TOPIC STRUCTURES IN CHINESE

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This paper systematically considers the full range of topic structures in Chinese. Such structures are syntactically characterized by the rule schema S′ → X {S, S′}, where X, the topic, is any major category, and S or S′, the comment, is another topic structure or a sentence which is independently well-formed. Some constituent of the comment, or the comment as a whole, must be related to the topic. If the related constituent is an empty category, it is interpreted not as a variable bound by the topic, but as a pro-form whose antecedent is the topic.*

1. By 'topic structure', we mean any grammatical configuration consisting of two parts: the topic, which invariably occurs first, and the comment, a clause which follows the topic and says something about it.[1] Consider first some simple English examples:

(1) *John, I know.*
(2) *John, I know him.*
(3) *John, I know the guy.*

The topic *John* is associated in ex. 1 with an empty element in the comment, in 2 with a pronoun, and in 3 with a full NP. As Ross 1967 first observed, island constraints apply to the relation between the topic and the empty element in the comment in sentences like 1, but not between the topic and the lexically-filled bound elements in sentences like 2–3. Chomsky (1977:91) accounts for this difference by proposing the following base rules:

(4) a. S″ → TOP S′
     b. S′ → COMP S′

If the S′ introduced by rule 4b contains a WH-phrase, then the phrase moves, subject to constraints on movement, into COMP and is deleted; Chomsky calls this process 'topicalization'. But if that S does not contain a WH-phrase, but rather a pronominal or nominal phrase co-indexed with TOP, then no movement

[1] The term "topic structure" as used here does not refer to every kind of topic–comment structure that has been described in the literature. In particular, it does not refer to the structures of cleft sentences—or to the structures of sentences which have canonical constituent order, but contrastively stressed elements (but see fn. 7).

takes place, and the relation between TOP and the co-indexed phrase is un-constrained.[2]

Chinese counterparts to the English examples above are:[3]

    (5) *Wú xiānsheng wǒ rènshi.*
        Wu Mr.   I   know
        'Mr. Wu, I know.'
    (6) *Wú xiānsheng wǒ rènshi tā.*[4]
                        I   know he
        'Mr. Wu, I know him.'
    (7) *Wú xiānsheng wǒ rènshi zhège rén.*
                        I   know this   man
        'Mr. Wu, I know the guy.'

However, the relation between the topic and the comment in sentences like 5 is not subject to island constraints (see §4.4 below for examples and discussion). Moreover, because Chinese has no lexical complementizers without semantic content (like Eng. *that*) which serve as clause introducers,[5] we propose that Chinese has no rules of type 4a–b, but rather has the following rule:[6]

    (8) S' → TOP S

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[2] Ross analyses sentences like 2 as derived by the movement of a phrase into the topic position, with the insertion of an appropriate personal pronoun in the pre-movement position of that phrase; this process he calls 'left-dislocation'. Such sentences are no longer commonly analysed in this way, but the term 'left-dislocation' persists.

[3] We use the Pinyin romanization for Chinese citations throughout. Tones are marked the way words are pronounced in isolation, without regard to contextual variation.

[4] Personal pronouns in non-poetic Chinese (except as complements of certain prepositions, such as *bǎ* and *bèi*) are used only with animate referents; accordingly, left-dislocated English sentences such as *That book, I read it* have no direct translation into non-poetic Chinese.

[5] It has been suggested that *shuō* 'say' functions as an element comparable to the English complementizer *that* in sentences such as

    (a) *Tā zhǐchū   shuō ní yào lái.*
        he point.out say   you want come
        'He pointed out that you would come.'

However, such sentences are limited to main verbs whose meaning is consistent with the act of speaking; this shows that *shuō* forms a constituent with the preceding verb, not with the following clause, and hence should not be construed as a complementizer. If a verb such as *yǐwéi* 'think' occurs as the main verb, the resulting sentence is ungrammatical.

Another suggested possibility is *kàn* 'look':

    (b) *Nǐ xiǎng-xiǎng kàn zhè duì bù duì*
        you think   look this right not right
        'Think it over whether this is right or not.'

However, when *kàn* is used in such constructions, the verb preceding it must be reduplicated. Moreover, the clause following *kàn* can be topicalized or deleted, showing that it too cannot be analysed as a complementizer.

Finally, Huang 1982 has suggested that subordinate conjunctions such as *yīnwèi* 'because' and *suīrán* 'although' be analysed as instances of COMP in Chinese. However, it is difficult to take this suggestion seriously until one learns why, for example, a similar claim is not made for English.

[6] In 8, as in 4a, the symbol TOP is to be understood as identifying the grammatical function of the topic, not its category. Since the question of what constituents can serve in that capacity is one of the problems under investigation, the symbol TOP will be used throughout for convenience.

By postulating no COMP constituent, we disallow the possibility of COMP-to-COMP movement (WH-movement) in the derivation of topic structures in Chinese—contrary to Huang 1982—though we leave open the possibility that material may move directly into the TOP constituent from the comment clause.

For the moment, let us assume that the comments in sentences like 5–7 are to be analysed as containing elements (empty or lexicalized) that are co-indexed with the elements in TOP, just as in the analysis of English sentences like 1–3. Throughout this paper, we refer to this relation of co-indexing as a BINDING relation, and we say that the topic BINDS the co-indexed element in the comment. If this element is non-empty, then this binding relation is simply the ordinary antecedent–pronoun one that normally is not subject to island constraints. However, if the co-indexed element in the comment is empty, then the relation may again be the one that holds between antecedents and pronouns; or it may be 'variable binding' of the sort which is usually assumed to hold between a WH-trace and its antecedent, and which normally is subject to island constraints (cf. Chomsky 1977). If topic structures in Chinese are derived without WH-movement, it may be expected that the binding relation that holds between the element in TOP and the co-indexed empty element in the comment is the antecedent-pronoun relation, not variable binding. We will develop arguments to show that this is the case.

The topic structures in 5–7 are all very simple, and can be represented as follows:

(9) $[_{S'}$ X $[_S$ ... Y ...]], where Y is an empty NP, pronoun, or full NP co-indexed with X, and Y is not contained in a larger constituent other than VP.

As we proceed, 9 will be revised to accommodate more and more different types of topic structures in Chinese.

2. We now consider the grammatical relations that Y in 9 can bear to the comment. From exx. 10–12, we see that Y can freely occur in argument position (A-position) in the comment—as subject, direct object, or indirect object:

(10) a. *Wú xiānsheng rènshi wǒ.*
       know I
   'MR. WU knows me.'[7]
  b. *Wú xiānsheng tā rènshi wǒ.*
       he know I
   'Mr. Wu, he knows me.'
  c. *Wú xiānsheng zhège rén rènshi wǒ.*
        this   man know I
   'Mr. Wu, the guy knows me.'
(11) a. *Wú xiānsheng wǒ rènshi.* (= 5)
   'Mr. Wu, I know.'
  b. *Wú xiānsheng wǒ rènshi tā.* (= 6)
   'Mr. Wu, I know him.'

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[7] Topicalization of the subject of both English and Chinese main clauses is indicated by intonation; in the English gloss, the topicalized subject appears in small capitals.

   c. *Wú xiānsheng wǒ rènshi zhège rén.* (= 7)
        'Mr. Wu, I know the guy.'
(12) a. *Wú xiānsheng wǒ gěi le   liǎngběn shū.*
                     I give ASP[8] two   book
        'Mr. Wu, I gave two books.'
   b. *Wú xiānsheng wǒ gěi le tā liǎngběn shū.*
        'Mr. Wu, I gave him two books.'
   c. *Wú xiānsheng wǒ gěi le zhège rén liǎngběn shū.*
        'Mr. Wu, I gave the guy two books.'

Y in 9 can also appear as a complement of a copula (predicate complement) or as an adverbial. If Y occurs as a predicate complement and is empty, then, as in English, the grammaticality of the result depends on the interpretation of the topic. If, as in 13a, the topic is understood as a class or type, then it can bind an empty predicate complement in the comment clause—but not if, as in 13b, it is understood as an individual. In the latter case, however, if the bound element is lexicalized, the result is grammatical:

(13) a. *Tā shì gè xiǎotōu, qiángdào tā hái bù shì*
        he be a thief   robber   he still not be
        'He is a thief, but a robber he isn't.'
   b. **Lǐ Qìnyú wǒ zhǐ de   jiù   shì.*
           I refer MOD[9] precisely be
        *'Li Qinyu, the one I refer to is precisely.'
   c. *Lǐ Qìnyú wǒ zhǐ de   jiù   shì tā.*
           I refer MOD precisely be he
        'Li Qinyu, the one I refer to is precisely he.'
   d. *Lǐ Qìnyú wǒ zhǐ de   jiù   shì zhège rén.*
           I refer MOD precisely be this   man
        'Li Qinyu, the one I refer to is precisely this man.'

