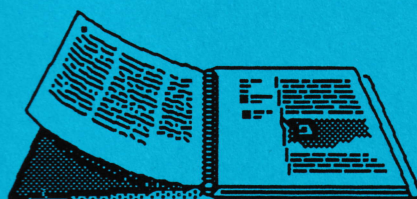Zentrum für Allgemeine Sprachwissenschaft,
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Experiencer non-verb predicates in Russian

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This paper outlines the properties of Russian non-verb predicates which take an Experiencer role (≈ psych predicates). Aside from verbs, the set of Experiencer predicates in Russian includes morphologically adjectival stems and various calcified predicate chunks (mostly do-nominal stems). Their exact case-assigning properties are presented.[1]

This paper is organized as follows: Section 1 discusses briefly how Experiencer predicates are linked to the problem of information structure. I then define "Experiencer" in section 2. Section 3 gives an overview of what possible argument structures are attested for Experiencer predicates in Russian. Finally, in section 4 syntactic models to account for the various non-verb Experiencer predicates are proposed.

1. Relevance of Experiencer predicates to information structure

The various predicates in this paper below seem to constitute exceptions to typical constituent orders of Russian. The project of which this study is a part[2] seeks to establish the following three claims: First, information structure can be derived from argument structure (as stored in the lexical entry of predicates). That is, the neutral constituent order of a Russian sentence will reflect the unaltered mapping of arguments to syntactic structures. Next, only the neutral word order allows both neutral and narrow-focus interpretations. Finally, the neutral constituent order allows the speaker to imply which argument can be interpreted as topic. The present paper attempts to deal with the first of these claims: A neutral word order (with unmarked intonation) exists for each predicate; this order reflects the argument structure of that predicate as stored in the lexicon.

It has often been observed that DAT Experiencers in Russian appear first in a clause; see, for example, Schoorlemmer (1995:67). This paper looks at a subset of DAT Experiencers in Russian—those that accompany non-verb predicates. This paper does not deal conclusively with whether DAT Experiencers are initial due specifically to their having an Experiencer role.[3] Such an analysis is not as easy to do with adjectives, because their Experiencer arguments appear only in the DAT case, and non-Experiencer arguments

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[3]   See Billings (*to appear*), which compares Experiencer and non-Experiencer *verbs* with regard to whether DAT Experiencers in fact must go first. The findings to be reported there suggest that DAT Experiencers tend to be initial because they are usually expressed by means of personal pronouns (referring to humans). Once pronoun-hood and discourse factors are accounted for, that study reports, it is not the case that a nominal expression is initial solely because it has either DAT case or an Experiencer thematic role. Of the four verbs known to subcategorize for a DAT Experiencer—*dosaždat'* 'annoy', *nadoedat'* 'bother', *naskučivat'* 'bore', and *nravit'sja* 'be pleasing'—only the last of these shows any tendency toward positioning DAT Experiencers first (and not even with every informant).

of adjectives invariably appear in non-DAT cases. Thus, it's impossible to compare minimally different examples.

2. What is an Experiencer?

Experiencer predicates are often referred to as "psych" predicates in the generative-syntactic literature. I refer specifically to Experiencers because of some predicates in Russian which are accompanied by a nominal with Experiencer-like semantics but which would not usually be referred to as psych predicates in other languages. Indeed, in certain constructions there is no overt predicate which licenses the Experiencer semantics.

What, then, is an Experiencer? Many studies simply assume that the definition of "Experiencer" is understood. For example, two works which deal extensively with this term, Grimshaw (1990:8) and King (1994:115), begin using it without any definition. Belletti & Rizzi (1988:291) define Experiencer simply as follows: "the individual expressing the mental state" represented by the verb. This is perhaps because these works are limited to so-called inner-state verbs. When it comes to non-verb predicates, however, there appear to be instances of a nominal expression which seem very close to being Experiencers. Chvany (1974), in the course of her discussion of certain adjectival stems in Russian, suggests a few minimal prerequisites for Experiencerhood: First, "it must have an animate referent that can experience a feeling" (p. 96). Additionally, an Experiencer must be "aware" of a feeling (p. 98). Certainly other prerequisites exist. In the course of this paper I will show that even these two criteria—feeling and awareness—are too restrictive to account for each type of predicate in Russian which takes an Experiencer nominal. Still, I will use Chvany's criteria as a starting point for defining this term.

The following semantic types of predicates are considered in this paper:

- Inner states (e.g., *grustno* 'sad', *ljubit'* 'love', *nravit'sja* 'be pleasing')
- Perception—specifically, potential sensation (e.g., *vidno* 'visible')
- Modal:
    - Deontic
    - Permission
    - Ability
- Involuntary (usually adversed) reactions (e.g., *tošnit'* 'nauseate')

Examples of each of these can, arguably, be considered Experiencer predicates in Russian; such an interpretation has been ascribed to them in the literature. One might argue that only the inner states are really Experiencer predicates, as Belletti & Rizzi's definition above seems to imply. This might turn out to be true. I would prefer, however, to err on the side of casting the net too widely; if any of these others turn out not to have Experiencer arguments, the description of these predicates remains the same.

3. Overview of the argument-structure variation of various Experiencer predicates

This section shows examples of each kind of predicate (known to me) that can take an Experiencer. These come in four types: verbs, clauses, nouns, and adjectives.

3.1 Verbs

The various verb classes with Experiencer arguments are merely outlined in this subsection just in order to show the various possibilities. King (1994) discusses the three verb classes in (1):

(1)   Experiencer realized as: Theme realized as:

    a.   NOM   ACC
    b.   DAT   NOM
    c.   ACC   NOM

The combinations of cases and roles in (1a-c) are exemplified in (2a-c), respectively.

(2) a. Ja   ljublju novuju muzyku.
       I   love   new music
       NOM 1.SG   ACC.SG   'I love new music.'

    b. Mne nravitsja novaja muzyka.
       me   likes   new music
       DAT 3.SG   NOM.SG   'I like new music.'

    c. Mamu interesuet novaja muzyka.
       mom   interest   new music
       ACC   3.SG   NOM.SG   'New music interests (my) mom.'

(The constituent orders in (2) are not the only possible orders. With personal pronouns expressing the Experiencer role, this argument tends to be initial; see discussion below.)

Using Chvany's criteria above in section 2 it is arguably possible to dispute the Experiencerhood of the NOM argument in (1a) and (2a). It is possible, indeed common, to say the following in Russian, with an inanimate NOM argument: *Cvety ljubjat solnce.* 'Plants love sun(shine).' Are there two verbs /ljubi-/ in the language, or is one derived from the other? Belletti & Rizzi (1988:298-299) discuss verbs like *colpire* 'strike' in Italian sentences like *Giani mi ha colpito per la sua protenzza.* 'Gianni struck me by virtue of his quickness.' Contrary to their literal meaning, such verbs "admit a derivative psychological interpretation," they argue: "the subject is a Theme [...] and the object is the Experiencer." It is unclear to me how "derivative psychological derivation" is achieved—by separate lexical storage or by some morpho-lexical operation. I leave this issue unresolved. Suffice it to say that an Experiencer *interpretation* can be added.

Additionally, there are several more classes of verbs in which the Experiencer appears in the NOM and the Theme is in some oblique case or prepositional case.

(3) a. Ja   soboleznuju Oksane.
       I   commiserate Oksana
       NOM 1.SG   **DAT**   'I commiserate with Oksana.'

    b. Ja   pugajus'   Oksany.
       I   be-scared-of Oksana
       NOM 1.SG   **GEN**   'I am scared of Oksana.'

c. Ja   interesujus'   Oksanoj.
   I   be-interested-in Oksana
   NOM 1.SG   INST   'I am interested in Oksana.'

d. Ja   seržus'   **na** Oksanu.
   I   be-angry at Oksana
   NOM 1.SG   ACC   'I am angry at Oksana.'

e. Ja   preklonjajus' **pered** Oksanoj.
   I   revere   before Oksana
   NOM 1.SG   INST   'I revere Oksana.'

f. Ja   sožaleju **ob**   Oksane.
   I   pity   about Oksana
   NOM 1.SG   PREP   'I feel sorry for Oksana.'

g. Ja   razočarovyvajus'   **v** Oksane.
   I   become-disillusioned in Oksana
   NOM 1.SG   PREP 'I am disappointed with Oksana.'

The data in (2) and (3) are discussed in more detail in Billings (*to appear*).

There is one more type of verb that might be interpreted as having an Experiencer argument.[4] These are the involuntary-reaction verbs (listed in the diagram in section 2 above). One example, from Schoorlemmer (1995:55) is shown in (4):

(4)   Mašu tošnilo ot   gribov.
       M.   sickened from mushrooms
       ACC [–agr]   GEN   'Maša was sick from mushrooms.'

This class of verbs subcategorizes an ACC-case argument to express the entity that undergoes (experiences?) the nausea. The argument expressing the source of the nausea is (unlike in one possible English gloss, *Mushrooms sickened Maša*) not expressed using the NOM case; instead, a prepositional phrase (headed by *ot* 'from') is used. There is no overt NOM-case subject, and the verb takes either 3.SG or NEUT.SG agreement, depending on the tense. Under the verb in (4) I've written [–agr], meaning "non-agreeing", instead of NEUT.SG (as traditional accounts usually do). Schoorlemmer (1995:55-56) refers to this small class as "lexical adversity-impersonal" verbs and discusses their syntactic properties briefly. It is not clear at all to me whether the entity undergoing the nausea is an Experiencer. Using Chvany's tests (mentioned in section 1 above) it appears that nominals like *comatose patient* (i.e., one unable to feel) can be used with such verbs. For a definitive answer, this issue awaits further research. Note that this verb, like the other verbs discussed in this subsection, each subcategorize for exactly two arguments.[5]

I discuss none of these verbs further in this paper. I list them merely to show the diversity of case-assignment possibilities in the verbal system and allow a comparison

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[4]   Indeed, since presenting this material I have become aware of another such analysis: Harves (1996) reports that some speakers allow the ACC nominal to bind a reflexive in the PP headed by *ot*.

[5]   This verb class's other argument (expressed with the PP headed by *ot*) appears to be consistent with the role of Causer, as defined by Pesetsky (1995). In this sense these verbs fit other Experiencer verbs.

with the non-verb predicates. The remainder of section 3 discusses non-verbal predicates that take Experiencers. These are calcified, non-inflecting predicates (§3.2) and adjectives (§3.3). In the following section (§4) I present a syntactically more appealing way to slice the non-verb Experiencers—according to which type of complement the predicates take.

3.2 Non-inflecting states

Russian has several predicates formed etymologically from various phrases or parts of speech. They function in the modern language as predicates which do not inflect. Some of these are referred to in the traditional accounts of Russian as a separate part of speech: *kategorija sostojanija* 'category of state'. The ones discussed in this subsection each allow a DAT-case Experiencer. The example in (5a) is a particularly colorful example.[6]

(5) a. Mne èto daže kak-to **ne k licu!**
      me this even somehow not toward face
      DAT NOM.SG ACC.SG DAT.SG
      'This somehow doesn't really suit me!'

    a. Mne èto bylo daže kak-to **ne k licu!**
      me this was even somehow not toward face
      DAT NOM.SG [–agr] ACC.SG DAT.SG
      'This somehow didn't really suit me!'

The predicate in (5) *ne k licu* does not inflect. It is best analyzed as a lexical entry distinct from the sum of its parts. In the past tense, such predicates take the [–agr] *bylo* 'was', which indicates that there is no clausal agreement. I also attempted to determine whether the nominal *èto* 'this' in (5a-b) is an argument of the predicate *ne k licu*. It is apparently impossible to substitute a non-pronominal expression like *èto delo* 'this affair'.[7]

A few more of these non-inflecting predicates are etymologically nouns.[8] As in (5), the ones in (6a-c) each take a DAT Experiencer.

(6) a. Mne bylo **pora** uxodit'.
      me was time leave
      DAT.SG [–agr] INFIN   'It was time for me to leave.'

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[6]   The transliteration used in this paper is a hybrid of the forms typically used in North America and Europe: *e* is used instead of *è* because stress is indicated in some forms below and the acute accent is often interpreted as secondary stress. Instead of the diagraph *ch*, *x* is used to render the voiceless velar continuant.

