an operator in Classical Chinese. As a clitic, it undergoes $N^0$ to $I^0$ movement in the overt syntax in both modern and Classical Chinese. But in contrast to modern \textit{suo} staying in the $I^0$ position, the classical \textit{suo} undergoes further movement from $I^0$ to $C^0$ to realize its operator status at LF. This analysis is argued to account for all the similarities and contrasts between the modern and classical \textit{suo}. 
NOTES

* I’d like to express my gratitude to Yafei Li for his support, comments and suggestions on various versions of this article. I’d also like to thank Alain Peyraube for kindly giving me references on the classical *suo* with which I could start this study and for the enlightening discussion as well. For valuable comments I wish to thank the anonymous referee. Earlier versions of this article were presented at the 14th North American Conference on Chinese Linguistics, University of Arizona, Tucson, 2002, as well as at colloquiums at National Taiwan Normal University and at National Chengchi University, 2002. I thank the audiences for their questions and comments. I’d also like to thank Shengli Feng for encouraging support. Lastly, my gratitude goes to the Academic Paper Editing Clinic, National Taiwan Normal University. Mistakes are exclusively my own. Research for this article was supported by NSC grant # 89-2411-H-003-029.

1. According to X. Zhu (1996) (cf. F. Zhou (1961)), the bone oracle and the bronze inscriptions do not have the word *suo* but instead *you* (ჭ) of the same usage. The occurrence of *suo* is seen as early as in *jing shu* ‘classical texts’ and may originate at the time around the early Warring States period (*Chunqiu*) with the meaning “sound of chopping wood” as stated in *Shuo Wen* and was later borrowed to mean “location.”

   (i) ograms
       xian  yu gong suo (Shijing.Zhengfeng)
       serve YU king place
       ‘serve it at the king’s place’

   Later, a different usage of *suo*, which is the concern of this paper, was further developed.

2. Due to space limit, examples are suppressed in order to accommodate the maximum length of discussion. The readers are referred to Ting (2002) for more examples.

3. Zhu actually considers *suo* to be a nominalization marker. Since he rejects the pronoun approach, I classify his analysis under the category of construction particles.

4. But note that *zhi* may also introduce a temporal adverb, as in instances like (i).
I once all day ER think YI not like moment ZHI SUO
learn YE
(Xunzi.Quanxue)
‘I once contemplated all day long, but it is not better than a moment of learning.’

5. As Yi (1989) notes, this pattern needs to be distinguished from that involving zhe indicating a pause in the judgmental construction, e.g. in (i). But see D. Zhu (1983) for arguments against making such a distinction.

6. According to Yi (1989, p. 250), the presence of zhi does not make any grammatical difference, but just out of prosodic consideration.

7. Additional instances with resumptive clitics are reported by Zribi-Hertz (1984) in French, as in (ib), which occurs as an alternative to the form in (ia). Since one of the reviewers does not accept (ib) and I cannot find native speakers of French to verify its well-formedness, I will leave validity of such examples for future study.

8. This idea of analyzing a resumptive pronoun as a LF operator is also proposed by Demirdache (1991) to account for Hebrew resumptive pronouns. She argues that a relative clause containing a resumptive pronoun has the structures at S-structure and LF, respectively below (from Demirdache (1991, p. 32)).
b. LF

\[
\text{ze ha-?is } [c^0 \ ?oto_1 ] \ [\text{ra?iti t}_1 \ ?etmol]]
\]

\text{this the-man him saw-i yesterday}

“This is the man that I saw yesterday.’

Since the complementizer \( se \) has no semantic content, its deletion is allowed at LF and permits the movement of the resumptive pronoun into Comp. The LF movement of resumptive pronoun is forced for two reasons (Demirdache (1991, p. 32)): first, to create an open sentence to be predicated of the head by moving an operator into the Comp; second, since the resumptive pronoun is an operator, it must move to an A'-position in order to bind a variable like other operators. This analysis of Hebrew resumptive pronouns, however, is faced with several problems, one of which is as follows. It is suggested that the LF movement of resumptive pronouns is in the same fashion of resumptive pronoun fronting in overt syntax. Only an \( X^0 \) element like \( \text{?oto ‘him’} \) or a pronominal PP like \( \text{?it-o ‘with-him’} \) is allowed to take the place of the highest complementizer \( se \); maximal projections like \( \text{?ax-iv ‘his brother’} \) in overt syntax cannot do so. The fronting of maximal projections is analyzed as topicalization (p. 27). On this analysis we will predict that at LF maximal projections containing obligatory resumptive pronouns like ‘his brother’ may also move as far as the highest IP-adjunction position. This would fail to create an open sentence with an operator in Comp to be predicated of the head.

9. With respect to a resumptive pronoun like \( \text{ta ‘he’} \) in modern Chinese, it appears that the alternation between a gap and a pronoun is not as free as in Hebrew, since the former is preferred. But it is necessary to note that even in Hebrew-type languages, it is not clear whether gaps and resumptive pronouns truly alternate. See Shlonsky (1992) and Aoun, Choueiri and Hornstein (2001) for arguments that resumption is a last resort.

10. The relevant differences between Zhu’s analysis and mine are as follows: first, he is vague about the syntactic status of \( su\) and \( zh\), only stating that both are nominalization markers with \( su\) “extracting” an object and \( zh\) “extracting” a subject and that \( zh\) can convey a \( zhuan-zhi \) “derivative-reference”, as in \( sha ren zh\) “the one who killed” and \( zi-zhi \) “self-reference”, as in \( Qin gong liang zh\) “the fact that the Chin country attacked the Liang country”, while \( su\) can only convey the former. \( Zh\) is thus analyzed differently with respect to whether it
occurs alone or with suo. It conveys derivative-reference in the former, but self-reference in the latter. The current analysis, in contrast, treats zhe in both cases as the same, namely, an overt pronominal manifestation of a relative head noun. The examples which Zhu deals with under the category of self-reference, however, are not handled here.

11. This analysis couches on the claim that in Classical Chinese the preverbal patient NP in passives not explicitly marked is in grammatical subject position. Sentences of a similar word order in modern Chinese are argued to be a type of middle sentences as those in English by Ting (2003b), an analysis hopefully to be extended to Classical Chinese.

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