But the occurrence of Y as an element in adverbial, or non-argument, position (A'-position) is unconstrained:[10]

(14) a. *1968 nián 8 yuè   22 rì   wǒ zhènghǎo 21 suì.*
             year   month   day I exactly   year
        '(On) August 22, 1968, I was exactly 21 years old.'
   b. *1968 nián 8 yuè   22 rì   wǒ nèi tiān zhènghǎo 21 suì.*
             year   month   day I that day exactly   year
        '(On) August 22, 1968, I was exactly 21 years old that day.'

The bound constituent *nèi tiān* in 14b occurs in the untopicalized position of the adverbial constituent; compare the word order of the topic structures in

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[8] The morpheme *le* in 12 is an aspect marker here labeled simply as ASP.

[9] In 13b–d, *wǒ zhǐ de* is a headless relative clause functioning as subject of the comment. The particle *de*, here called a 'modifier marker' (MOD), closes every constituent in Chinese that modifies another.

[10] Though Y cannot be a pronoun, for the reason given in fn. 4.

14 with that of the following canonical sentence:

    (15) *Wǒ 1968 nián 8 yuè 22 rì zhènghǎo 21 suì.*
           'I was exactly 21 years old (on) August 22, 1968.'

Thus adverbial fronting in Chinese, as in English, is simply a special case of topicalization. This can be seen by noting that the structures in 14 are comparable to the indubitable topic structures in 16a, in which the temporal phrase binds the direct object position of the comment (cf. 16b):

    (16) a. *1968 nián 8 yuè   22 rì   wǒ yǒngyuǎn bù hui wàngjì.*
              year month   day I   ever   not will forget
            'August 22, 1968, I will never forget.'
        b. *Wǒ yǒngyuǎn bù hùi wàngjì 1968 nián 8 yuè 22 rì.*
            'I will never forget August 22, 1968.'

3. Having shown that NP's in both A and A′ positions can be topicalized, we now consider whether other categories can appear in TOP as well. We assume that six major categories are used in Chinese syntax: NP (including quantifier phrases as a special case), S, S′, VP, PrepP (prepositional phrase), and PostP (postpositional phrase). The well-formedness of 17–22 shows that elements of each of these major categories can appear in TOP:

    (17) *Zhèxiē huà   wǒ bù xiāngxìn.*
           these words I   not believe
           'These words, I don't believe.'
    (18) *Tā hui shuō zhèxiē huà wǒ bù xiāngxìn.*
           he can say these words I   not believe
           'That he could have said these words, I don't believe.'
    (19) *Zhèxiē huà   tā hui shuō wǒ bù xiāngxìn.*
           these words he can say I   not believe
           'That these words he could have said, I don't believe.'
    (20) *Zài zhuōzi shàng tā fàng le jǐběn shū.*
           PREP table on   he put ASP some book
           'On the table, he put some books.'
    (21) *Zhuōzi shàng yǒu shū; chuáng shàng bù hui yǒu shū.*
           table on   have book bed   on   not can have book
           'On the table there are some books; on the bed there cannot be any
            books.'   '
    (22) *Shuō zhèxiē huà wǒ bù zànchéng.*
           say   these words I   not approve.of
           'Saying these words, I don't approve of.'

In 17, the NP *zhèxiē huà* appears in TOP. In 18, the S *Tā hui shuō zhèxiē huà* appears in TOP. Ex. 19, in which the S′ *Zhèxiē huà tā hui shuō* appears in TOP, is somewhat more complex, since the S′ contains the NP *zhèxiē huà* in its own TOP. In 20, the PrepP *zài zhuōzi shàng* binds an element preceding the verb in the comment; the sentence is of the same construction type as 14a above.[11] In

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[11] The morpheme *zài* is a meaningless PrepP marker, and *shàng* specifies the location of the book on the table.

21, *zhuōzi shàng* and *chuáng shàng* are PostP's which, according to Chao 1968, function as the subject of the verb *yŏu*.[12] Alternatively, the PostP's can be considered as adverbials, with PRO as the subject of *yŏu*, thus treating the PrepP's and PostP's alike. Which approach one adopts is irrelevant to the present discussion.

Finally, in 22, the VP *shuō zhèxiē huà* appears in TOP. This VP binds an A-position in the comment, that of the direct object of the verb *zànchéng*. We say that a VP can occur directly in A-position without nominalization, since any VP can so appear without morphological or semantic change:

(23) a. *Tā shuō zhèxiē huà.*
   he say these word
    'He says these words.'
  b. *Wŏ bù zànchéng shuō zhèxiē huà.*
    I not approve.of say these word
     'I don't approve of saying these words.'

The appearance of VP's in A-position in Chinese sentences seems to be analogous to the appearance of clauses in A-position in English sentences.

In contrast, VP's in TOP in Chinese sentences cannot bind A'-positions, as the ungrammaticality of (24–25)a reveals (square brackets are used to delimit the intended topic constituents, and **e** marks the positions they are meant to bind in the comment clauses):

(24) a. *[*Bù dé tā tóngyì zuò juédìng*] méi rén **e**.
    not get he consent make decision no man
     *'Makes a decision without his consent, nobody.'
  b. [*Bù dé tā tóngyì zuò juédìng*] méi rén gǎn **e**.
    not get he consent make decision no man dare
     'Make a decision without his consent, nobody dares.'
(25) a. *[*Bànyè dāndú chūqù*] tā nándé **e**.
    midnight alone go.out he seldom
     *'Goes out alone at midnight, he seldom.'
  b. [*Bànyè dāndú chūqù*] tā pà **e**.
    midnight alone go.out he afraid
     'Going out alone at midnight, he is afraid of.'

Examples (24–25)b are grammatical, since the VP in TOP binds an A-position in the comment. Moreover, as 26–27 show, the counterparts to sentences like (24–25)a, in which a lexical pro-VP expression appears in the comment, are grammatical. Apparently VP's must be lexicalized, except when they occur in

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[12] Chao's example is:
 Xuéxiào lǐ yŏu xuéshēng.
 school in have student
  'There are students in the school.'
He calls *xuéxiào lǐ* a 'place-word subject' (223).

A-position (see also ex. 40 below):

    (26) *Bù dé tā tóngyì zuò juédìng cónglái méi rén zhèyang zuò*
        not get he consent make decision ever   no man thus   do
        guo.
        ASP
        'Make a decision without his consent, nobody ever did that.'

    (27) *Bànyè dāndú chūqù tā nándé zuò zhè zhǒng shì.*
        midnight alone go.out he seldom do this kind   thing
        'Go out alone at midnight, he seldom does anything like that.'

We conclude that any of the six major categories of Chinese can appear in TOP, and we accordingly revise 9 as follows:[13]

    (28) $[_{S'}$ X $[_S$ ... Y ...]], where Y is any major category co-indexed with X, and Y is not contained in a larger constituent other than VP.

4. Our discussion thus far has been confined to topic structures in which Y is contained only in the VP of the comment. We now consider the possibility of relating X in TOP to Y, when Y is contained in a major category Z other than the VP of the comment, as follows:

    (29) $[_{S'}$ X $[_S$ ... $[_Z$ ... Y ...] ...]]

There are three cases: (i) Z = NP, (ii) Z = PrepP or PostP, and (iii) Z = S or S'. We consider each of these cases in turn, limiting ourselves for now to structures in which Y is not contained within a clause that is subordinate to Z.

4.1. Z = NP. If S and NP are bounding nodes in Chinese, then we would expect, by the subjacency condition of Chomsky 1973, that all structures of type 29 in which Z = NP and Y is a proper part of Z would be ungrammatical. Instead, we find that while some such structures are ungrammatical, others are grammatical.

Consider the NP *Cáo Yú de jùběn* 'Cao Yu's play(s)': here *jùběn* 'play(s)' is the head of the NP as a whole, *Cáo Yú de* 'Cao Yu's' is its modifier, and *Cáo Yú* is an NP contained in the modifier. The element *de*, labeled MOD (see fn. 9), closes all modifier constituents. Ex. 30a is a simple sentence in which the NP in question occurs canonically as a direct object. If just the head *jùběn* occurs in TOP, binding an empty position in the comment clause, then the result is grammatical, as 30b shows. However, if the contained NP *Cáo Yú* or the entire modifier *Cáo Yú de* occurs in TOP, binding an empty position in the comment clause, then the results are ungrammatical:

    (30) a. *Wǒ xǐhuan Cáo Yú de jùběn.*
           I   like   MOD play
           'I like Cao Yu's plays.'

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[13] This formulation omits some of the detailed restrictions discussed above. In the final version of the rule given in 76, these are all accommodated.

   b. *Jùbĕn wŏ xĭhuan Cáo Yú de.*
      play I like   MOD
      'As for plays, I like Cao Yu's.'
   c. **Cáo Yú wŏ xĭhuan de   jùbĕn.*
             I   like   MOD play
      *'Cao Yu, I like 's plays.'
   d. **Cáo Yú de   wŏ xĭhuan jùbĕn.*
             MOD I   like   play
      *'Cao Yu's, I like plays.'