[7]   Nor was it possible to ascertain if (5a-b) can undergo the GEN-of-negation test (cf. §3.3 below).

[8]   Perhaps by coincidence, all of the de-nominal predicates I know of come from FEM nouns. Of these, *pora* is used extremely rarely in the modern language as a noun, meaning 'time'. Two examples of this kind were encountered in Bulgakov's *Master i Margarita*: *Nastavala pora dejstvovat'* (literally: came.FEM.SG time.NOM act.INFIN) 'It was time to act.' In both examples the same verb is used: *nastavat'* '(of a time, a season, etc.) to come'. Certain fixed expressions from this noun also remain in the modern language: *do six por* (literally: until these times) 'until now'. If *pora* in (6) were a noun, it would be in the NOM, but the copula has [–agr], not FEM.SG, inflection. Unlike *pora*, *(ne)oxota* 'hunt(ing)', *len'* 'laziness' and *žal'* 'pity' continue to be used commonly as nouns in the language. However, as predicates, as (6) and (7) show, the copula nonethless bears [–agr] inflection. These de-nominal predicates should therefore be lexified separately from the respective nouns from which they were derived etymologically.

b. Mne   bylo   **len'**   vstavat'.
   me   was   laziness   get-up
   DAT.SG [–agr]   INFIN   'I felt too lazy to get up.'

c. Mne   bylo   **neoxota**   uxodit'.
   me   was   NEG.hunt   leave
   DAT.SG [–agr]   INFIN   'I didn't feel like leaving.'

All the predicates so far in this subsection select a DAT-case Experiencer and an infinitival complement. The predicate in (7) likewise selects a DAT Experiencer and can take an infinitival complement, as shown in (7a). See also its near equivalent in (10a-c) below.[9]

(7) a. Mne   bylo   **žal'**   uxodit'.
       me   was   pity   leave
       DAT.SG [–agr]   INFIN   'I felt sorry that I had to leave.'

   b. Mne   bylo   **žal'**   kurtki.
      me   was   pity   jacket
      DAT.SG [–agr]   GEN.SG   'I felt sorry about losing (my) jacket.'

   c. Mne   bylo   **žal'**   mamu.
      me   was   pity   mom
      DAT.SG [–agr]   ACC.SG   'I felt sorry for mom.'

Unlike the preceding examples in this subsection, *žal'* can take a nominal complement instead of the infinitival, as exemplified in (7b-c). In the meaning of 'feel sorry about (or feel sad about what happened to) something' it takes GEN case, shown in (7b). In the meaning 'feel sorry for' this predicate takes an ACC argument, as shown in (7c).[10] This is the first of several predicates to assign ACC case, a property relevant to the interpretation of the DAT Experiencer's morphosyntactitic status; see especially (12) below.

One last group of non-inflecting predicates which take a DAT-case Experiencer are shown in (8a-c). These function as modals and take an infinitival as well.[11]

(8) a. Mne   **nado**   bylo   uxodit'.
       me   need   was   leave
       DAT.SG   [–agr] INFIN   'I had to leave.'

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[9]   The GEN-case assigning construction in (7b) is more common with *žalko*, as shown in (10b) below.

[10]   I also attempted to test whether the GEN of negation (cf. §5.3) is possible with (7c) or (10c). Unfortunately, it was impossible to determine conclusively if a sentence like *Mne ne žal'/žalko mamy* [= (7c) or (10c), but with *ne* NEG added and new case on GEN.SG *mamy* 'mom'] meant 'I didn't feel sorry for mom' or 'I didn't feel sorry about mom' (or 'I didn't feel sad about what happened to mom'). That is, due to the existence of a slightly different predicate that takes a GEN case argument even without negation, shown in (7b) and (10b), it is difficult to exclude this interpretation, especially for younger speakers who hardly ever use the GEN of negation any more. Cf. Timberlake (1974/1986) re the diachronic wane of this phenomenon. The other adjectival predicates discussed below clearly allow GEN of negation.

[11]   It could be argued that the predicate in (8b) is adjectival. This may be true etymologically, but there is no form of this stem in the modern language that functions as a modifier or inflects like a predicate (short-form) adjective. There is a similar stem, /vozmož#n-/ 'possible', which functions as an adjective. Cf. (10a-c), where there is a corresponding adjective

b. Mne **možno** bylo uxodit'.
    me   can   was   leave
    DAT.SG   [−agr]   INFIN   'I could leave.'

c. Mne **nel'zja** bylo uxodit'.
    me   NEG.can was   leave
    DAT.SG   [−agr] INFIN   'I couldn't leave.'

Note, as Kondrashova (1994) and Schoorlemmer (1995:62 fn. 61) both do, that whereas the copula in the preceding examples can precede the predicate, the copula in (8a-c) is not allowed to precede the predicate:[12] *Mne bylo {nado/možno/nel'zja} uxodit'.[13]

Until relatively recently, *nado* was like (7c) in being able to take an ACC-case nominal. Bulaxovskij (1954/1976) lists the following examples of *nado* and the synonymous (but by now obsolete) predicate *nadobno*, all of them from the 1800s.

(9) a. **Inuju** slavu **nado** mne!
    different glory need me
    ACC.SG   [−agr] DAT.SG   'I need a different kind of glory!'

b. **nadobno** ešče tret'ju merku
    need   yet   third yardstick
    [−agr]   ACC.SG   'yet a third yardstick is needed'

Whereas ACC-assigning predicates such as (7c) are still used, others, like (9a-b) are not.

To summarize this subsection, DAT-case Experiencers accompany various non-inflecting predicates in Russian. Some take an infinitival complement, while others take additional nominal arguments, while yet others take both types of complements. None of these predicates, however, can take both an infinitival and a nominal simultaneously.

3.3 Adjectival stems

In this subsection I survey the various morphologically adjectival stems that select an Experiencer. With the exception of participles, which can take a NOM-case Experiencer, the Experiencer with adjectival predicates is invariably in the DAT case.

Like the non-inflecting predicate *žal'* 'pity' in the preceding subsection, certain adjectival stems can take multiple arguments in specific cases. Moreover, adjectival predicates can also take nominative subjects. This subsection sketches the various possible realizations of thematic roles and cases with several adjectives in Russian.

The adjectival predicate in (10a-c) is shares the same root with the one in (7a-b).

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[12]   Moreover, if (8a) is negated, the NEG particle *ne* immediately precedes *nado*. The predicates in (8b-c) are a suppletive pair; whereas *nado* in (8a) is negated as *ne nado* (literally: NEG should), the predicate in (8b) cannot be negated by preposing *ne*. Instead, the separate stem *nel'zja* is used.

[13]   A construction versy similar to those in (8a-c) is discussed in Schoorlemmer (1995:65-66): *Kuda nam bylo postavit' ètot jaščik?* (literally: where us.DAT install.INFIN this box.ACC) 'Where could we put down this box?' She argues for "a null predicate comparable to other modal predicates like *nado*" in (8a). This approach appears to work inasmuch as the DAT-case nominal is licensed uniformly.

(10) a. Mne   bylo   **žalko**   uxodit'.
        me   was   wretched leave
        DAT.SG [–agr]   INFIN   'I felt sorry that I had to leave.'

     b. Mne   bylo   **žalko**   kurtki.
        me   was   wretched jacket
        DAT.SG [–agr]   GEN.SG   'I felt sorry about losing (my) jacket.'

     c. Mne   bylo   **žalko**   mamu.
        me   was   wretched mom
        DAT.SG [–agr]   ACC.SG   'I felt sorry for mom.'

In practice, *žalko* is an informal-register equivalent of *žal'*, with identical case-assignment.

I assume that the GEN case assigned in (7b) and (10b) is quirky, a property specified idiosyncratically in the lexicon for this predicate.[14] The GEN case here does not appear to be partitive—a common use of the GEN in Russian. Furthermore, as the glosses of these examples are intended to show, the GEN-assigning use of *žal'* and *žalko* constitutes a separate lexical entry from the others which use this stem, (7a, c) and (10a, c).[15]

The adjectival stem in (10a-c), at first blush, might appear to be an argument *against* slicing the data as I have done in the preceding subsection and this one (i.e., non-inflecting vs. adjectival predicates). As the following data shows, however, several types of predicates—all of which could be argued to take Experiencers—share various inflectional properties. For this reason, I present the data based on the predicates' inflectional properties. I re-sort the data as to syntactic properties of the predicates in section 4 below.

Truly predicative adjectives do not show case. These are the so-called short form, which agrees with the clausal subject in gender and number, but not in case. Long forms are attributive, and agree with the noun in gender/number as well as case. In some sentences the only overt word of the predicate is a long-form adjective, which I assume to agree with an inaudible noun in N°. Long forms are not discussed in much detail here.

Many of the adjectival stems that take multiple arguments are (morphologically adjectival) modals. For this reason, linguists are generally skeptical about their ability to actually subcategorize for an Experiencer. Some works in the generative framework have admitted that the DAT-case nominals co-occuring with modal adjectives have Experiencer semantics: Chvany (1974), Kondrashova (1994) and Schoorlemmer (1995:62 fn. 41).

This subsection sorts through the details of these adjectiveal predicates, showing the following: First, adjectives can take up to three arguments (NOM, ACC and DAT), quite similarly to how ditransitive verbs do. I show below that adjectives quite clearly have direct objects (i.e., they assign structural ACC to their complements). Next, also like the

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[14]   More than one work on such predicates has overlooked the GEN-assigning version of *žalko* (or *žal'*). The following datum is attested in a corpus search (of Bulgakov's *Master i Margarita*): *Užasno emu ne xotelos' vozvraščat'sja, no šljapy bylo žalko.* 'He really didn't fee like returning, but he felt sorry about losing his hat.' I have not determined exactly when ACC and GEN case is assigned. The latter seems to be restricted to inanimate objects, but this does not mean that inanimates nominals cannot be the ACC-case complement; cf. the following example in Schoorlemmer (1995:67 fn. 66): *Detjam bylo žalko ix rabotu* (literally: children.DAT was.[–agr] sorry their work.ACC.SG) 'The children were sorry about their work.'

[15]   One other non-verb predicate which appears to assign quirky case is *zavidno* 'envious', as in the following example: *Mne bylo zavidno Vase* (literally: me.DAT was.[–agr] envious.[–agr] Vasja.DAT.SG) 'I envied Vasja.' This example, from Kondrashova (1994:256), is especially interesting in that it shows two DAT-case nominals in the same clause, which is fully expected if one of these is quirky DAT case.

other Experiencer predicates exemplified above, if an adjective subcategorizes for a an Experiencer, it selects exactly one other argument. Finally, unlike verbs, if an adjective subcategorizes for an Experiencer, this argument is invariably realized in the DAT. This discussion will venture a bit beyond Experiencer-taking predicates, strictly speaking. This foray will show, however, that defining "Experiencer" is extremely difficult.

Because of this subsection's widely varying data, I have organized the presentation beginning with the adjectival predicates that exhibits the greatest complexity of arguments and end with those which take just one argument (the Experiencer). This *a tergo* presentation is necessitated by the detailed discussion of the most complex of the adjectival predicates in Chvany (1974), which I use as a baseline for further discussion.

3.3.1 Ditransitive adjectives: Chvany (1974) is an early-generative treatment of the adjectival stem /dolž#n-/,[16] which variously means 'must', in either the obligative or inferential sense; 'expected' or 'supposed', without obligative or inferential modalities; or 'owe', in which case it has both direct and indirect objects.[17] Beginning with the last of these meanings, this adjective, in the meaning of 'owe', is exemplified in (11a):

(11) a. On   dolžen-Ø ej   marku.
        he   obliged her   mark
        NOM.SG MASC.SG DAT.SG   ACC.SG
        'He owes her a mark.'

     b. On   ne dolžen-Ø ej   (ni   odnoj) marki.
        he   not obliged her   (nary single) mark
        NOM.SG   MASC.SG DAT.SG   GEN.SG GEN.SG
        'He doesn't owe her a (single) mark.'

That *on* is the sentential subject is clear; *on* 'he' is NOM and the predicate shows (MASC.SG) agreement with it. That the ACC-case argument behaves like the direct object of a verb is also clear, diagnosed by the GEN-of-negation test. The GEN of negation is a relatively well known phenomenon of Russian whereby (otherwise-NOM) subjects of so-called unaccusative intransitive verbs, certain adjuncts (those which otherwise appear in the ACC case), and direct objects of transitive verbs **can** appear in the GEN if there is sentential negation. This is exemplified for this predicate in (11b).

Alas, none of the arguments in (11a-b) seems to be an Experiencer. Chvany (1974:98) writes that there is no evidence that the NOM-case nominal is an Experiencer, since the subject (*on* 'he') may owe money without being aware of it. That is, the subject does not necessarily Experience any feeling (of indebtedness) in order for (11a-b) to be true. Nor does the presence of *two* other arguments resemble verbs which subcategorize for an Experiencer. None of the verbs above (in §3.1) takes more than one other argument aside from the Experiencer. Pesetsky (1995), who distinguishes three types of roles which accompany the Experiencer in psych verbs—Causer, Target, and Subject Matter—shows

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[16] The symbol # is shorthand for a position where a vowel appears if the inflection is null, as in (11a).

[17] Unlike the [−agr] form *bylo* 'was' in the preceding subsection, the form that accompanies subject-agreeing /dolž#n-/ shows gender/number agreement in the past tense (and person/number in the future). In (11a) the copula would be MASC.SG *byl*. None of Chvany's /dolž#n-/ data in the meaning 'owe' contains a copula. She does mention, however (1974:80) that the 'owe' meaning tends to place the copula before /dolž#n-/, while in the other uses the copula is postposed.

that none of these other argument types can co-exist. Furthermore, whereas the DAT-case nominal in (12a-b) is clearly a Goal, it is difficult to pinpoint which of these three roles the ACC-case nominal bears. For these reasons I agree with Chvany that the 'owe' meaning of /dolž#n-/ does not assign an Experiencer role to its NOM-case subject.

Still, these examples are opportune because they show that two widely held maxims of syntax cannot be true. The first is that non-verb predicates can take direct objects. The GEN-of-negation test in (11b) suggest that the amount-owed nominal is an internal argument. Next, as Schoorlemmer (1995:50) observes, data like these are a violation of Burzio's Generalization, shown in (12), which is her paraphrase of Burzio (1981).

(12) If a predicate assigns case to its object, then it assigns a θ-role to its subject.

Schoorlemmer (1995:56-57) discusses a class of adjectival predicates quite similar to the one in (11a-b). These are morphologically adjectival predicates of perceivability, in which the perceived item can be in either NOM or ACC case, as shown in (13a-b), respectively:

(13) a. Mne   doroga   byla   vidna.
        me   road   was   visible
        DAT.SG   NOM.SG   FEM.SG   FEM.SG   'The road was visible to me.'

     b. Mne   dorogu   bylo   vidno.
        me   road   was   visible
        DAT.SG   ACC.SG   [–agr]   [–agr]   'The road was visible to me.'

(These constituent orders are not necessarily the most neutral. Usually, the ACC-case nominal follows the copula and predicate.) Aside from /vid#n-/ 'visible', the two other adjectives with the same properties are /slyš#n-/ 'audible' and /zamet#n-/ 'noticeable'.

Showing that the version in (13b), with an accusative object, can undergo GEN of negation,[18] Schoorlemmer (1995:57) considers two possibilities to be worth pursuing: First, the ACC case assigned by adjectives is not the same and therefore does not constitute counter-evidence to Burzio. In my view tests like the GEN of negation show quite clearly that the ACC is the same as the ACC assigned by transitive verbs. Second, "the dative NP in these sentences is in fact an external argument." That is, while the predicate in (13) assigns structural ACC case, it only **seems** not to take an external argument. I pursue this possibility in my treatment of *nužno* below, as well as in Billings (*to appear*).

When I presented the talk that preceded this paper I suggested that the predicate in (13) might also take an Experiencer. The DAT nominal in (13) fails Chvany's tests, listed in section 2 above. Sensory perception does not necessarily involve a feeling; this suggests that the DAT nominal is not an Experiencer. Still, what role would the DAT-case nominal in (13a-b) bear if not Experiencer? I leave this issue unresolved here.

In conclusion, the data so far have shown that adjectives have very extensive properties in subcategorizing for various cases. Neither of the preceding adjective types— /dolž#n-/ 'owe' or the perceivability class—conclusively involves an Experiencer role.

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18   This would result in *Nam dorogi ne bylo vidno*. 'The road.GEN.SG wasn't visible.[–agr] to us.'

3.3.2 Adjectives with DAT-case Experiencers: In the other meanings of the /dolž#n-/ stem—'must' (in either the obligative or inferential sense) or 'expected'/'supposed' (without obligative or inferential modalities)—potential Experiencer nominals are attested.

With non-'owe' meanings, /dolž#n-/ can take infinitive complements, as in (14a-d). In these the NOM-case subject implies an obligation of some sort.

(14) a. On-Ø   dólžen-Ø rabotat'.
      he   **must**   **work**
      NOM.SG MASC.SG INFIN

    b. Ona   dolžná rabotat'.
      she   **must**   **work**
      NOM.SG FEM.SG INFIN

    c. Ono   dolžnó rabotat'.
      it   **must**   **work**
      NOM.SG NEUT.SG INFIN

    d. Oni   dolžný rabotat'.
      they   **must**   **work**
      NOM.PL PL   INFIN

A so-called impersonal form is also possible. It is homonymous with the NEUT.SG form *dolžnó* in (14c) and (15a), but has stress on the first syllable, *dólžno*, in (15b).

(15) a. Èto   ponjatie ne dolžnó   otoždestvljat'**sja** s   tem.
      this   concept not must   equate   with that
      NOM.SG NOM.SG   NEUT.SG INFIN+REFL   NEUT.INST.SG
      'This concept must not be equated with that one.'

    b. Èto   ponjatie ne dólžno   otoždestvljat'   s   tem.
      this   concept not must   equate   with that
      ACC.SG ACC.SG   **[–agr]**   INFIN   NEUT.INST.SG
      '{One must not/It is wrong to} equate this concept with that one.'

The two sentences in (15a-b), which are for the most part synonymous, are deceptively similar syntactically as well. On the surface they differ only in two ways: In (15a) an (etymologically reflexive) morpheme *-sja* appears on the verb which indicates the passive.[19] Chvany glosses (15a-b) alike, as shown under (15a), but I've added a different gloss for (15b). The hidden fundamental difference is the case assigned to the initial nominal expression in each. It so happens that the NEUT.SG exhibits syncretism between the NOM and ACC cases. With another declensional class, this illusion is erased, as in (16):

(16) a. Èta   ideja   ne dolžná   otoždestvljat'**sja** s   toj.
      this   idea   not must   equate   with that
      NOM.SG NOM.SG   FEM.SG INFIN+REFL   FEM.INST.SG
      'This idea must not be equated with that one.'

    b. Ètu   ideju   ne dólžno   otoždestvljat'   s   toj.
      this   idea   not must   equate   with that
      ACC.SG ACC.SG   **[–agr]**   INFIN   FEM.INST.SG
      '{One must not/It is wrong to} equate this idea with that one.'

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[19]   Imperfective verbs (of which *otoždestvljat'* is one) are passivized using *-sja*, while perfective stems are passivized with *-n-* (or its allomorph *-t-*).

As in (13a-b), the constituent orders in (16a-b) aren't necessarily the most neutral ones.[20]

At this point I should clarify, as Chvany does, that the following data no longer hold of Russian: DAT Experiencers with /dolž#n-/ were relatively well documented in the early 1800s but this phenomenon has reached the point of extinction today. I might also add that the [–agr] form *dólžno* has itself all but ceased to exist in the modern language. It now being some quarter of a century since Chvany's paper was written, this fact is not surprising. These phenomena are nonetheless worth pursuing in an investigation of the modern language because Chvany's observations carry over to other adjective predicates as well (namely, *nužno* 'need'), where DAT Experiencers continue to be well attested.

That said, it is possible to render near-equivalents of the sentences in (14), with one major modification: Instead of the NOM-case subject there is a DAT-case Experiencer. Because is no overt NOM subject; the predicate in (17a-d) shows the [–agr] form *dólžno*.[21]

(17) a. **Emu** **dólžno** rabotat'.
   him **must** work
   DAT.SG [–agr] INFIN
   'He must work.'

  b. **Ej** **dólžno** rabotat'.
   her **must** work
   DAT.SG [–agr] INFIN
   'She must work.'

 c. **Emu** **dólžno** rabotat'.
   it **must** work
   DAT.SG [–agr] INFIN
   'It must work.'

  d. **Im** **dólžno** rabotat'.
   them **must** work
   DAT.PL [–agr] INFIN
   'They must work.'

Chvany (1974:93-94) is very explicit about the thematic-role differences between the data in (14a-d) and their seeming counterparts in (17a-d): The DAT nominal in the modern language "still seems to be potentially selectable: native speakers do understand sentences like [(17a-d)] and often report that a surface subject of [(14a-d)] feels an 'inner duty' to do something —a connotation that may be due to the <u>potential</u> subcategorization for a dative NP interpreted as Experiencer, even though such an argument is no longer freely selected in contemporary usage."[22] Chvany (1974:116 n. 19) goes on to describe this diachronic situation in more detail:

> It is interesting to identify just what the historical change consists in. It is not simply that an Experiencer lost its case marking and became nominative: the nominative with [in (14a-d)] is not an Experiencer, and is not necessarily animate, cf. [(15a) and (16a)]. In this respect, <u>dolž#n-</u> differs from its glosses <u>nužno</u> and <u>objazan</u>, which require animate NPs:

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(18) a. Pivo   dolžnó   byt' poxolodnee.
          beer   must   be   colder
          NOM.SG   NEUT.SG   INFIN COMPARATIVE[–agr]

      'The beer ought to be colder.'

      b. * Pivo   objazano byt' poxolodnee.
           beer   required be   colder
           NOM.SG   NEUT.SG   INFIN COMPARATIVE[–agr]

      c. * Pivu   nužno   byt' poxolodnee.
           beer   need   be   colder
           DAT.SG   [–agr]   INFIN COMPARATIVE[–agr]

I discuss /objazan-/ and /nuž#n-/ in more detail below. For the present purposes, /objazan-/ 'required' is subcategorized for a NOM subject, while /nuž#n-/ 'need(ed)'—specifically its [–agr] form *nužno*—takes a DAT Experiencer; both take infinitivals.

Chvany's point in (18a-c) is that an inanimate noun like (NEUT) *pivo*, which cannot be in the NOM position in (18b) or the DAT position in (18c), can nonetheless be the NOM subject of (18a), because /dolž#n-/ does not require a human subject; and [+human] is a necessary (although not sufficient) condition on being an Experiencer. I am compelled to dispute Chvany's [±human] criterion, based on the following example, which I elicited:

(19) Čtoby perenesti surovuju sibirskuju zimu, ...

      'In.order.to survive (the) rough Siberian winter, ...

      ... étim jablonjam   nužno   byt'   kak možno krepče.
      these apple.trees   must   be   as sturdy as possible
      DAT.PL   [–agr]   INFIN

      ... these apple trees must be as sturdy as possible.'

In a sense, however, *étim jablonjam* 'these apple trees' is an Experincer in that it "undergoes" something, as do the involuntary-action verbs exemplified above in (4). But trees certainly do not feel any necessity and are definitely not aware in any sense. As above, I refrain from defining this thematic role more precisely in this paper.