Two ways of accounting for the pattern of grammaticality in 30 are available. First, we may assume that topic structures conform to the subjacency condition in the usual way, but that somehow 30b is not a topic structure. Second, we may assume that the subjacency condition is irrelevant to topic structures (either because NP, S, or both, are not bounding nodes in Chinese, or because the construction does not involve a relation between terms X and Y in the sense required for the condition to hold); then we may attempt to account for the ungrammaticality of 30c–d by independently motivated mechanisms. Since we wish to give a general account of topic structures in Chinese, in which 30b counts as an instance of that construction, we pursue the second of these options.

The ungrammaticality of 30c can be accounted for by claiming that the particle *de* cannot be stranded. In §4.2 below, we demonstrate that this constraint need not be stipulated ad-hoc for this case alone, but is a special instance of a more general constraint that disallows the stranding of prepositions and postpositions in Chinese. Moreover, the constraint that bars the stranding of the particle *de* correctly predicts that other constituents within modifiers other than NP's cannot be topicalized. In 31, the VP modifier of the noun *shíjiān* 'time' cannot be topicalized; and in 32, the S modifier of the noun *shū* 'book' cannot be topicalized:

  (31) a. *Méi rén zhīdào kāi hui   de   shíjiān.*
          no man know hold meeting MOD time
          'Nobody knows the time to hold the meeting.'
      b. **Kāi hui méi rén zhīdào de shíjiān.*
          *'To hold the meeting, nobody knows the time.'
  (32) a. *Wŏ méi dú   guo tā tídào   de   nèibĕn shū.*
          I   not read ASP he mention MOD that   book
          'I haven't read the book he mentioned.'
      b. **Tā tídào wŏ méi dú guo de nèibĕn shū.*
          *'He mentioned, I haven't read the book.'[14]

As in English, the left-dislocated counterpart to 30c, given in 33a, in which a pronoun appears in the binding site of the comment, is well-formed. Similar examples are:

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[14] Ex. 32b is, of course, well-formed as a canonical sentence with the interpretation 'He mentioned the book which I had not read.'

(33) a. *Cáo Yú wǒ xǐhuan tā de jùběn, bù xǐhuan tā de shīgē.*
        I like he MOD play not like he MOD poem
    'Cao Yu, I like his plays, but not his poems.'

b. *Wáng xiānsheng tā de érzi shì wǒ de péngyǒu.*
    Wang Mr. he MOD son be I MOD friend
    'Mr. Wang, his son is my friend.'

c. *Lǐ Míng zhège rén de jìxing hěn hǎo.*
        this man MOD memory very good
    'Li Ming, the guy's memory is very good.'

The grammaticality of the examples in 33 is simply a consequence of the fact that the particle *de* is not stranded in them. However, (31–32)b cannot be saved by the addition of lexical material to the binding site, since no expressions are available in Chinese for that purpose.

The ungrammaticality of 30d can be accounted for by a mechanism that prevents modifier constituents from occurring in TOP. A similar mechanism is required for English. While a full NP can be topicalized, a modifier cannot— as is shown by the ungrammaticality of the English translation of 30d. Perhaps the simplest way of expressing this restriction in Chinese is to analyse modifier constituents as belonging to a category which cannot occur in TOP. However, whatever mechanism we use to rule out 30d, it must distinguish *de*-phrases that serve as modifiers to other constituents (as in 30) from *de*-phrases that occur as independent NP's:

(34) a. *Tā shì bǎoshǒupài, jiù de zǒng bǐ xīn de hǎo.*
        he be conservative old MOD always than new MOD good
        'He is a conservative—what is old is always better than what
        is new.'

b. *Zhèlǐ fù de kànbuqǐ qióng de.*
    here rich MOD look.down.upon poor MOD
    'Here the rich look down upon the poor.'

c. *Wǒ xǐhuan Cáo Yú de.*
    I like MOD
    'I like Cao Yu's.'

The phrases *jiù de, xīn de, fù de, qióng de,* and *Cáo Yú de* in 34 are comparable in sense to the expressions *the old, the new, the rich, the poor,* and *Cao Yu's* in English.[15] It is not necessary to analyse them syntactically as containing empty noun heads; instead, they may be analysed either as headless exocentric constructions or as nominalizations in which *de* functions as a nominalizing particle. Whatever the analysis of such *de*-phrases, they may, unlike modifier phrases, occur in TOP, binding an empty position in the comment clause (cf. 30d, 34c):

(35) *Cáo Yú de wǒ xǐhuan.*
        MOD I like
    'Cao Yu's, I like.'

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[15] Headless NP's like *wǒ zhǐ de* 'the one I refer to', in 13b–d, are of the same type.

Similarly, in the grammatical topic structure 30b, we may analyse the phrase *Cáo Yú de* in the comment clause as an independent NP. However, its relation to the element in TOP does not appear to be a binding one. Just what that relation is is taken up below in §6.

4.2. Z = PREPP OR POSTP. In general, it is impossible in Chinese to topicalize any element of a PrepP or a PostP, stranding the preposition or postposition:

(36) a. *Tā* [PrepP *yīnwèi   shēngbìng*] *bù   néng lái.*
        he   because.of ill   not can   come
        'He can't come because of illness.'

    b. **Shēngbìng tā* [PrepP *yīnwèi* e] *bù néng lái.*
        **'Illness, he can't come because of.'

(37) a. *Wǒ* [PrepP *chúle   Lǐ xiānsheng*] *méi rén   rènshi.*
        I   except   no man know
        'I know nobody except Mr. Li.'

    b. **Lǐ xiānsheng wǒ* [PrepP *chúle* e] *méi rén rènshi.*
        **'Mr. Li, I know nobody except.'

(38) a. *Wǒ kànjiàn* [PostP *zhuōzi shàng*] *yǒu   shū.*
        I   see   table   on   have book
        'I see that there are books on the table.'

    b. **Zhuōzi wǒ kànjiàn* [PostP e *shàng*] *yǒu shū.*
        **'The table, I see that there are books on.'

Left-dislocation is permitted, as in previous cases in which topicalization is impossible:

(39) a. *Tā de   māma bìng le   tā yīnwèi   zhè yuányīn bù néng*
        he MOD mother ill   ASP he because.of this reason   not can
        lái.
        come
        'His mother is ill; he can't come because of this reason.'

    b. *Lǐ xiānsheng wǒ chúle tā méi rén rènshi.*
        'Mr. Li, I know nobody except him.'

Thus neither prepositions, postpositions, nor the particle *de* (discussed above) may be stranded in topic structures. If the particle *de* is itself considered a postposition, which seems reasonable, then we can simplify the statement of the restriction even further: prepositions and postpositions cannot be stranded in topic structures. Moreover, the restriction is not peculiar to topic structures; prepositions and postpositions cannot be stranded in structures of any type, including canonical sentences.

In canonical sentences, NP's which function as subjects, direct objects, or indirect objects may be freely omitted, especially in answer to questions in which the referents are contextually apparent:

(40) *Nǐ   rènshi nèige rén   ma? Rènshi.*
        you know that man Q[16] know
        'Do you know that man? I do.'

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[16] The particle *ma* marks the sentence as a question, and is classified here as a question marker (Q).

The sentence *Rènshi* in 40 has neither lexical subject nor direct object: both are understood. Only the verb is lexicalized.[17]

However, if the complement of a preposition or postposition is omitted, the result is clearly ungrammatical:

(41) a. *Tā chúle Lǐ xiānsheng méi rén rènshi ma? *Chúle méi rén*
   he except   no man know Q except no man
   rènshi.
   know
   'Does he know nobody except Mr. Li? *He knows nobody
   except.'

 b. *Zhuōzi shàng yǒu shū ma? *Shàng yǒu shū.*
   table on   have book Q on   have book
   'Are there books on the table? *There are books on.'

An apparent exception to this generalization about preposition and post-position stranding concerns the element *bèi,* which occurs as a preposition in 42a and as a particle attached to the verb in 42b:

(42) a. *Wǒ bèi tā dǎ le.*
   I by he hit ASP
   'I was hit by him.'

 b. *Wǒ bèi dǎ le.*
   I by hit ASP
   'I was hit.'

The prepositional phrase, but not the particle, may be separated from the verb by certain adverbial phrases, such as *zài huāyuán lǐ:*

(43) a. *Wǒ bèi tā zài huāyuán lǐ dǎ le.*
   I by he PREP garden in hit ASP
   'I was hit by him in the garden.'

 b. *Wǒ bèi zài huāyuán lǐ dǎ le.*
   'I was hit in the garden.'

Like any other preposition in Chinese, *bèi* cannot be stranded:

(44) a. *Zhāngsān wǒ [PrepP *bèi* e] *dǎ le.*
      I   by   hit ASP
   'Zhangsan, I was hit by.'

 b. ?*Zhāngsān wǒ [Prt *bèi*] *dǎ le.*
   ?*'As for Zhangsan, I was hit.'

If, as in 44b, *bèi* is construed as a particle, then the grammatical status of the resulting sentence does not bear on the question of preposition stranding. What bearing its status has on the nature of topicalization in Chinese is taken up in §8.

4.3. Z = S OR S'. Here we consider cases in which X in TOP is associated with an element Y that occurs within a constituent clause of the comment clause. Before taking up such cases, however, we note that a subordinate clause

[17] Chao calls sentences like *Rènshi* in 40, which typically (but not exclusively) serve as answers to questions, 'minor sentences'.

can contain an element in its own TOP position:

(45) a. *Tāmen shuō zhège rén   Wú xiānsheng jiàn   guo.*
         they   say this   man   meet ASP
         'They say that this man, Mr. Wu met.'
   b. *Tāmen shuō zhège rén Wú xiānsheng jiàn guo tā.*
         'They say that this man, Mr. Wu met him.'
(46) a. *Tāmen shuō zhège rén jiàn guo Wú xiānsheng.*
         'They say that THIS MAN met Mr. Wu.'
   b. *Tāmen shuō zhège rén tā jiàn guo Wú xiānsheng.*
         'They say that this man, he met Mr. Wu.'

Corresponding to the above sentences, we find the topic structures below, in which the element in the main-clause TOP position binds a position in a subordinate clause in the comment:

(47) a. *Zhège rén tāmen shuō Wú xiānsheng jiàn guo.*
         'This man, they say that Mr. Wu met.'
   b. *Zhège rén tāmen shuō Wú xiānsheng jiàn guo tā.*
         'This man, they say that Mr. Wu met him.'
(48) a. *Zhège rén tāmen shuō jiàn guo Wú xiānsheng.*
         'This man, they say met Mr. Wu.'
   b. *Zhège rén tāmen shuō tā jiàn guo Wú xiānsheng.*
         'This man, they say he met Mr. Wu.'

Exactly parallel are the following sentences, in which the subordinate clause contains an interrogative word:

(49) a. *Zhège rén   wǒ xiǎng zhīdào shuí jiàn   guo.*
         this   man I   want know   who meet ASP
         *'This man, I wonder who met.'
   b. *Zhège rén wǒ xiǎng zhīdào shuí jiàn guo tā.*
         'This man, I wonder who met him.'
(50) a. *Zhège rén wǒ xiǎng zhīdào jiàn le shuí.*
         *'This man, I wonder whom met.'
   b. *Zhège rén wǒ xiǎng zhīdào tā jiàn le shuí.*
         'This man, I wonder whom he met.'

The grammaticality of (49–50)a shows that topicalization is not affected by the WH-island condition—a fact which should not be surprising, since WH-words in Chinese do not undergo WH-movement into COMP (though they may be topicalized, and thus appear to undergo such movement in certain cases; cf. ex. 66b below).

   Perhaps more surprising is the fact that Chinese topicalization is not affected by the sentential-subject condition either. Consider first this structurally ambiguous sentence:

(51) *Zhèxiē shì   tā shuō bù   héshì.*
      these   thing he say   not proper

In this sentence, the topic *zhèxiē shì* can be analysed as occurring either in TOP position in the sentential subject, as in 52a, or in TOP position in the main clause,

as in 52b:

> (52) a. [$_S$ [$_{S'}$ *Zhèxiē shì* [$_S$ *tā shuō* **e**]] *bù héshì*].
> 'That these things he says is not proper.'
>
> b. [$_{S'}$ *Zhèxiē shì* [$_S$ [$_S$ *tā shuō* **e**] *bù héshì*]].
> 'These things, it's not proper that he says.' (lit. *'These things, that he says is not proper.')

Of course, 52a does not violate the sentential-subject condition; and if it can be shown (as Huang 1982:459–60 suggests) that only structures of type 52a are assigned to sentences of type 51, then the sentential-subject condition is not violated in Chinese. However, 52b is a possible interpretation of 51, as we can see from the fact that an element in the TOP position in the main clause can be associated with a position inside a sentential subject embedded one or more clauses down—as in 53, whose structure is indicated in 54:

> (53) *Zhèxiē shì   wǒ juéde tā shuō bù héshì.*
> these thing I   think he say   not proper
> 'These things, I think it's not proper for him to say.' (lit. *'These things, I think that he says is not proper.')
>
> (54) [$_{S'}$ *Zhèxiē shì* [$_S$ *wǒ juéde* [$_S$ [$_S$ *tā shuō* **e**] *bù héshì*]]].

The X in TOP can be related to a position Y in the comment to any degree of sentential embedding whatever. For example, the topic *zhèxiē shì* can appear in TOP position in any of the clauses in 53, not just the main clause. That is, besides 53, with the associated structure in 54, we also have 55, with the associated structures in 56:

> (55)   *Wǒ juéde zhèxiē shì tā shuō bù héshì.*
> 'I think that these things, it's not proper that he says.' / 'I think that these things he says is not proper.'
>
> (56) a. [$_S$ *Wǒ juéde* [$_{S'}$ *zhèxiē shì* [$_S$ [$_S$ *tā shuō* **e**] *bù héshì*]]].
> b. [$_S$ *Wǒ juéde* [$_S$ [$_{S'}$ *zhèxiē shì* [$_S$ *tā shuō* **e**]] *bù héshì*]].

Similarly, an element in TOP may be associated with a position in an object complement at an arbitrary distance of embedding. Examples are given below where the phrase *zhèběn shū* appears in successively 'higher' TOP positions:

> (57) a. *Wǒ bù jìde   nǐ   shuō guo zhèběn shū   tā dú   guo.*
> I   not remember you say   ASP this   book he read ASP
> 'I don't remember you said this book, he had read.'
>
> b. *Wǒ bù jìde zhèběn shū nǐ shuō guo tā dú guo.*
> 'I don't remember this book, you said he had read.'
>
> c. *Zhèběn shū wǒ bù jìde nǐ shuō guo tā dú guo.*
> 'This book, I don't remember you said he had read.'

The examples in 53–57 suggest the possibility that elements move into higher TOP positions from lower ones by successively cyclic applications of TOP-to-TOP movement. If this possibility is correct, then topicalization in Chinese could be considered to be a rule which is crucially subject to the subjacency condition—just as the English rule is, according to the analysis in Chomsky 1977. To test this possibility, we consider in §4.4, below, topic structures in which Z = NP, and in which X is related to an occurrence of Y inside an S or S'

within Z—in particular, in which Y occurs inside a relative clause that modifies an NP. NP, unlike S', contains no TOP node; thus if NP and either S or S' are bounding nodes, it should not be possible in Chinese to topicalize an element from within a relative-clause modifier of an NP, if the subjacency condition holds and if topicalization operates in successive cyclic fashion, moving elements from TOP to TOP.

4.4. Z = NP, AND Y IS WITHIN A CLAUSE SUBORDINATE TO Z. Note first that it is possible for a topic structure to appear as a relative clause modifying a noun; an example is given in 58a, with the corresponding canonical structure given in 58b:

(58) a. *Zhèběn shū   dú   guo de   rén   bù   duō.*
       this   book read ASP MOD man not many
       ?'There aren't many people who this book read.'
    b. *Dú   guo zhèběn shū   de   rén   bù   duō.*
       read ASP this   book MOD man not many
       'There aren't many people who read this book.'

Relative clauses precede the nouns they modify, and contain no lexical proform coreferential with the head. Like other modifiers, they are closed by the postposition *de*. The structure of 58a is shown in 59a, and that of 58b in 59b:

(59) a. $[_S [_{NP} [_{S'} Zhèběn \; shū_i [_S e_j \; dú \; guo \; e_i \; de]] \; rén_j] \; bù \; duō]$.
    b. $[_S [_{NP} [_S e_j \; dú \; guo \; zhèběn \; shū \; de] \; rén_j] \; bù \; duō]$.

Embedding 58a into a matrix sentence, we obtain 60a, whose structure is indicated in 60b:

(60) a. *Wǒ rènwéi zhèběn shū   dú   guo de   rén   bì   duō.*
       I   think this   book read ASP MOD man not many
       ?'I think there aren't many people who this book read.'
    b. $[_S Wǒ \; rènwéi [_S [_{NP} [_{S'} zhèběn \; shū_i [_S e_j \; dú \; guo \; e_i \; de]] \; rén_j] \; bù \; duō]]$.

In 60, the phrase *zhèběn shū* appears in TOP position in the relative clause. That position is separated from the TOP position of the matrix sentence by the nodes S', NP, and S.[18] Hence, if topicalization in Chinese is subject to the subjacency condition, and if NP and either S or S' are bounding nodes, then we would not expect to be able to move that phrase into the TOP position of the matrix sentence. But we CAN do so, as the grammaticality of 61a shows (the structure is given in 61b):[19]

(61) a. *Zhèběn shū   wǒ rènwéi dú   guo de   rén   bù   duō.*
       this   book I   think   read ASP MOD man not many
       *'This book, I think there aren't many people who read.'
    b. $[_{S'} Zhèběn \; shū_i [_S wǒ \; rènwéi [_S [_{NP} [_S e_j \; dú \; guo \; e_i \; de] \; rén_j] \; bù \; duō]]]$.