Nor I will go into the slight subcategorization differences between the three non-'owe' meanings of /dolž#n-/ here. These are discussed at length in Chvany (1974). It is sufficient to say that there are two quite distinct predicates, as it were, sharing the same morphological stem.[23] One means 'owe' and has the same arguments (cases and roles) as

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[23]   In a valiant attempt to provide a unified analysis of all versions of /dolž#n-/, Chvany (1974:99-100) proposes that even the 'owe' meaning of this predicate takes a clausal complement, similar to the infinitival(-clausal) complements of non-'owe' versions. With 'owe' the clause is headed by an abstract ditransitive predicate with the feature [+ transfer]. Using this and other clausal complements of /dolž#n-/. Chvany argues for a raising analysis of the lower subject to the subject of the /dolž#n-/ clause. The fact that the DAT argument with 'owe' is a Goal, while with non-'owe' it's an Experiencer is a problem, as Chvany (1974:98) admits; that problem is addressed below in my discussion of so-called modal-infinitives. As ingenious as this proposal is, I can't accept it for the following reason: There isn't an impersonal form of the 'owe' variant. That is, even if an experiencer-DAT is excluded if a Goal-DAT argument is present, why isn't the predicate form *dólžno* (discussed immediately below) attested with 'owe'? I conclude then that 'owe' is lexically distinct. (Cf. Dziwirek 1993 for another apparent double-DAT restriction in Slavic.)

a ditransitive verb (like *dat'* 'give'). The other predicate means 'must' (and the like) and takes either a NOM subject (with which /dolž#n-/ agrees syntactically) or takes no NOM subject (requiring the [–agr] form of the predicate, *dólžno*); until the last century or so this form could take a DAT-case Experiencer. In the agreeing version, the NOM argument is not an Experiencer. Additionally, the [–agr] form itself is quite archaic to my informants.[24]

Before proceeding to the remaining adjectival predicates, I should address (18b). Cf. a grammatical example of the same predicate: *Student objazan byt' smelee.* (literally: student.NOM required.MASC.SG be.INFIN bolder.COMPARATIVE) 'The student is required to be more self-confident.' Recall that I characterized all non-verbal predicates as taking Experiencer arguments only in the DAT case. In (18b) the argument which Chvany calls an Experiencer is in the NOM case. This is because *objazan(o)* is a verbal form, the so-called past passive participle of the perfective verb /objaz-a-/ 'bind' (as in 'lay someone under an obligation'). Passivized perfective verbs take this /-(e)n/ suffix. As Babby (1993:26) shows, however, such participles form near-minimal pairs with adjectives which have semantic content not fully derivable from the verb: *načitan* 'read in great quantity' (describing the printed material) or 'well-read' (describing the reader). The first gloss reflects the passive of /načit-aj-/ 'read (a quantity of something)', while the second is from the independently lexified adjective /načitann-/ 'well-read'. As Babby points out, these two forms are homophonous in the MASC.SG (short form) but differ in vowel-final forms such as the FEM.SG: *načitana* 'read in great quantity' but *načitanna* 'well-read', with a geminate *nn*.[25] Such pairs also of passive participles and adjectives exhibit an additional type of homophony, again only in the MASC.SG form: *odarën, odarená* 'endowed'; *odarën, odarënna* 'gifted'; in this pair the stems differ in stress as well. I have not been able to detect any evidence that the the predicate in (18b) is any other than the passive form of the transitive, perfective verb /objaz-a-/, which apparently requires its internal argument to be [+human]. Furthermore, this [+human] nominal is an Experiencer, with a enternal argument bearing the Theme role—or, as defined in Pesetsky (1995), the Causer role. In any event, this predicate in (18b) is verbal and beyond the scope of this paper.

The other predicate mentioned in (18), *nužno*, is quite similar to /dolž#n-/. The two predicates are similar in both having [+agr] forms, cf. (14a-d) above with (20a-d) :

(20) a. On-Ø   mne   núžen-Ø.
        he   me   need
        NOM.SG   DAT.SG   MASC.SG
        'I need him.'

     b. Ona   mne   nužná.
        she   me   need
        NOM.SG   DAT.SG   FEM.SG
        'I need her.'

     c. Ono   mne   núžno.
        it   me   need
        NOM.SG   DAT.SG   NEUT.SG
        'I need it.'

     d. Oni   mne   nužný.
        they   me   need
        NOM.PL   DAT.SG   PL
        'I need them.'

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[24]   Because the [–agr] form of /dolž#n-/ is so archaic, it was difficult for my informants to determine whether the GEN of negation is possible in lieu of the initial ACC nominal in (15b) or (16b).

[25]   As the underlying representation of the adjectives show, the stem contains a *nn*. The passive forms invariably have just a single *n*. According to Babby (1993:26 fn. 16), in the MASC.SG short form a phonetic rule deletes the second *n* because a geminate (i.e., *nn*) can occur only in prevocalic position.

In (20a-b) the gloss 'I need it' could also be used if the referent of the NOM-case subject is non-human. As with /dolž#n-/, it is possible to have an infinitival clause, as in (21):

(21)   Mne   núžno rabotat'.
        me   need   work
        DAT.SG [–agr] INFIN   'I need to work.'

Note that this predicate stem shows no distinction between the NEUT.SG-agreeing form in (20c) and the [–agr] form in (21); the two are segmentally and prosodically homophonous: núžno. Still, I gloss (20c) as NEUT.SG, while I gloss (21) with [–agr]. This is based on abstract notions discussed briefly in Chvany (1974:115-116 n. 17), who cites various works by Roman Jakobson. The essential idea is that the so-called NEUT.SG (or 3.SG) form is really [–agr] in those cases where there is no NOM subject to agree with; such is the case in (21). (In the remainder of this paper I mark stress only where it is distinctive.)

Unlike /dolž#n-/, with the /nuž#n-/ stem the DAT-case nominal continues to be used freely. The DAT-case Experiencer appears in both [+agr] and [–agr] forms .

It is clear from (22) that the NOM subjects of (20a-d) are not external arguments.

(22)   Mne   ne   nužno tvoix voprosov.
        me   not need   your questions
        DAT.SG   [–agr] GEN.PL   'I don't need your questions.'

If the GEN-of-negation test applies to a predicate that otherwise takes a NOM-case subject, then this predicate must be unaccusative (i.e., a predicate with only internal arguments).[26]

I return to a portion of Chvany's (1974:116 fn. 19) extended quote above, preceding example (18): "It is not simply that an Experiencer lost its case marking and became nominative." There is additional evidence that Chvany is right. As the data above in (7c), (9a-b), (10c), (11a) and (13b) show, quite a number of non-verb predicates assign or, until recently, have assigned ACC case. The same is true of /nuž#n-/. Bulaxovskij (1954/1976) lists the following example of /nuž#n-/ from the 1800s with both DAT and ACC nominals:[27]

(23)   ... ego čuvstvu   nužno bylo   i proxladu vozdoxa i prostor neba ...
        his consciousness   need was   & coolness air   & expanse sky
            DAT.SG   [–agr] [–agr]   ACC.SG   GEN.SG   ACC.SG GEN.SG
        'his consciousness needed both the cool of the air and the expanse of the sky'

It appears that /nuž#n-/, at least in the 1800s, resembled the predicate in (13a-b) above, in which the a nominal can be in either the NOM (in which case the predicate agrees with it)

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[26]   As U. Junghanns pointed out to me, an ACC-case nominal that undergoes the GEN of negation is not necessarily an argument; certain adjuncts can likewise undergo this phenomenon. If, however, a NOM-case nominal undergoes GEN of negation, then it must be an argument (specifically, an internal one). The fact that this predicate's NOM-case subject could appear in the ACC case as late as the 1800s—cf. (23)—is additional evidence that this nominal is an internal argument.

[27]   Example (23) involves two conjoined ACC-case nominals. The first of these shows unmistakable ACC case, while the second (die to syncretism of the NOM.SG and ACC.SG forms in that declension) does not. Still, the predicate and copula exhibit [–agr], and not PL agreement, suggesting that *prostor* is ACC too.

or the ACC (which then results in a [–agr] form of the predicate).[28] And, since the DAT-case nominal co-occurs in the same clause with the ACC-case nominal, this strongly suggests that in the modern language the NOM and DAT nominals are not mere variants of each other. Alas, this issue is moot in the modern language; DAT use is now obsolete.

One last predicate that takes a DAT-case Experiencer is exemplified in (24a-b):

(24) a. Mne   bylo   ból'no dyšat'.
        me   was   painful breathe
        DAT.SG [–agr] [–agr] INFIN   'It was painful for me to breathe.'

     b. Mne   bylo   ból'no ruku.
        me   was   painful breathe
        DAT.SG [–agr] [–agr] ACC.SG   'My arm hurt.'

These are modified from Schoorlemmer (1995:56 fn. 56), who points out that this predicate resembles the predicates of perceivability shown above in (13) with two differences: /bol'#n-/ has no counterpart to (13a), with a NOM subject (instead of an ACC nominal), but can take an infinitival complement, as in (24b). In Schoorlemmer (1991:120) she points out yet another property of this predicate; compare (25a-b):

(25) a. Èto   mesto   očen' bol'nó.
        this   place   very   painful
        NEUT.NOM.SG NOM.SG   NEUT.SG 'This spot is very painful.'

     b. Mne   bylo   ból'no v rukax.
        me   was   painful in arms
        DAT.SG [–agr] [–agr] PREP.PL   'My arms hurt.'

Like the forms *dolžnó* and *dólžno* in (15a-b) above, this predicate has distinct NEUT.SG and [–agr] forms. The use of this form in (25a) appears to be archaic to my informants, who would not use it personally. This is primarily because younger speakers tend to use a long-form adjective (*bol'nóe* 'painful.NEUT.SG') in place of short-form *bol'nó*. Furthermore, the stem in (24) and (25) is homophonous with the adjective meaning 'sick' (said of the entire person).[29] The form in (25b), with a prepositional-phrase adjunct instead of a NOM/ACC nominal as in (24a-b) is still attested in the modern language.

This concludes the enumeration of adjectival stems which take some other nominal argument in addition to a DAT-case Experiencer nominal. That other nominal never co-occurs with an infinitival, suggesting that the infinitival is itself in an argument position.

3.3.3 Ordinary adjectives: The remainder of the data are adjectives which assign an Experiencer role to their lone argument. That is, within nominal expressions, such an adjective modifies a noun to indicate that the noun experiences some feeling, as in (26).

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[28]   M. Schoorlemmer (p.c.) reports forms in the modern language like *Mne nužno vrača.* (literally: me.DAT need.[–agr] physician.ACC) 'I need a doctor.' Bulaxovskij stops short of saying they are extinct.

[29]   Due to these complications, I was unable to determine other characteristics of this form (i.e., whether GEN of negation is possible or the position where a past- or future-tense copula would appear).

(26) a. grustnyj   brat   b. grustnaja   sestra   c. grustnye roditeli
       sad   brother   sad   sister   sad   parents
       MASC.NOM.SG NOM.SG   **FEM.NOM.SG** NOM.SG   NOM.PL NOM.PL

Adjectives can also be used predicatively, as in (27a-b). It is also possible to express a nearly equivalent clause using a DAT Experiencer and a [−agr] adjective, in (27c):

(27) a. Brat   grustnyj.
        brother   sad
        NOM.SG   MASC.NOM.SG   'My brother is a sad person.'

     b. Brat   grusten.
        NOM.SG   MASC.SG[−case]   'My brother is sad.'

     c. Bratu   grustno.
        DAT.SG   [−agr]   'My brother is feeling sad.'

Such predicates do not require an Experiencer; examples with identical syntax are interpreted as having non-Experiencers if the noun is [−human], as in (28a-c) and (29a-b):

(28) a. grustnyj   rasskaz   b. grustnaja   povest'   c. grustnye pesni
        sad   story   sad   tale   sad   songs
        MASC.NOM.SG   NOM.SG   FEM.NOM.SG   NOM.SG   NOM.PL NOM.PL

These examples do not convey Experiencer semantics. The same holds for such adjectives as clausal predicates; in (29a) the adjective merely describes the nominal.[30]

(29) a. Rasskaz   grustnyj.
        story   sad
        NOM.SG   MASC.NOM.SG   'The story is (a) sad (one).'

     b. *Rasskaz grusten.

     c. *Rasskazu grustno.

Crucially, the counterpart of (25c), with a DAT-case Experiencer, as (29c) shows.

Babby (1993:20) discusses a similar situation, in which passive participial form of verbs can be homophonous with derived adjective stems in some forms; cf. my discussion in connection with the predicate in (18b) above: "departicipial adjectives ... have external theta-roles that are different from the internal argument of the corresponding verb, e.g., *U nee ispugannye glaza* 'She has **frightened eyes** [expressing fear]' ...; *Maša ispugana*

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[30] The short form is ruled out in (27b) for pragmatic reasons. As the glosses in (25a-b) suggest, only long-form adjectives denote an inherent property. Since stories tend to be *inherently* sad, (27b) is odd. This long/short distinction is becoming lost with younger speakers, who increasingly use long forms even for temporary states. Schoorlemmer (1995:61 fn. 59) assumes that data very similar to (27a, c) "contain different but systematically related predicates." (She actually uses an INST.SG long-form adjective, which adds a meaning that the person is no longer sad.) What Scooorlemmer might have had in mind was environments like those in (32a-b); /grust#n-/ can alternate between [−agr] *grustno* and INST.SG *grustnym* in (32a), or in (32b) if it were the predicate there, but *stydno* 'ashamed' cannot resort to any corresponding morphologically agreeing forms. (Such agreeing forms exist, /styd#n-/, but means 'shameful', not 'ashamed'.) It is unclear to me whether these are morphological blocking effects or separate lexical entries.