Naturally, if an element in TOP can bind an empty position in a relative clause

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[18] The S node in question is the matrix S node. We may assume that the S node following the verb *rènwéi* in 60 is transparent to movement (cf. 57).

[19] For simplicity, we omit the S' node, as well as the trace that the higher TOP would bind in the relative clause if TOP-to-TOP movement applied in the derivation of 61b.

in the comment, it can also bind lexically filled positions:

(62) a. *Yīn Fūshān wǒ xiǎng rènshi de   rén bù duō.*
                   I   think know MOD man not many
              *'Yin Fushan, I think there aren't many people who know.'

      b. *Yīn Fūshān wǒ xiǎng rènshi tā de rén bù duō.*
              'Yin Fushan, I think there aren't many people who know him.'

      c. *Yīn Fūshān wǒ xiǎng rènshi zhège rén de rén bù duō.*
              'Yin Fushan, I think there aren't many people who know the guy.'

In the preceding examples, the NP containing the relative clause is the subject of its matrix, but an element in TOP can also bind a position in a relative clause modifying an object noun:

(63) a. *Wǒ cónglái méi yùdào guo néng huídá zhège wèntí   de*
           I   ever   not meet ASP can answer this   question MOD
           rén.
           man
              'I have never met a person who can answer this question.'

      b. *Wǒ cónglái méi yùdào guo zhège wèntí néng huídá de rén.*
              'I have never met a person who this question can answer.'

      c. *Zhège wèntí wǒ cónglái méi yùdào guo néng huídá de rén.*
              *'This question, I have never met a person who can answer.'

Some readers may question the acceptability of 63b–c. But our observations of a considerable number of native speakers reveal that the occurrence of such structures is by no means rare. If our judgments and observations are correct, it follows that topics can bind positions in the comment across any number of intervening NP, S, and S' nodes.

However, not all examples constructed along the lines of 61 are equally acceptable. Most speakers find 64 quite unnatural:

(64) ??*Zhèběn shū wǒ xiǎng dú   guo de rén lái   le.*
         this   book I   think read ASP MOD man come ASP
         *'This book, I think the man who read came.'

The difference between 61 and 64 is that the NP *dú guo de rén* is understood as non-specific in the former case, but specific in the latter. Ex. 64 is less acceptable because of a semantic principle like the 'name constraint' of Guéron 1980, which prohibits a name (i.e. a complete referring expression) from containing a variable. But note that examples like 64 remain unacceptable even when lexical material is substituted for the empty category. Exx. 65a–b are exactly like 61 and 64, except that a lexical pronoun, rather than an empty category, is anaphorically related to the topic. As in 61 and 64, the result is acceptable if the NP containing the pronoun is non-specific, but less acceptable if it is specific:

(65) a. *Zhège qiángdào wǒ xiǎng néng zhuāzhù tā de   rén shì ge*
           this   robber   I   think can   catch   he MOD man be a
           yīngxióng.
           hero
              'This robber, I think anyone who can catch him is a hero.'

   b ??*Zhège qiángdào wǒ xiǎng zhuāzhù tā de   rén lái   le.*
       this   robber   I   think catch   he MOD man come ASP
       'This robber, I think the man who caught him came.'

We conclude from these considerations that the subjacency condition is irrelevant to the binding of empty categories in relative clauses by elements in the main-clause TOP position; and that the binding relation in this case is not variable binding, but ordinary pronoun binding by an antecedent. However, treating the empty category as an ordinary pronoun raises certain problems for the theory of empty categories as it has recently been developed by Chomsky 1981, 1982. We return to these problems below in §8.

5. We now consider a number of syntactic properties of topic structures in Chinese that either are accounted for by our analysis thus far, or that require only minor modifications.

First, note that since S is the bearer of sentence type, the comment clause in a topic structure can be of any type: declarative, interrogative, imperative, or exclamatory. We have already given numerous examples in which the comment is declarative; examples of the other types are given here:[20]

   (66) a. *Zhèběn shū nǐ   dú   guo ma?*
          this   book you read ASP Q
          'This book, have you read?'
       b. *Shuí de   yǎnchū   nǐ zuì ai   kàn?*
          who MOD performance you most love see
          'Whose performance do you most love to see?'
       c. *Zhèxiē dōngxi bié dòng!*
          these things not move
          'These things, don't move!'
       d. *Zhèzhāng huà   wǒ zhēn   xǐhuan!*
          this   picture I   indeed like
          'This picture, I really like!'

Second, note that rule 8, above, does not accommodate all cases in Chinese in which a sentence contains two or more distinct topics. When the topics occur separately in two different clauses, as in 67a (structure in 67b), our analysis is adequate, since we have provided for the separate introduction of S' in matrix and in subordinate clauses:[21]

   (67) a. *Lǐ xiānsheng wǒ yǐwéi   nǐ   yǐjīng   gàosu guo zhèxiē shū*
                            I   believe you already tell   ASP these book
          tāmen yào.
          they   want
          'Mr. Li, I believe, you have already told that these books, they want.'

---

[20] Note that, as in 66b, a WH-phrase can appear in TOP position in Chinese.

[21] For some speakers, the topicalization of the indirect object *Lǐ xiānsheng* in 67 is unacceptable. Such speakers, however, do accept multi-topic sentences that do not involve the topicalization of indirect objects; e.g.,

   Lǐ xiānsheng wǒ yǐwéi yǐjīng gàosu guo nǐ zhèxiē shū tāmen yào.
   'Mr. Li, I believe, has already told you that these books they want.'

b. [$_{S'}$ *Lǐ xiānsheng*$_i$ [$_S$ *wǒ yǐwéi* [$_S$ *nǐ yǐjīng gàosu guo* e$_i$ [$_{S'}$ *zhèxiē shū*$_j$
[$_S$ *tāmen yào* e$_j$]]]]].

However, our analysis thus far does not provide for the far simpler situation in which two separate topic constituents bind separate elements in a simple comment clause—as in 68a, whose structure is shown in 68b:

(68) a. *Lǐ xiānsheng zuótiān   wǒ kànjiàn le.*
                     yesterday I   see   ASP
            'Mr. Li, yesterday I saw.'
    b. [$_{S'}$ *Lǐ xiānsheng*$_i$ [$_{S'}$ *zuótiān*$_j$ [$_S$ *wǒ* e$_j$ *kànjiàn le* e$_i$]]].

To accommodate such structures within our analysis, we need simply generalize rule 8 to allow S', as well as S, to be a sister of TOP:

(69) S' → TOP {S, S'}

In the multi-topic structure analysed in 68b, the topics and their binding sites are nested. However, the order of the topics can be reversed without loss of grammaticality, as in 70, in which case the topics and binding sites are crossed rather than nested:

(70) a. *Zuótiān   Lǐ xiānsheng wǒ kànjiàn le.*
            yesterday   I see   ASP
            'Yesterday, Mr. Li I saw.'
    b. [$_{S'}$ *zuótiān*$_j$ [$_{S'}$ *Lǐ xiānsheng*$_i$ [$_S$ *wǒ* e$_j$ *kànjiàn le* e$_i$]]].

Furthermore, both elements in TOP can bind A-positions in the comment, and again the binding lines can either cross or nest. Examples are given in 71, in which the topics and their binding sites are indicated by co-indexing (the bracketing has been omitted):

(71) a. *Zhèjiàn shì*$_j$ *Lǐ xiānsheng*$_i$ *wǒ gàosu   guo* e$_i$ e$_j$.
            this   event   I   tell.about ASP
            ?'This event, Mr. Li, I have told about.'
    b. *Lǐ xiānsheng*$_i$ *zhèjiàn shì*$_j$ *wǒ gàosu guo* e$_i$ e$_j$.
            ?'Mr. Li, this event, I have told about.'

Needless to say, there are practical limits to the number of topics, and perhaps also to their relative lengths. It is difficult to accept a sentence with three topics, and harder still to accept one with more than three. When one attempts to emphasize many things at once, one fails to emphasize anything. Any limitation on the number of topics in a topic structure may therefore be considered a matter of performance.

Let us now return to multi-topic structures in which the topics are related to elements in different clauses, such as 67. In that sentence, the dependencies between topics and their binding sites are arranged serially, and the sentence is fully acceptable—or very nearly so (but see fn. 21). When such sentences are constructed with nested or crossed dependencies, they are found to be of diminished acceptability, but not fully ungrammatical:

(72) a. *?Zhèxiē shū*$_i$ *wǒ yǐwéi   Lǐ xiānsheng*$_j$ *nǐ   yǐjīng   gàosu*
            these   book I   believe   you already tell
            guo e$_j$ *tāmen yào   * e$_i$.
            ASP   they   want

> *'These books, I believe that Mr. Li, you have already told
> that they want.'
>
> b. ??*Lǐ xiānsheng*$_i$ *wǒ yǐwéi   zhèxiē shū*$_i$ *nǐ   yǐjīng   gàosu*
>   I   believe these book you already tell
>   *guo* e$_i$ *tāmen yào* e$_j$.
>   ASP   they   want
>   *'Mr. Li, I believe that these books, you have already told
>   that they want.'

There is some variability in native speaker reactions to such sentences. Our judgment is that 72a is less acceptable than 67, and 72b is less acceptable than 72a—but that all these examples are more acceptable than their English counterparts (the translations given in 72 strike us as completely ungrammatical in English). Moreover, these relative acceptability rankings remain intact when appropriate resumptive pronouns are substituted for the empty elements in 67 and 72. Since the sentences are not judged to be as unacceptable as outright ungrammatical strings, and since their relative acceptability is not affected by the replacement of empty elements by resumptive pronouns, we may consider the degree of unacceptability of the sentences in 72 to be the result of performance, rather than grammatical factors.

It will be noted that the order of acceptability of 67, 72a, and 72b corresponds to the configuration of the dependencies between the topics and their binding sites in the comment; these dependencies are schematized below:

(73) a. ... X$_i$ ... Y$_i$ ... X$_j$ ... Y$_j$ ...
     b. ... X$_i$ ... X$_j$ ... Y$_j$ ... Y$_i$ ...
     c. ... X$_i$ ... X$_j$ ... Y$_i$ ... Y$_j$ ...

In 73a, the dependencies are serial; in 73b, they are nested; and in 73c, they are crossed. This correlation between dependency configuration and relative acceptability corresponds with what is known about the correlation between dependency configuration and degree of sentence-processing difficulty (Fodor 1978); we take this as further evidence that the degree of unacceptability of the sentences in 72 is the result of performance, rather than of grammatical factors.

6. Here we consider a class of topic structures in Chinese that are not readily describable within the framework developed thus far. According to that framework, the comment must contain a pro-form, either empty or lexicalized, which is anaphorically related to the element in TOP (cf. the concluding discussion in §4.4 above). We have already considered an example of this type of construction, 30b, repeated here for convenience:

(74) *Jùběn wǒ xǐhuan Cáo Yú de.*
     play   I   like   MOD
     'As for plays, I like Cao Yu's.'

On the assumption that the phrase *Cáo Yú de* is not analysable as a modifier of an empty or displaced head-noun, but is to be construed as a full-fledged NP in its own right, then the comment clause does not appear to contain an element which is anaphorically related to the element in TOP. Rather, the re-

lation between the topic and the comment in this example seems much looser; the topic simply establishes what Chafe (1976:55) calls a 'spatial, temporal or personal frame or domain' for the following comment. From this point on, it will be convenient to use Chafe's terms 'English style' and 'Chinese style', respectively, to refer to topic structures in which the comment clause does or does not contain an element which is anaphorically related to the element in TOP.[22]

Additional examples of 'Chinese style' topic structures are:

(75) a. *SHÍGE LÍ   wǔGE làn   le.*
     ten   pear five   spoil ASP
     'Of the ten pears, five have spoiled.'

   b. *SHUǏGUǑ tā zuì   xǐhuan PÍNGGUǑ.*
     fruit   he most like   apple
     'As for fruit, he likes apples most.'

   c. *ZHĀNG JIĀ   wǒ gěi   le   MĚIGE HÁIZI yíjiàn wánjù.*
         family I give ASP every child one   toy
     'In the Zhang family, I gave every child a toy.'

   d. *ZHÈSUǑ DÀXUÉ zuì   chūmíng   de   shì wùLǏXÌ.*
     this   college most well-known MOD be physics.dept.
     'In this college, best-known is the physics department.'

   e. *ZUÓTIĀN   tā 12 DIǍNZHŌNG shuìjiào.*
     yesterday he   o'clock   sleep
     'Last night, he went to bed at 12 o'clock.'

   f. *KÀN XÌ   tā zhǐ   KÀN XǏJÙ.*
     see play he only see comedy
     'As for plays, he only sees comedies.'

   g. *WÉNXUÉ ZUÒPǏN tā chúle   XIǍOSHUŌ dōu bù   dú.*
     literary work   he except novel   all not read
     'Of literary works, he reads nothing but novels.'

   h. *ZHÈGE RÉN   wǒ juéde JÌXING   tèbié   hǎo.*
     this   person I feel memory exceptionally good
     'As for this man, I feel his memory is exceptionally good.'

   i. *ZHÈSUǑ DÀXUÉ xué   fǎlù de   XUÉSHĒNG bù   duō.*
     this   college study law MOD student   not many
     'In this college, there aren't many students who study law.'

    In each of these examples, we have emphasized both the topic and a particular phrase in the comment. While the relation between these elements does not appear to be anaphoric binding, there is nevertheless some relation. For example, in 75a, the five objects mentioned in the comment are drawn from among the ten pears specified in the topic. In 75c, the children mentioned in the comment are the children of the Zhang family. In these examples, the topic

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[22] We use these terms, however, with the understanding that Chinese contains 'English style' topic structures (e.g., ex. 5), and that English contains 'Chinese style' topic structures (e.g., *As for your friend, no one really understands what happened.)*

X appears to specify a frame of reference for the following comment—and, in particular, for some constituent Y in it.

Syntactically, these clearly 'Chinese style' topic structures and the topic structures considered in §§1–5 above have much in common. X is invariably in initial position. Y can be an NP in A-position (subject, direct or indirect object, or complement of a copula), as in 75a–d, or in A'-position (adverbial), as in 75e. Y can be a category other than NP, e.g. VP, as in 75f. Finally, Y can be an NP within a larger constituent (prepositional phrase, embedded complement, or relative clause), as in 75g–i.

Our analysis of topic structures thus far fails for the 'Chinese style' topic structures in 75 only because we require that there be an element in the comment which is co-indexed with the element in TOP. If we drop that requirement, then the structures in 75 can all be accommodated. Moreover, by dropping that requirement, we strengthen our explanation why topic structures in Chinese in general are not subject to island and crossing constraints: no rule of grammar which is sensitive to those constraints would need to apply in the derivation of those structures.

Suppose, then, that we formulate the representation of topic structures in Chinese from 29 to this:

(76) $[_{S'}$ X $[_S$ ... Y ...]], where X is a major category and Y, possibly empty, is related to X.

We have noted the following instances of 76 in which the result is ungrammatical: (i) X is understood as an individual, and Y is an empty predicate complement (§2); (ii) X = VP and Y is an empty non-argument (§3); (iii) X is a modifier phrase and Y is its head (§4.1); and (iv) Y is an empty complement of a preposition or a postposition (including the particle *de*) (§§4.1, 4.2). But of these restrictions, only (iii) must be imposed specifically on topic structures, and this simply by the provision that the categories that occur in TOP are distinct from the category of modifier constituents; the others follow directly from the requirement that the comment clause must itself be well-formed as an independent sentence.

7. We now consider certain implications of the assumption that 76, rather than some version of 29, is the correct representation when Y is empty.

First, if X and Y are co-indexed as in 29, and if Y is understood as a variable bound by X (cf. §1), then a topic structure such as 77, in which Y is empty, has an interpretation roughly like that of 78a. However, if Y is understood as a pronoun anaphorically related to X, then it has an interpretation roughly like that of 78b:

(77)   *Zhège rén*$_i$ *wǒ tǎoyàn* e$_i$.
        this   man I   dislike
           'This man, I dislike.'
(78) a. For some x, x = this man, I dislike x.
     b. As for this man, I dislike him.

In §4 above, we pointed out that, in cases like 77, the empty element in the comment relates to the topic as a pronoun relates to its antecedent, rather than

as a bound variable, since the relation is not subject to island constraints. Moreover, the claim that an empty category related to an element in TOP is (or has the properties of) a variable runs into a number of other serious technical difficulties. First, the element in TOP can relate to more than one distinct empty category simultaneously, contrary to the bijection principle of Koopman & Sportiche 1981 (cf. Chomsky 1982:36):

(79) a. *Lǐ Míng$_i$ wǒ yǐjīng   gàosu guo e$_i$ nǐ   bù   xiǎng jiàn e$_i$ le.*
        I   already tell   ASP   you not want see   SFM[23]
        'Li Ming, I have already told (him) that you don't want to see (him).'

    b. *Zhāngsān$_i$ tāmen shuō e$_i$ céngjīng zhǔdòng   yāoqiú biérén*
          they   say   ever   of.own.accord ask   other
          pīpíng   e$_i$.
          criticize
        'Zhangsan, they say that (he) of his own accord has asked other people to criticize (him).'

If we consider just the sentences in 79 (i.e. if we ignore the indices), we find that they have exactly the same range of interpretations as the corresponding sentences in which the pronoun *tā* is substituted for one or both of the empty categories.