'Maša has been frightened' ... vs. *Maša ispuganna* 'Maša is scared' (a departicipial adjective); cf. *Ee glaza ispugany* {*'Her eyes have been frightened'} vs. *Ee glaza ispuganny* {'Her eyes were frightened/expressed fear.'}." If de-participial adjectives can differ in their thematic subcategorization, by the same reasoning, homophonous non-verbal adjectives can co-exist and assign distinct sets of thematic roles.

Like many of the predicates which have both [+agr] and [–agr] forms, there exists a systematic relationship between the agreeing form, in which the NOM-case subject does. not have Experiencer semantics, and the non-agreeing form, in which there is a DAT-case Experiencer. This is exemplified opportunely in (30a-b), from Kondrashova (1994:275).

(30) a. Maša   byla   xolodna.
          M.   was   cold
          DAT.SG [–agr]   FEM.SG   'Maša was cold.'

      b. Mne   nado   bylo   uxodit'.
          me   need   was   leave
          DAT.SG   [–agr] INFIN   'Maša was cold.'

Whereas (30a) can be paraphrased as either 'Maša was cold to the touch' or 'Maša was cold in her manner' (i.e., non-Experiencer interpreations), (30b) can mean only 'Maša experienced being cold'; these constructions' interpretations are mutually exclusive.

This class of adjectives is quite distinct syntactically from the modals in (8a-c) and (19) through (23) above. Such adjectives can be followed by infinitivals, with the copula on either side of the adjective, as (31a-b) show.[31] However, as Kondrashova (1994:267) and Schoorlemmer (1995:61-62) point out, whereas modals require a copula (if present) to precede the modal, this is not true for adjectives like /grust#n-/, as (31c-d) show.

(31) a. Mne   **grustno bylo**   uxodit'.
          me   sad   was   leave
          DAT.SG   [–agr] INFIN   'I felt sad to leave.'

      b. Mne **bylo grustno** uxodit'.   'I felt sad to leave.'

      c. Mne   **nado   bylo**   uxodit'.
          me   need   was   leave
          DAT.SG   [–agr] INFIN   'I had to leave.'   [= (8a) above]

      d. *Mne **bylo nado** uxodit'.

As (32a-b) show, /grust#n-/ class can be in copula-infinitivals with raising predicates.

(32) a. Mne   moglo   byt'   **grustno**.
          me   could   be   sad
          DAT.SG PAST[–agr] INFIN [–agr]   'I could have been sad.'

---

b. Mne   perestalo   byt'   **stydno.**
   me   stopped   be   ashamed
   DAT.SG   PAST[–agr] INFIN   [–agr]   'I stopped feeling ashamed.'

As I discuss in section 4 below, this strongly suggests that stems of the /grust#n-/ class are the primary predicate of the clause, and not a mere functional category within the predicate's extended projection.[32] If so, then it follows that the status of the infinitival in (31a-b) is that of complement of the adjective head. I assume this without further ado.

This class of adjectives is quite large; I will not exhaustively list its members. In the next section I return to the issue of how the external argument of an attributive adjective, as in (26a-c) appears as the NOM-case subject of clauses like (27a-b), but as the DAT-case in Experiencer in clauses like (27c). I also discuss the structure of infinitives in section 4.

To summarize section 3, I have presented the data according to how/whether the predicate stem inflects. The verbs (§3.1) allow Experinecers to appear in three different cases, depending on the verb class: NOM, DAT, or ACC. Several stems, etymologically derived from nouns or groups of words, do not show inflection (§3.2); if they take an Experiencer, then it must be in the DAT case. Finally, various morphologically adjectival predicates (§3.3) also require an Experiencer (if there is one) to be in the DAT case.

4. Proposals about the structures of non-verb Experiencer predicates

I now outline preliminary structural requirements of the various non-verb Experiencer predicates discussed (in §3.1 and §3.2) above. In this section the data are sliced differently—this time according to their position in the syntactic structure. Specifically, I distinguish modals (functional projections within an extended verbal projection), from predicates which head their own extended projections. In a later paper I plan to support these proposals with the results of a corpus search.

My primary assumption is that the copula, if there is one—in the past or future tenses only; the copua is null in the present—is located in the tense head (T). I further assume, following Kondrashova (1994) and Schoorlemmer (1991; 1995:66), that a functional modality phrase (MP) is headed by modal predicates like *nado*. MP is situated below the subject-agreement projection (AgrS). These authors have differing proposals about exactly where the DAT-case nominal appears in the Experiencer predicates discussed above (SpecAgrSP or SpecMP, respectively). I follow the SpecAgrSP model here.

Some of the predicates mentioned above **exclude** a NOM-case subject. A strong feature [–agr] in M°—checked by specifier-head agreement, as well as no subject-agreement features in the nominal expression (that would be checked in SpecAgrSP)—is what requires this the DAT-case nominal to move to SpecMP and no further. These predicates (in the contemporary language) are the de-nominals like *pora* 'time' (6a-c) and *žal'* 'pity' (7), the modals like *nado* 'need' (8a-c), and the adjectival stems *žalko* 'pitiful' (10) and *stydno* 'ashamed' (32b). With these predicates no NOM-case subject is possible.

Note that this class still mixes predicates which require infinitivals—i.e., the modals in (8a-c)—and all the others, which either optionally take infinitivals or at least allow nominal complements. Note as well that the modals have one other distinguishing characteristic: The copula, if there is one, must follow the modal, while with the other

predicates the copula precedes the predicate (with neutral prosody, but **can** follow the predicate with marked intonation). The structure I have in mind is shown in (33):

(33) $[_{\text{AgrSP}} \text{AgrS}° [_{\text{MP}} \text{M}° [_{\text{TP}} \text{T}° [_{\text{XP}} \text{L}°]]]]$

Modals are in M°, which implies that some lexical category L (i.e., L = V) must head the predicate head's extended projection. The other predicates are in L° (where L = A[djective] or some other category). The position of the copula, in T°, follows from this: The copula must follow the modal but usually precedes the other predicates.

Modals are subcategorized for an external argument, base-generated in SpecMP. This position is not, however, θ-marked, meaning that any nominal expression in this position is θ-licenced by the subject position of the infinitival (SpecVP). With non-modals the Experiencer is base-generated in the specifier of XP, and raises to SpecMP.

Moving now to the predicates which **allow** a NOM-case subject, it must be possible for a DAT-case Experiencer and a NOM-case subject to appear simultaneously in SpecMP and SpecAgrSP, respectively. This is necessary to account for predicates like /nuž#n-/ 'need'; cf. (20) above. (The fact that the movement of NOM leapfrogs MP might be handled in terms of relativized minimality.) Recall that /nuž#n-/ can always take a DAT Experiencer, but either an infinitival or a NOM-case subject. This subject is an internal argument, as the GEN-of-negation test in (22) above shows. The infinitival with /nuž#n-/ occupies the position of the nominal and there is nothing that moves to SpecAgrSP; this therefore results in the [–agr] form of this predicate: *nužno*. Thus /nuž#n-/ need not be a modal at all. Additional evidence for this is the position of copulas: Whereas with the *nado* class in (8a-c) the copuls **must** follow the modal, with /nuž#n-/ the copula can either precede or follow the predicate.[33] Another group of predicates which allow simultaneous DAT Experiencer and NOM subject are the perceivability class: /vid#n-/ 'visible', /slyš#n-/ 'audible' and /zmet#n-/ 'noticeable', exemplified above in (13a). Like /nuž#n-/ 'need', these three predicates take a DAT Experiencer and an internal argument, realized in NOM, ACC, or (with sentential negation) GEN case.[34] The only difference is that the perceivability predicates don't take an infinitival. This difference can be quite unproblematically accounted for by means of lexical encoding for each predicate.

These assumptions are minimal. Other tests, such as the position of sentential and constituent negation, discussed by Kondrashova (1994), further specify the structure. The minimally specified structure in (33) is however sufficient for the purposes of exploring information-structure properties of these predicates, the next step in the current project.

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[33] As M. Schoorlemmer has pointed out to me, the copula in sentences with /nuž#n-/ and an infinitival more strictly require the copula to appear between the /nuž#n-/ predicate and the infinitive verb. This strongly suggests that /nuž#n-/ + infinitival is a modal, while /nuž#n-/ + nominal is a lexical predicate.

[34] Unlike the perceptibility predicates, /nuž#n-/ no longer assigns ACC case; but cf. 1800s-era (23).

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Topics, Foci and Sentence Structure in Mandarin Chinese[*]

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Abstract

An area which has increasingly attracted attention in more recent linguistic studies is how universal principles of the information structuring of sentences are reflected in syntactic structures. Based on Chinese data, this paper is an attempt to submit evidence that principles of that kind are reflected in the form of functional topic phrases and focus phrases. It is argued that the specifier positions of these functional phrases are occupied by different sentence constituents, which, depending on existing or lacking contrastiveness and prominence features suggested by Liu & Xu (1997), have the status of base-generated topics, contrastive topics or contrastive foci. Base-generated topics are subdivided into two basic types appearing in different specifier positions.

Great value is attached to the verification of the assumption that in Chinese there is an "inner" (IP-internal) functional focus phrase whose specifier position can serve as an intermediate landing site, where the contrastiveness feature of left-dislocated verbal arguments is checked. In addition, endeavours are made to explain why direct objects and subjects, but not indirect objects, are permitted to be left-dislocated.

Moreover, the present paper aims at providing a model of Chinese sentence structure that differentiates between "pragmatically driven" and "basic" constituents, the latter considered as obligatory.

The paper accounts in a new way for the internal structure of the verbal constituent V'. Elements like *ba, gei, bei,* and verbal copies are uniformly treated as dummy verbs occurring in the head position of a higher V'-shell, where they function as syntactic licensers.

The theoretical framework of this paper is not based on Chomsky's Minimalist Program but rather on the more classical Government and Binding theory developed by Chomsky (1981; 1986a; 1986b).

1. Introduction

The paper is organized as follows:
Outlined in section 2, Rizzi's (1995) C-System serves as a springboard to the discussion of the location of Chinese sentence type particles such as *ma* and *ba* in section 3. It is postulated in this section, in contrast with Kayne (1994), that Chinese sentence type particles are located in a functional phrase that is head-final.

Section 4 initially gives an overview of various "Chinese-style" topics. This section establishes the specific background on which I will base subsequent claims about the possible sentence positions of different kinds of base-generated and derived topics. In particular, section 4 contains a discussion of the relative position occupied by "Chinese style" topics with regard to sentence type particles. It is argued that "Chinese style" topics are located outside the scope of LF operators but within the scope of sentence type particles.

Section 5 turns its attention towards the possibilities of the left-dislocation of direct objects. In doing this, a relationship is established between a contrastive Focus Phrase, which is claimed to exist within IP, and Weak Crossover effects, which do not appear at the level of S-structure. It is shown in this section that only contrastively used direct objects are able to be left-dislocated. Based on the parameters of Contrastiveness and Prominence, the distinctions between contrastive focus phrases, contrastive topics, and a second type of base-generated topics (which differs from "Chinese style" topics) are explored.

Based on the results of section 5, the mechanism of the left-dislocation of contrastive subjects is investigated in section 6. Due to the fact that this mechanism is largely "invisible", examples of "visible" left-dislocation of subjects are examined. Furthermore, in analogy to those cases in which focus-sensible particles do, by necessity, trigger the left-dislocation of direct objects, the hypothesis that subjects marked by the same particles are obligatorily left-dislocated will be defended as well.