Second, the relation between the empty category Y and the element X in TOP in Chinese topic structures is not limited by the (strong) crossover condition first noted by Postal 1971—a condition which was subsequently re-interpreted by Chomsky and others as a diagnostic for variable binding. English topic structures are subject to the condition, indicating that the empty categories in the comment that relate to the elements in TOP are interpreted as bound variables:

(80) **John$_i$, he$_i$ thinks mother will blame e$_i$.*

Chinese topic structures, however, are not subject to the condition, as 81 shows. This indicates that empty categories in the comment that relate to the elements in TOP are not interpreted as bound variables:

(81) *Xiǎomíng$_i$ tā$_i$ yǐwéi māma   yào zéguài e$_i$ le.*
           he think mother will blame   SFM
    *'Xiaoming$_i$, he$_i$ thinks mother will blame him$_i$.

Here the empty direct object of the embedded verb *zéguài* is free to be interpreted either as the same person as the one referred to by the topic NP *Xiǎomíng* or as some other person, just like the pronominal subject of the main verb *yǐwéi*. Indices aside, 81 has exactly the same range of interpretation as 82, in which the empty direct object of the embedded verb is replaced by a pronoun:

(82) *Xiǎomíng tā yǐwéi māma yào zéguài tā le.*
    'Xiaoming, he thinks mother will blame him.'

Here the topic *Xiǎomíng* is related either to the subject pronoun *tā*, the object

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[23] The particle *le* here is a sentence-final marker (SFM) that indicates that 'a state of affairs has current relevance with respect to some particular situation' (Li & Thompson 1981:239).

pronoun *tā,* or to both simultaneously. The structure 81 corresponds to the third of these interpretations for 82; the others may be obtained by substituting the index *j* for *i* on the empty category and on the pronoun, respectively.

Our claim that an empty category in Chinese may be interpreted as a simple pronoun co-indexed with an antecedent is challenged by Huang, who contends that an empty direct object in Chinese must be interpreted as a bound variable. He claims that in a sentence like 83a, the empty direct object in the embedded clause is understood as denoting a different person from the one denoted by the matrix subject; i.e., it has only the interpretation of 83b. Huang accounts for this interpretation by analysing 83a as having the structure 83c, in which an empty topic (designated by OP) binds the empty direct object—the latter being interpreted as a variable, and hence subject to the strong crossover condition:

(83) a. *Zhāngsān shuō nǐ   kànjiàn le   e.*
           say you see   ASP
         'Zhangsan said that you saw him.' (lit. *'Zhangsan said that you saw.')
   b. *Zhāngsān$_i$ shuō nǐ kànjiàn le e$_j$.* (i ≠ j)
   c. [$_{S'}$ OP$_j$ [$_S$ *Zhāngsān$_i$ shuō nǐ kànjiàn le e$_j$*]].

However, even if Huang were correct about the interpretation of 83a, empty direct object pronouns in embedded clauses are not obligatorily non-coreferential with matrix subjects. Thus 84a is well-formed with the interpretation of 84b (cf. 81):

(84) a. *Xiǎomíng yǐwéi māma   yào zéguài e le.*
          think mother will blame   SFM
         'Xiaoming thinks mother will blame him.' (lit. *'Xiaoming thinks mother will blame.')
   b. *Xiǎomíng$_i$ yǐwéi māma yào zéguài e$_i$ le.*

Huang's analysis in 83c of the structure underlying 83a therefore cannot be accepted in general. Moreover, it is difficult to accept it even for the special case of 83a, since it requires both the claim that bound empty categories are interpreted as variables, and the claim that empty categories can occur in TOP. We have already given ample evidence for rejecting the first claim; for the second, no independent evidence exists. We will return in §8 to the problem of explaining the interpretation of sentences like 83a.

We have shown that, when an empty category in a comment clause is bound to an element in TOP in a Chinese topic structure, that empty category behaves as a pronoun with the topic as its antecedent, and not as a variable. Then the question arises: Given that an empty category in a comment clause behaves as a pronoun, can it behave as a free pronoun? The answer to this question is yes:

(85) *Nèige huāyuán$_i$ wǒmen yǐjīng   zhòngshang e$_j$ le.* (i ≠ j)
     that   garden   we   already raise   SFM
       'That garden, we already raised them (e.g. flowers) in.' (lit. *'That garden, we already raised.')

The non-coindexing of the topic and the empty category in 85 accords with the most natural interpretation of that sentence; construing the empty category as co-indexed with the topic would yield the rather unnatural interpretation in which we raised the garden itself, rather than the flowers in it.

Examples like 85 provide a natural 'bridge' between clearly 'English style' topic structures, like 5, and clearly 'Chinese style' topic structures like 75. In clearly 'English style' structures, an empty pronoun occurs in the comment clause which is anaphorically related to an element in TOP. In clearly 'Chinese style' structures, the comment clause contains no empty element; rather, it contains a lexical constituent which is related to, but not anaphorically related to, an element in TOP. In examples like 85, an empty pronoun occurs in the comment clause (as in 'English style' topic structures); but that pronoun is related non-anaphorically to the element in TOP (as in 'Chinese style' topic structures).

Topic structures are not the only grammatical structures in Chinese to be governed by a condition like 76; so are relative clause structures:

(86) a. [$_{NP}$ [$_S$ *Yīn Fūshān rènshi* e$_i$ *de*] *xuéshēng$_i$*]
                    know   MOD student
    'the student(s) whom Yin Fushan knows'

b. [$_{NP}$ [$_S$ *Yīn Fūshān rènshi tā$_i$ de*] *xuéshēng$_i$*]
    'the student whom Yin Fushan knows' (lit. *'the student Yin Fushan knows him')

c. [$_{NP}$ [$_S$ *Yèzi hěn dà*   *de*] *nèikē shù$_i$*]
           leaf very large MOD that   tree
    'the tree whose leaves are very large' (lit. *'the tree the leaves are very large')

d. [$_{NP}$ [$_S$ *Wǒmen yǐjīng*   *zhòngshang* e$_j$ *de*] *nèige huāyuán$_i$*]
          we   already raise   MOD that   garden
    'the garden in which we already raised them' (lit. *'the garden we already raised')

The relative clause structure in 86a can be described as 'English style', inasmuch as the relative clause contains an empty category which is co-indexed with the head NP. (However, unlike English, this co-indexing is not mediated by the WH-movement of a relative pronoun.) As the structure in 86b shows, the relative clause can also contain a pronoun co-indexed with the head.[24] The parallelism of 86a–b suggests that the empty category in 86a is a pronoun which is related anaphorically to the head, and not a variable bound by the head; but unlike the pronoun *tā*, the empty category is not specified for number, and thus a non-singular interpretation is permitted for the phrase as a whole.

This analysis for the 'English style' relative clause structure 86a receives further support from consideration of the 'Chinese style' relative clause structures in 86c–d. In those structures, no element which is co-indexed with the

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[24] However, the bound element in an English-style relative clause cannot be a full NP, nor can it be a pronoun if it is the subject of the relative clause. We have no explanation at the moment for these differences between relative-clause and topic structures.

head occurs in the relative clause. Nevertheless, the structures as a whole are well-formed, apparently because their relative clauses contain non-empty, non-co-indexed elements which relate to their heads. The empty category that happens to occur in 86d remains free within the structure as a whole, just as if it were a lexical pro-form.

It follows from what we have said about empty categories in Chinese that they do not obey the 'empty category principle' (ECP) of government/binding theory (Chomsky 1981, 1982). It may, however, be possible to reconcile the properties of the Chinese empty category with government/binding theory by construing the category to be a base-generated element like Chomsky's (big) PRO and (little) *pro*—but, unlike the latter elements, to be completely unspecified for any features whatever.

8. Finally, we consider the nature of the relation that Y must bear in 76 to the topic X. Up to now, we have tacitly assumed that the element Y that relates to the topic X must be properly contained in the comment. But that assumption is false. There are perfectly well-formed topic structures in Chinese in which only the comment as a whole, not any particular part of it, is related to the topic:

(87) a. [$_{S'}$ *Nèihuí dà huǒ* [$_S$ *xìngkuī xiāofángduì dào   de   zǎo*]].
   that   big fire   luckily brigade   arrive PREP early
   'As for that big fire, luckily the brigade arrived early.'

   b. [$_{S'}$ *Píngguǒ* [$_S$ *èr   jiā   èr   děngyú sì*]].
   apple   two plus two equal   four
   'As for apples, two plus two equal four.'

In 87a, no sub-constituent in the comment can be said to be more closely related to the topic than any other sub-constituent. Clearly, however, the comment as a whole relates to the topic; it is that relation that makes the sentence coherent, and hence acceptable to native speakers. In 87b, the comment seems, on first consideration, to be completely unrelated to the topic; hence the construction as a whole initially strikes native speakers as unacceptable (just as the gloss of 87b initially strikes native speakers of English as unacceptable). However, in the context of explaining to someone the difference between countables and uncountables, by using apples as an example of the former and water as an example of the latter, 87b is acceptable. Hence we may suppose that 87b is also grammatical in Chinese.