Section 7 deals with the nearly total syntactic immobility of indirect objects. In order to show the effects of the Empty Category Principle on indirect objects, the internal structure of the verbal constituent V' is considered in great detail. It shall be argued that V' is inherently head final, though it should be noted that V^0 may consist of a Verbal Complex in which the verbal stem occupies the leftmost position. Furthermore, the mechanism of syntactic licensing by the raised full verb or by the element *gei*, considered as dummy verb, is explored. Finally, some real and some apparent counterexamples to our claim that indirect objects cannot be left-dislocated are discussed. In this connection, cases of passivization are particularly examined.

In section 8, the general mechanism of topicalization and focusing developed in this paper is applied to pseudo-cleft sentences which, in contrast to the prevailing trend, are treated as essentially monoclausal structures.

2.The C-System of Rizzi (1995)

In recent generative studies, CP acted as a catch-all for very heterogeneous elements that were to be moved to the left periphery of the sentence by S-structure or at the level of Logical Form. Thus, the Spec position of CP served as final landing site for wh-phrases, relative pronouns, affective operators that trigger subject-auxiliary inversion in English[1], QPs in a narrower sense, narrowly focused phrases, and even topics. It is evident that this procedure is scarcely consistent with Rizzi's notion of dynamic agreement and with the principle of feature checking.

Rizzi (1995) draws the logical conclusions from this situation in that he dissolves the well-established category of CP into a number of different functional phrases.

Adopting this idea, I will posit that there exist two functional topic phrases and one functional focus phrase[2] on the left periphery of Chinese sentences, all of them lying in the scope of the head of a functional phrase Sentence Type' (ST'):[3]

---

[1] *With no job would Bill be happy.*, for example.

[2] A functional focus phrase different from CP and placed between CP and IP has also been suggested by Brody (1990), Laka (1990), Cullicover (1991), Piñon (1992), Drubig (1994) among others. As for a functional topic phrase, cf. Gasde (1993) and Gasde & Paul (1996).

[3] As for the systematic relationship between sentence types and sentence moods, cf. Gasde (1993). In Rizzi's terminology, the information imparted by the category of sentence mood is called the specification of *Force*, whereas Cheng (1991) considers this type of information as information on the *Clausal Type* of a sentence.

(1) ST' > Top1P > Foc1P > Top2P > IP

3. Sentence Types in Chinese

The head position of ST' can be characterized by features such as [+/- wh] and [+/-imp].

Given this, ST^0 in yes/no questions contains the feature combination [+wh, -imp], which generally triggers the appearance of the sentence mood particle *ma*.

Contrastively, in the case of commands containing the features [-wh, +imp], ST° may be occupied by *ba*.

In statements which represent the default case of sentence types, ST° bears the features [-wh, - imp]. This feature combination remains abstract, i.e., it is not represented by a specific sentence type particle.

Based on his syntactic antisymmetry hypothesis, Kayne (1994) presupposes a left-headed clause structure across languages. Based on this assumption, he claims that "final complementizers reflect the leftward movement of IP into Spec, CP"[4].

Applied to a language like Chinese, this claim results in the following procedure underlying the superficial structure of any sentence:

(2) a.
```
              STP
            /      \
      Spec           ST'
        ↑          /     \
        |       ST⁰         XP
        |_____|
```
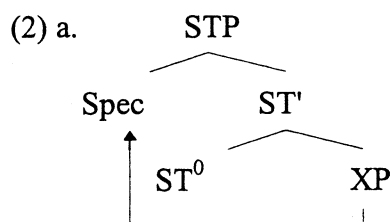
The problem is how to motivate the raising step of XP to [Spec, STP], because the underlying structure taken for granted by Kayne completely meets his requirements.

Ilse Zimmermann suggests considering the leftward movement of XP (i. e. the remainder of the sentence) into [Spec, STP], along the lines of Kayne, to be a movement step that takes place at the level of Phonetic Form, since such kind of raising does not have any semantic involvement (p. c.).

An alternative approach permitting right-headed structures functions without any XP movement. Zhang (1997: 92ff.) quotes Whitman (1997), who proposes a solution within the framework of the Minimalist Program. Claiming that Spec-head agreement requires adjacency between the head element and its Specifier, Whitman (1997: 4) reasons that right-headed X'-structures necessarily lack a Spec-position. In terms of the Minimalist program this means: "Right-headed structure can be built only by Merge, not Attract." (ibid.). According to this approach, Chinese sentences would have a basic underlying structure like (2) b., instead of (2) a.[5] :

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[4] Kayne (1994), p. 53.
[5] In principle, such an alternative to Kayne's proposal was already aspired to in Gasde & Paul (1996).

(2) b.   ST'

         XP   ST^0
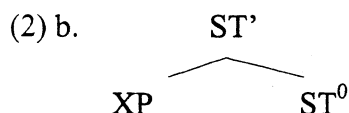
4. "Chinese style" topics

There is a kind of topic often described in the relevant literature, which is characteristic of Topic Prominent languages such as Chinese, Japanese, Korean, Lisu, and Lahu[6]. These so-called "Chinese style" topics consist of a bare DP base-generated outside IP in the leftmost position of the sentence.

"Chinese style" topics will have to be sharply distinguished from topics anaphorically binding an argument position within IP, which shall be treated in the sections 5 and 6. More precisely, I will contend in this paper that the two kinds of topics are located in different functional topic phrases.

4.1. Different kinds of "Chinese-style" topics

Semantically, in prototypical cases, "Chinese style" topics have some loose relation to the rest of the sentence as a whole. In other cases, "Chinese style" topics bear a possessive relation to the subject of the comment clause, yielding the so-called "double subject" construction. A third kind of "Chinese style" topic-comment structures signalizes that the topic concerned is a constitutive element of a part-whole relation.

4.1.1. Prototypical "Chinese style" topics

(3) Zanmen   caidi,   shui di-yi yaojin.
    Our   vegetable plot water   first important
    lit. 'Our vegetable plot (Topic), [pouring] water is most important.'

(4) Dianzi jisuanji, wo shi waihang.
       computer   I   be layman
    lit. 'Computers (Topic), I am a layman.'

(5) Zhe jian shi, Zhongguo renmin de   jingyan tai duo le.
    This Cl matter,   Chinese   people SUFF experience too much ASP
    lit. 'This matter (Topic), the Chinese people have too much experience.'

(6) Kuaiji   women yijing you ren   le.
    bookkeeper we   already have people ASP
    lit. ' Bookkeeper (Topic), we've already got someone.'

(7) Zheme hao de   qiu, bu kan   caidian   bu xing.
    so   good SUFF ball, not watch colour television not all right
    'Such a good match, not watching colour television is out of the question.'

---

[6] Li & Thompson (1976), p. 480. Cf. also ibd., p. 469.

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Prototypical "Chinese style" topic-comment constructions like those in (3) to (7)[7] are signalized by a bare DP in a sentence initial position outside IP. This DP neither anaphorically binds a lexical or empty element within IP nor establishes another specific relation to any constituent within IP. Rather, the topic has a loose relationship to the comment clause as a whole. Semantically speaking, topic-comment structures of this type reflect a loose relationship between an entity and a complete proposition[8].

4.1.2. Challenged topics

There is a subtype of "Chinese style" topics that is not "prototypical", in that topics of this type bear a possessive relation to the subject of the comment clause. This kind of topic-comment structures has been called the "double subject" construction:

(8) Xiang bizi da.
   elephant nose long
   'Elephant noses are long.'
   Tan Fu (1991:172); Hashimoto (1966)

(9) Nei ke shu yezi da.
   that Cl tree, leaf big
   lit. 'That tree (Topic) the leaves are big.'
   Teng Shou-hsin (1974)

Whereas the the possession represented by the second DP (*bizi* ('nose') and *yezi* ('leaf') respectively) is inalienable, it is alienable in the following two examples:

(10) Zhe ji   ge shengchandui de tudi, haohuai chabuduo.
   this several Cl production team SUFF soil, quality about the same
   lit. 'The soil of those production teams (Topic), [its] quality is about the same.'
   Lü Shuxiang (1986)

(11) Xiao Chen xiezi hen zang.
   Xiao Chen shoes very dirty
   lit. 'Xiao Chen (Topic), [her] shoes are very dirty.'

Although the pervasiveness of this construction is a significant feature of topic-prominent languages, the topichood of its sentence-initial DP has been challenged. This was recently done by Tan Fu (1991), who claims that in (8) NP1, *xiang* ('elephant') has the status of a possessive specifier of NP2, *bizi* ('nose'). In other words, Tan posits that, in (8), NP1 and NP2 form a common constituent.

In doing so, Tan ignores important arguments put forth for discussion as early as the nineteen-seventies by Teng Shou-hsin (1974) and Li & Thompson (1976). Li & Thompson (1976: 480f.) provided evidence for the topichood of the constituent *nei-ke shu* ('that tree') in (9) by showing that co-referential noun phrase deletion is differently controlled in (12) and (13):

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[7] These examples are taken from a sample of examples given by Lü Shuxiang (1986).
[8] Cf. Lambrecht (1994: 118).

(12) Nei ke shu   de   yezi tai da, souyi wo bu xihuan ___.
      that Cl tree SUFF leaf too big so   I not like
      That tree's leaves are too big, so I don't like them.

(13) Nei ke shu yezi tai da, souyi wo bu xihuan ___.
      that Cl tree leaf too big so   I not like
      lit. 'That tree (topic), the leaves are too big, so I don't like it.

Note that (12) contains the possessive marker *de* between NP_1 and NP_2, while (13) does not.

The deleted constituent in sentence (12) is the subject, *na-ke shu de yezi ('that tree's leaves')*, whereas in (13) the controller of the deleted constituent is the topic, *nei-ke shu ('that tree')*.

Ergo, regardless of the possessive relationship between DP_1 and DP_2 in (9), this sentence cannot be derived from (14) by "re-interpretation"[9]:

(14) Nei ke shu   de   yezi da.
      that Cl tree SUFF leaf big
      'The leaves of that tree are big.'

Instead, (9) and (14) have different underlying structures.

The topichood of DP_1 in (8) to (10) is indirectly underpinned by other examples containing a possessive relationship between DP_1 and DP_2, which are characterized by the fact that the possessive marker *de* is unable to intervene between DP_1 and DP_2, as in the follwowing example:

(15) Erhua zhe jiahuo,   ren   bu cuo.
      Erhua this guy,   personality not bad
      lit. 'Erhua this guy (TOPIC), [his] character is not bad.
      Lü Shuxiang (1986)

4.1.3. Part-whole relations in topic-comment structures

For the sake of completeness, a further subtype of "Chinese style" topics based on the part-whole relation must be mentioned:

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[9] In contrast to (9), a sentence like
(i) Ta tou   teng.
    he head painful
    'He has a headache.'
does NOT consist of a topic-comment construction. Rather, *ta ('he')* is a subject, whereas *tou-teng ('head painful')* is a complex predicate. This analysis is advocated by Teng (1974), who pointed out that adverbial elements like *you (again)*, which can never appear between a real topic and a subject, are able to occur between *ta ('he')* and *tou ('head')* in (i):
(ii) Ta you   tou-teng   le.
    he again head-painful ASP
    'He has a headache again.'
Cf. also Tan (1991:179) who points out that complex adjectives like *duzi-e (tummy hungry = 'hungry'), shou-jin (hand tight = 'stingy'), zui-zang (mouth filthy = 'obcene in speech')* etc. are abundant in Chinese.

27

(16) Shi-ge li, wu-ge lan le.
    ten-CL pear five-Cl rot ASP
    lit. 'The ten pears (TOPIC), five have rotted.' / 'Of the ten pears, five have spoiled.'
    Xu & Langendoen (1985)

(17) Hai,   taipingyang zui da.
    oceans, the Pacific most big
    lit. 'Of all the oceans (TOPIC), the Pacific is the biggest.'
    Tan Fu (1991)

(18) Zhongguo, da chengshi, Beijing zui luan.
    China   big   city   Beijing most chaotic
    lit. 'China (TOPIC), the big cities (TOPIC), Beijing is the most chaotic one.' / 'In China,
    among the big cities, Beijing is the most chaotic one."
    Tang (1990)

(19) Bu hui chouyan de ren, wo jiu   conglai mei-you jian-guo yi-ge shi
    not able smoke SUFF people I at any rate always   not-have seen-ASP one-CL be
    xiangyang de zhuangjiaren.
    respectabe SUFF   farmer
    lit. 'People that don't smoke (TOPIC), I never saw anyone who was a respectable farmer.'
    Lü Shuxiang (1986)

4.2. The function of "Chinese style" topics

As elaborated in the relevant literature, "Chinese style" topics are "scene-setting" expressions providing a "frame" within which the main predication represented by the rest of the sentence holds[10]. It is exactly this scene-setting function that makes "Chinese style" topics, although syntactically occupying the most prominent position within the sentence structure, NOT PROMINENT in a pragmatic sense. That is to say, it is not the topic but the action or the state described in the comment which the speaker wants to bring to the hearers' attention.

    Within the framework of Liu & Xu (1997), "Chinese style" topics would have to be assigned a feature like [-prominent, -contrastive][11].

4.3. The sentence position of Chinese style topics

It is a typological feature of Chinese, emphasizing its topic-prominent character, that "Chinese style" topics are positioned outside the scope of LF-operators[12].

    This applies to wh-phrases like those in (20) and (21), for example, whose LF-representations are outlined under (20') and (21'), in a first approach, leaving open the question of the exact position of the topics involved. As far as the wh-phrases in (20) and (21) are concerned, I argue that they, as indicated in (21') and (22'), must be moved into [Spec, FoclP] at LF:

---

[10] Cf. Li/Thompson (1974; 1976; 1981), Barry (1975), Chafe (1976), Xu/Langendoen (1985), Lambrecht (1994), etc.

[11] For a more detailed description of the pragmatic features of DPs appearing outside IP in a sentence-initial position, cf. section 5.

[12] Cf. Tang (1990) who was the first to mention this fact, which has far-reaching implications for Chinese syntax.

(20) Nimen liang-ge   ren,   shei zhang de   gao?
    you   two-CL   people, who   grow   SUFF tall
    lit. 'You two (TOPIC), which of you is taller?'

(20') [[$_{DP}$ nimen liang-ge   ren], [$_{Foc1P}$ [shei]$_i$ [$_{IP}$ e$_i$ zhang   de   gao]]]? (LF)
      you   two-CL   people,   who   grow   SUFF tall

(21)   Zhongwen xi,   ni xihuan   naxie jiaoshou?
    Department of Chinese language you like   which ones professor
    lit.'Department of Chinese Language (TOPIC), which professors do you like?

(21') [[$_{DP}$ zhongwen xi],   [$_{Foc1P}$ [naxie   jiaoshou]$_i$ [$_{IP}$ ni xihuan e$_i$]]]? (LF)
      Department of Chinese language   which ones professor   you like

In a like manner, "Chinese style" topics lie outside the scope of negative operator phrases and narrowly focused phrases:

(22) Zhe ge danwei,   mei-you ren nenggou danren zhe ge renwu.
    this CL institution   nobody   can   perform this CL task
    lit. 'This institution (TOPIC), nobody is able to perform the task.'

(22') [[$_{DP}$ zhe ge danwei], [$_{Foc1P}$ [mei-you ren]$_i$ [$_{IP}$ e$_i$ nenggou danren zhe ge renwu]]] (LF)
      this CL institution   nobody   can   perform this CL task

(22") As for this institution, nobody x [x is able to perform the task]

(23) Dianzi jisuanji, WO shi waihang.
     computer   I   be   layman
    lit. 'Computers (TOPIC), it is me who is a layman.'

(23')[[$_{DP}$ dianzi jisuanji], [$_{Foc1P}$ [WO]$_i$ [$_{IP}$ e$_i$ shi waihang]]] (LF)
     computer   I   be layman

(23") As for computers, for x = I, [x is a layman]

For all intents, the matter in contention is not so much the question of the relative position of "Chinese style" topics and LF-operators with respect to each other at LF. It is rather the problem of whether overt ST^0-elements like *ma* and *ba* and the covert ST^0-element appearing in statements (see above, section 3) take scope over "Chinese-style" topics or not.
　　Semantically, there is no reason why, instead of making a comment, the speaker cannot ask a question about the topic, or make a comment containing an indirect question about the topic, as Huang (1981/82: 397) points out. To put it differently, from a semantic viewpoint, "Chinese style" topics may remain outside the scope of *ma* and *ba*.
　　Likewise, considered from a syntactic viewpoint, it cannot be taken for granted a priori that "Chinese style" topics lie within the scope of ST^0. This is due to the fact that the relative position of "Chinese style" topics and ST^0 elements to each other is obscured by the fact that "Chinese style" topics occur on the leftmost periphery of the sentence, while sentence type particles appear on its rightmost periphery. If they lie outside the scope of sentence type par-

ticles, "Chinese style" topics have to be joined to ST'[13]. However, they are accommodated in the Spec-position of a Topic Phrase if they are in the scope of *ma* and *ba*.

What is there to be said for the two possibilities from a syntactic viewpoint? It might be considered as an argument in favour of the former solution that, "Chinese style" topics are syntactically independent from the rest of the sentence, as far as they are not involved in processes like reflexivation, passivization, etc., as elaborated by Li & Thompson (1976). Yet, on the other hand, the complex question operator *shi-bu-shi* (lit. *'is or is not'; 'is it the case that... or not?'*) is able to appear sentence-initially before "Chinese style" topics, taking scope over them:[14]

(24) Shi-bu-shi dianzi jisuanji, ta shi waihang?
　　　　　　　computer　　he be layman
　　'Is it or is it not the case that [as for] computers (TOPIC), he is a layman.'

(25) Shi-bu-shi zhe　ji-ge　shengchandui de tudi, haohuai　chabuduo?
　　　　　　　this several-CL production team SUFF soil, quality be about the same
　　'Is it or is it not the case that [as for] the soil of those production teams (TOPIC), [its] quality is about the same.'

(26) Shi-bu-shi da chengshi, Beijing zui　luan.
　　　　　　　big　city　　Beijing most chaotic
　　'Is it or is it not the case that [among] the big Cities (TOPIC) Beijing is the most chaotic one?"

Drawing an analogy between *shi-bu-shi* and *ma*, we reach the conclusion that yes/no question operators in general are able to take scope over "Chinese style" topics. Accordingly, I will claim that "Chinese style" topics should be positioned in the Spec-position of a sentence-initial functional Topic1 Phrase (Top1P) located outside the scope of LF-operators.

Notice that the complex question operator *shi-bu-shi,* appearing in a sentence-initial position like in (24) to (26), can not occupy the head position of ST', even if the pre-condition of Kayne's, mentioned in section 3, holds true. For, if generated in ST^0, *shi-bu-shi* inevitably ends up in a　sentence-final surface position, after the rest of the sentence is raised into [Spec, STP]. As a result, we get tag questions such as (24') to (26'):

(24') Dianzi jisuanji, ta shi waihang, shi-bu-shi?
computer　　　he be　layman,　is-not-is
　　'[As for] computers (TOPIC), he is a layman, isn't he?'

(25') Zhe　ji-ge shengchandui de tudi, haohuai　chabuduo,　shi-bu-shi?
this several-CL production team SUFF soil, quality be about the same is-not- is
　　'[As for] the soil of those production teams (TOPIC), (its) quality is about the same, isn't it?'

(26') Da chengshi, Beijing zui　luan, shi-bu-shi?.
big　city　　Beijing most chaotic is-not- is
　　'[Among] the big Cities (TOPIC) Beijing is the most chaotic one, isn't it?"

---

[13] A solution aimed in this direction has been suggested by Ilse Zimmermann (p. c.).

[14] The question operator *shi-bu-shi* is able to occupy different sentence positions in accordance with its scope. The problems connected with this claim cannot be pursued in this paper.

In fact, (24) to (26) on the one hand and (24') to (26') on the other have different underlying structures.

The choice of positioning "Chinese style" topics "inside the sentence", instead of adjoining them to ST', is consistent with the assessment that structures containing such topics "must count as basic forms of Chinese sentences".[15]

In the next sections, 5. to 7., we will move on to structures comprising a sentence-initial DP that anaphorically binds an argument position within IP. As we will learn, such structures are not necessarily derived by left-dislocation.

5. Left-dislocation of direct objects and Weak Crossover effects in Chinese

In section 4 above, we stated that "pure" topic phrases, such as "Chinese style" topics, are neither prominent nor contrastive, i. e. they have a feature like [-prominent, -contrastive]. In this section, we will predominantly consider left-dislocated object DPs being used contrastively. Although sharing the feature of contrastiveness, these objects differ with regard to their prominence feature. Besides this, there are sentence-initial DPs anaphorically binding the object position within IP, which, just like "Chinese style" topics, are neither prominent nor contrastive.

5.1. Topic phrases and focus phrases

Based on the two parameters, [±prominent] and [±contrastive], Liu & Xu (1997) distinguish three kinds of focus:
- natural focus, which is characterized by the features [+prominent, -contrastive],
- contrastive focus, which is [+prominent, +contrastive], and
- topic focus, a notion denoting topics with a contrastive function: [-prominent, +contrastive].
      The basic idea contained in the category "topic focus" is that a DP can simultaneously contain both topic and focus features. In a similar manner, Jäger (1996: 129) posits: "Topic is a focus-sensitive operator".

Given this approach, let us first have a look at several sentence-initial DPs that are different from "Chinese style" topics in that they anaphorically bind an empty position within IP. By utilizing Liu & Xu's parameters, we gain three kinds of DPs which can bind an empty object position:

Firstly, the DP in question is neither prominent in a pragmatic sense nor is it used contrastively, as in the following example:

(27) [$_{DP}$ Zhe ge xiaohair]$_i$ wo XIHUAN e$_i$.
         this CL child   I   like
         lit. 'This child, I LIKE [it].'

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[15] Huang (1984), p. 550.

31

Based on the framework of Liu & Xu (1997), the sentence-initial DP in (27) must be characterized by [-prominent, -contrastive]. In fact, (27) contains a "predicate focus", in the terms of Lambrecht (1994), or a "natural focus", as claimed by Liu & Xu (1997).

Furthermore, (27) represents the unmarked case in Chinese as far as an anaphoric relationship between a topic and an empty position in IP is concerned. English, however, lacks such an unmarked structure, as described by Chafe (1976).

At first glance, the structure of (27) could be interpreted as derived, as an instance of "Topic Topicalization" ("TT") in the terms of Gundel (1988). As we will later see, under the aspect of Weak Crossover effects, this interpretation does not serve.

Secondly, the DP concerned carries a contrastive focus feature, whereas the rest of the sentence is background. Consider the following utterance, which could be a reply to the question: *'Which of these children do you like?'*:

(28) [$_{DP}$ ZHE ge xiaohair]$_i$ wo xihuan e$_i$.
         this CL child   I   like
     lit. 'THIS child (CONTRASTIVE FOCUS), I like.'

Structures like (28) are engendered by Focus left-dislocation, or by "Focus Topicalization" ("FT") in terms of Gundel (1988). In accordance with Liu & Xu (1997), I will call this type of fronted DPs "contrastive focus phrases". Such phrases are marked by [+prominent, +contrastive].

Thirdly, the sentence-initial DP is, in the terms of Lambrecht (1994), a "contrastive topic", or, in the terms of Liu & Xu (1997), a "topic focus". See (29):

(29) [$_{DP}$ ZHE ge xiaohair]$_i$ wo XIHUAN e$_i$, (er   NA ge xiaohair wo TAOYAN).
         this CL child   I   like   but that CL child I   dislike
     lit. 'THIS child (CONTRASTIVE TOPIC), I LIKE, (but THAT child (CONTRASTIVE TOPIC) I DISLIKE).'

Liu & Xu (1997) point out that topic foci are emphasized in that they are contrasted with contextual elements outside their own sentence, or with knowledge elements shared by the interlocutors. Yet, although being contrastive in that way, topic foci are not prominent, since the focus of the message lies on the predicate of the sentence. Therefore, in sentences containing a contrastive topic, the structure as a whole must have two pitches. It should, however, be noted that the main stress lies on the predicate. In short, topic foci are [-prominent, +contrastive].[16]

To summarize: Among the three kinds of DPs considered above, only "contrastive topics", such as in (29), contain a focus feature ([+contrastive]) AND a topic feature ([-prominent]). Contrary to the contrastive topic in (29), the DP in question in (27) is a "pure" topic, while the DP concerned in (28) is a "pure" focus phrase.