However, not every combination of topic and comment is acceptable in Chinese. In 44b above, repeated here for convenience, an example of an unacceptable, and possibly ungrammatical, topic structure is given:

(88) ?**Zhāngsān wǒ bèi dǎ le.*
   I   by hit ASP
   ?*'As for Zhangsan, I was hit.'

This example is unacceptable (and possibly ungrammatical) because there are no natural circumstances in which its topic and comment can be related. The only role that Zhangsan can reasonably play in the comment clause is that of agent; however, since the comment clause describes a state, not an action, the topic cannot be considered an agent.

An interesting contrast in acceptability is presented by this pair of examples:[25]

(89) a. *Lǐ xiǎojiě fùqin hěn yǒu qián.*
      Miss   father very have money
      'Miss Li, her father is very rich.'

    b. ?**Lǐ xiǎojiě Zhāngsān xǐhuan fùqin.*
                         like   father
      'Miss Li, Zhangsan likes her father.'

Furthermore, when a lexical pronoun is inserted as a modifier of *fùqin,* the contrast disappears:

(90) a. *Lǐ xiǎojiě tā de   fùqin hěn yǒu qián.*
                  she MOD father very have money
      'Miss Li, her father is very rich.'

    b. *Lǐ xiǎojiě Zhāngsān xǐhuan tā de fùqin.*
      'Miss Li, Zhangsan likes her father.'

From the acceptability pattern of examples such as 89–90, one might be led to conclude that there is a subject–object asymmetry in the potential for a topic to bind an empty category in the comment—specifically, that a bound empty category cannot appear on the left branch of an inalienably possessed object-NP. However, such a conclusion is unwarranted, since no empty category appears in the structures represented by the examples in 89; both are Chinese-style topic structures. To understand why 89b is less acceptable than 89a, whereas 90a–b are both fully acceptable, we need to examine more carefully the interpretation of inalienably possessed NP's in general.

Consider first these canonical sentences, in which *fùqin* occurs as the head of the subject phrase:

(91) a. *Fùqin hěn yǒu qián.*
      'Father is very rich.'

    b. *Tā de fùqin hěn yǒu qián.*
      'Her/His father is very rich.'

In 91a, the subject *fùqin* can refer (i) to the class of fathers in general, (ii) to the speaker's father, or (iii) to some unspecified person's father. In 91b, the subject *tā de fùqin* can refer only to the father of the person denoted by the pronoun *tā.* Either sentence, therefore, can occur as a comment on a topic which specifies the person whose father the sentence is about, e.g. 89a or 90a.

Now consider these canonical sentences, in which *fùqin* occurs as the head of the object NP:

(92) a. *Zhāngsān xǐhuan fùqin.*
      'Zhangsan likes father.'

    b. *Zhāngsān xǐhuan tā de fùqin.*
      'Zhangsan likes her/his father.'

In 92a, the object *fùqin* can refer (i) to the class of fathers, (ii) to the speaker's father, or (iii) to Zhangsan's father. It cannot refer to any other person's father.

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[25] We have found some people who judge 89b acceptable, but it is quite unacceptable for most native speakers.

However, in 92b, the object *tā de fùqin* can refer to some other person's father. Therefore 92b can be joined as a comment to a topic which specifies the person (other than the speaker or Zhangsan himself) whose father Zhangsan likes (e.g. 89b); but 92a cannot be joined as a comment to such a topic. Hence 89b is unacceptable.

Another potential case of subject–object asymmetry is the contrast in acceptability between the following examples (cf. 83a):

(93) a. *Zhāngsān$_i$ shuō e$_i$ kànjiàn le nǐ.*
         'Zhangsan$_i$ said that he$_i$ saw you.'
     b. *?Zhāngsān$_i$ shuō nǐ kànjiàn le e$_i$.*
         'Zhangsan$_i$ said that you saw him$_i$.'

This contrast, however, is pragmatic. In certain contexts, 93b is perfect with **e** referentially dependent upon *Zhāngsān*, for example, as a reply to the question *Shuí$_i$ shuō wǒ kànjiàn le tā$_i$?* 'Who said that I saw him?' Note further that the grammaticality of 93b completely undermines the basis for Huang's analysis (83c) of the interpretation of 83a in which the empty category in the comment is bound by an empty topic.

Similarly, an apparent subject–object asymmetry exists in the interpretation of examples like these:

(94) a. *Lǐ xiáojiě$_i$ zhǎo bù zháo e$_i$ xǐhuan e$_j$ de   rén$_j$.*
                   find not ASP   like   MOD man
         'Miss Li can't find any man whom she likes.'
     b. **e** *Mǎi* **e** *de   bǐ* **e** *zū* **e** *de   hǎo.*
         buy   MOD than rent MOD good
         'What one buys is better than what one rents.'

In neutral contexts, these sentences are not ordinarily interpreted as 'Miss Li can't find any man who likes her' and 'Whoever buys something is better than whoever rents something.' This suggests that, when a relative clause contains two empty categories, one a subject and one an object, then only the latter can be bound by the head—a restriction explainable by the claim that an empty object cannot be interpreted as a pronoun co-indexed with an antecedent.

However, the interpretation of the examples in 94 is subject to contextual manipulation; furthermore, it is easy to find sentences whose interpretations in neutral contexts are exactly the opposite:

(95) a. *Lǐ xiǎojiě$_i$ zhǎo bù zháo e$_j$ kěn   bāngzhù e$_i$ de   rén$_j$.*
                   find not ASP   be.willing help   MOD man
         'Miss Li can't find any man who is willing to help her.'
     b. **e** *Kěn   bāngzhù* **e** *de bǐ   bù kěn   bāngzhù de*
         be.willing help   MOD than not be.willing help   MOD
         hǎo.
         good
         'Whoever is willing to help someone is better than whoever
         isn't.'

Thus there is no subject–object asymmetry in the binding of empty categories in Chinese, and no reason to believe that empty direct objects cannot be interpreted as pronouns anaphorically related to an antecedent.

We conclude, then, that 76 provides an adequate account of the nature of topic structures in Chinese, provided that the comment is a well-formed clause which relates to the topic. We have not attempted to determine whether the relation that must hold between topic and comment in a well-formed Chinese topic structure is defined within the theory of grammar, as part of semantics— or whether it is defined within the theory of language use, as part of pragmatics. We suspect, however, that the latter is the case, and that the relation in question is the 'relevance' of Wilson & Sperber (MS).

Thus far, we have said nothing about whether any topic structures in Chinese are generated by movement of a phrase from the comment into the topic node. Clearly, at least some topic structures in Chinese are generated without movement, namely those whose source structures would be ungrammatical no matter where the topics originate within the comment clauses (e.g. those in 75). As for the others, a movement analysis, while impossible to rule out for certain, would be otiose. Even if the comment contains an empty category, and hence a 'slot' for the topic, that category is interpreted as it would be in a canonical sentence—namely as a simple pro-form, possibly coreferential with the topic, and not as a variable bound by the topic.

REFERENCES

CHAFE, WALLACE L. 1976. Givenness, contrastiveness, definiteness, subjects, topics and point of view. Subject and topic, ed. by Charles N. Li, 27–55. New York: Academic Press.

CHAO, YUEN REN. 1968. A grammar of spoken Chinese. Berkeley & Los Angeles: University of California Press.

CHOMSKY, NOAM. 1973. Conditions on transformations. A festschrift for Morris Halle, ed. by Stephen R. Anderson & Paul Kiparsky, 232–86. New York: Holt, Rinehart & Winston.

——. 1977. On wh-movement. Formal syntax, ed. by Peter Culicover et al., 71–132. New York: Academic Press.

——. 1981. Lectures on government and binding. Dordrecht: Foris.

——. 1982. Some concepts and consequences of the theory of government and binding. (LI monograph 6.) Cambridge, MA: MIT Press.

FODOR, JANET DEAN. 1978. Parsing strategies and constraints on transformations. LI 9.427–73.

GUÉRON, JACQUELINE. 1980. On the syntax and semantics of PP extraposition. LI 11.637–78.

HUANG, CHENG TEH JAMES. 1982. Logical relations in Chinese and the theory of grammar. MIT dissertation.

——. 1984. On the distribution and reference of empty pronouns. LI 15.531–74.

KOOPMAN, HILDA, and DOMINIQUE SPORTICHE. 1981. Variables and the bijection principle. Paper presented at GLOW Conference.

LI, CHARLES N., and SANDRA A. THOMPSON. 1981. Mandarin Chinese: A functional reference grammar. Berkeley & Los Angeles: University of California Press.

POSTAL, PAUL M. 1971. Crossover phenomena. New York: Holt, Rinehart & Winston.

ROSS, JOHN R. 1967. Constraints on variables in syntax. MIT dissertation.

WILSON, DEIRDRE, and DAN SPERBER. MS. Pragmatics.