Keeping this in mind, let us move on to a more detailed discussion of the problems connected with the subject of left-dislocation.

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[16] The case of topic foci is akin to the so-called "I-Topicalization" discussed in relevant German Studies.

5.2. Left-dislocation with and without WCO-effects

In the following, I will refer to the Weak Crossover Constraint in order to diagnose the nature of left-dislocation.

5.2.1. Weak crossover at LF

Postal (1971) discovered the so-called Crossover Constraint, by which no NP can cross a co-referential NP during the derivation of a sentence.

We will deal with WEAK Crossover here, which is characterized by the fact that the crossed co-indexed Noun Phrase is represented by a pronoun that serves as a possessive specifier within a DP.

In Chinese, as (30) to (32) prove, such kind of crossover is forbidden in all cases of operator movement at LF:

(30) *Ta_i de muqin kandao $shei_i$? (SS)
    he SUFF mother see who
    *'Who_i did his_i mother see?'

(30') *[$_{Foc1P}$ $shei_i$ [$_{IP}$ [$_{DP}$ ta_i de muqin] kandao e_i]] (LF)
        who   he SUFF mother   see

(31) *Ta_i de muqin xihuan renhe $haizi_i$. (SS)
    he SUFF mother like any child
    *'His_i mother likes any $child_i$.'

(31') *[$_{Foc1P}$ [renhe haizi]$_i$ [$_{IP}$ [$_{DP}$ ta_i de muqin] xihuan e_i]] (LF)
        any   child   he SUFF mother   like

(32) *Ta_i de muqin xihuan ZHANG SAN_i . (SS)
    he SUFF mother like Zhang San
    *'His_i mother likes ZHANG SAN_i .'

(32') *[$_{Foc1P}$ ZHANG SAN_i [$_{IP}$ [$_{DP}$ ta_i de muqin] xihuan e_i]] (LF)
      Zhang San   he SUFF mother   like

Note that, in (30) to (32), wh-movement, quantifier raising, and focus raising wind up in the Spec-position of the Focus1 Phrase, the existence of which I claimed at the outset of this paper.

Needless to say, (30) to (32) would be well-formed, if *ta* (*'his'*) referred to someone else who was understood from the discourse. But in the given form, (30) to (32) are ill-formed - being that the "bound construal" of the pronoun is unavailable in such cases.

It is generally assumed that weak crossover structures are ruled out by the following principles, which were elaborated by Koopman & Sportiche (1982/83: 145f.):

(33) A variable is locally bound by one and only one element in a non-A-position.
(34) Or, inversely: An element in a non-A-position locally binds one and only one variable.

33

(35) The Bijection Principle:
   There is a bijective correspondence between variables and non-A-positions.

These principles are violated in (30) to (32) in that an operator in the Spec position of the Focus1 Phrase simultaneously binds both a pronoun that is construed as a variable[17] and a variable-trace in the object position.

5.2.2. Left-dislocation by S-structure and the status of the WCO-Constraint

Whereas operator raising at LF ends up in ill-formed structures, weak crossover configurations at the level of S-structure are not ill-formed. Thus the following structures are well-formed without exception, although Koopman & Sportiche's principles (33) to (35) seem to be violated:

(36) Zhe tiao ke'ai de gou_i, ta_i de   zhuren hui   XIHUAN e_i.
      this CL lovely SUFF dog, it SUFF master surely   like
   lit. 'This lovely dog_i (TOPIC), surely his_i master must LIKE $[it_i]$.'

(37) ZHE tiao ke'ai de gou_i, ta_i de zhuren hui xihuan e_i.
      this CL lovely SUFF dog, it SUFF master surely like
   lit. 'THIS lovely dog_i (FOCUS), surely his_i master must like $[it_i]$.'

(38) ZHE tiao ke'ai de gou_i, ta_i de zhuren hui XIHUAN e_i.
      this CL lovely SUFF dog, it SUFF master surely   like
   lit. 'THIS lovely dog_i (TOPIC), surely his_i master must LIKE $[it_i]$.'

Again, (36) contains a "pure" topic and (37) a contrastive focus phrase. However, the sentence-initial DP in (38) is a contrastive topic. All three structures do not display weak crossover effects.

A nearly identical picture, regarding the presence and absence of weak crossover effects, arises in English. This means that, for example, left-dislocated contrastive focus phrases and contrastive topics[18], but not WH-phrases, are allowed to violate Koopman & Sportiche's principles:

(39) *Who_i does his_i boss dislike e_i?

(40) THIS $book_i$, I expect its_i author to buy e_i.

(41) THIS $book_i$, I expect its_i author to BUY e_i.

In light of the Chinese examples (36) to (38) and the English examples (40) to (41) the question arises of whether the Bijection Principle really holds true in any cases of left-dislocation.

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[17] Cf. Koopman & Sportiche (1982/83: 147): If a pronoun is locally non-A-bound, it is no longer a pronoun since by definition (cf. Chomsky, (1981), pl. 330), pronominals are either free or locally A-bound to an NP with an independent θ-role. Variables need not be empty categories, they may assume the shape of a pronoun that is locally non-A-bound.

[18] According to Chafe (1976: 49f.), there are no "pure" topics in English. See above.

Alternatively, we could ask whether our sentences in question violate the Bijection Principle at all.

The fact of the matter here is that whether the Bijection Principle is violated or not, depends on the status of the Empty Category appearing in Chinese (36) to (38) and English (40) to (41). More precisely, only if the Empty Category in these sentences is interpreted as a variable, is the Bijection Principle violated. Proceeding from Chomsky's GB-theory, which claims that a variable is " the trace of movement from an A-position to a non-A-position"[19], this conclusion appears to be inevitable. Therefore, in terms of Chomsky's theory, our sentences in question are to be ill-formed by virtue of the Bijection Principle.

Given the contrast between English sentences like (39) on the one hand and (40) and (41) on the other, Lasnik & Stowell (1991) and Rizzi (1995) conclude that weak crossover is a distinctive characteristic of non-A-relations involving "genuine quantification". That is to say: "Weak crossover effects arise only in contexts where a co-indexed pronoun is locally non-A-bound at LF by a true quantifier ranging over a possibly non-singleton set."[20] Since, only at this juncture, has the trace left behind the status of a variable. In contradistinction to this, the empty category in "topicalization cases" is defined as a "null epithet" by Lasnik & Stowell (1991), whereas Rizzi (1995) calls it a "null constant".

In other words, the three authors infer that the nature of empty elements in non-A-dependencies does not exclusively follow from the structural configuration in which they appear. Instead, "the logical status of the operator in the non-A-position must be taken into account"[21] .

In Rizzi's system, the null constant left behind by a topicalized argument as in:

(42) $John_i$, his_i mother really likes e_i.

must be licensed by an "anaphoric operator" such as in (43):

(43) $John_i$, $[OP_i$ $[his_i$ mother really likes t_i]

Rizzi's anophoric operator does not assign a range to its bindee. In point of fact, his role is to connect the null constant to an antecedent[22].

Nevertheless, I see a problem with Rizzi's configuration (43):

Although the element called OP in (43) is an operator which, according to Rizzi, is "different from quantificational operators"[23], it still REMAINS AN OPERATOR.

Furthermore, Rizzi's claim that this operator has the peculiarity of being "not sensitive" to weak crossover[24] is, for all intents, the tacit acknowledgement of the fact that the structure of (43) involves, in the final analysis, a weak crossover configuration. Indeed, there is an operator in (43) simultaneously binding a pronoun (that serves as a variable) and an empty category, which would, in the framework of Chomsky (1981), be a variable.

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[19] Cf. Chomsky (1981: 185).
[20] IbLasnik & Stowell (1991) , p. 707.
[21] Ibid.
22 Cf. Lasnik & Stowell (1991: 704): This operator contains no Q with any semantic content, and its range R is equivalent to the denotation of its antecedent, the referring DP. In this sense, it is a logically inert operator.
[23] Rizzi (1995), p. 11
[24] Cf. Rizzi (1995), p. 10.

In an alternative analysis that I propose, topicalization in Chinese is conceived of as a process producing a structure that excludes weak crossover effects SYNTACTICALLY, i. e. without reference to the logical status of the operator.

The starting point of my analysis is the simple idea that Rizzi's anaphoric operator should be placed hierarchically lower than the co-indexed possessive pronoun.

Let us assume that there is a second functional Focus Phrase in Chinese, Foc2P, which is required inside IP for independent reasons. Given this, the Spec-position of this functional phrase could serve as medial landing site in left-dislocation processes. That would mean that the fronting of object-DPs would leave two traces successively, one in their base position and the other one in [Spec, Foc2P].

Applying this to our weak crossover cases (37) and (38), we could first claim that $Foc2^0$ contains a focus feature that is designed to check the [+ contrastive] feature of left-dislocated DPs, with the result of Spec-head agreement. Consequently, left-dislocated objects have to move to [Spec, Foc2P] as a first step.

Second, we could contend, that fronted "pure" focus phrases like that in (37) have been moved on from [Spec, Foc2P] to [Spec, Foc1P] for their [+prominent] feature to be checked under Spec-head agreement:

(37') [$_{Foc1P}$ [$_{DP}$ ZHE tiao ke'ai de gou]$_i$, [$_{IP}$ [$_{DP}$ ta$_i$ de zhuren] [$_{Foc2P}$ t'$_i$ [hui xihuan e$_i$]]]]
　　　　　　this　CL lovely SUFF dog ,　　　　it SUFF master　　　　　surely　like

Unlike contrastive focus phrases like that in (37) above, contrastive topics would move on to [Spec, Top2P] in order to check their [-prominent]-feature:

(38') [$_{Top2P}$ [$_{DP}$ ZHE tiao ke'ai de gou]$_i$, [$_{IP}$ [$_{DP}$ ta$_i$ de zhuren] [$_{Foc2P}$ t'$_i$ [hui XIHUAN e$_i$]]]]
　　　　　　this CL lovely SUFF dog ,　　　　it SUFF master　　　　surely　like

By replacing the configurations (37) and (38) by the more appropriate structures (37') and (38'), we have derived structures in which an intermediate trace binds a null constant in the sense of Rizzi (1995). Technically speaking, the intermediate trace in [Spec, Foc2P] is analogous to Rizzi's anaphoric operator, which licenses the null constant in the base position of the topicalized object.[25]

In opposition to (37) and (38), in the case of (36) reiterated here as:

(44) Zhe tiao ke'ai de gou$_i$, ta$_i$ de zhuren hui XIHUAN e$_i$.
　　　this CL lovely SUFF dog , it SUFF master surely like
　　　lit. 'This lovely dog$_i$ (TOPIC), surely his$_i$ master must LIKE [it$_i$].',

---

[25] Harking back to von Stechow (1991), Cresti (1995: 92f.) uses the independently available mechanism of λ-conversion to account for movement processes inasmuch as he assumes that the index of a moved phrase is the actual binder of the trace of such movement. That means that in the case of multiple movement steps every step of movement introduces a new index. Given this, any trace (the bottom member of the chain excepted) carries an outer index that functions as a binder, and an inner index that encodes what that element is bound by:
(i) XP$_2$ ... [t$_2$]$_1$ ... t$_1$
Thus, medial trace in [Spec, Foc2P] corresponds to [t$_2$]$_1$ in (i).

a medial landing of the sentence-initial DP in [Spec, Foc2P] would end up in a feature clash. Phrased differently, this DP is not marked with a [+contrastive] feature designed to be checked in [Spec, Foc2P] under Spec-head agreement.

On the other hand, the sentence-initial DP in (44) cannot have been raised directly to [Spec, Top2P] without a "stopover" in [Spec, Foc2P]. Such an operation would engender a WCO configuration like that in (44), where a DP in a non-A position binds two variables, violating the Bijection Principle (35).

Therefore, the best way to handle cases like (44) that I can see is to assume that sentence-initial DPs lacking a [+contrastive] feature but being anaphorically related to an argument position within IP are BASE-GENERATED in [Spec, Top2P]. Assuming this, (44) can be replaced by the more appropriate structure (44'), in which the null constant is licensed by an anaphoric operator that is placed in a higher V'-shell[26]:

(44') $[_{Top2P}$ $[_{DP}$ zhe tiao ke'ai de gou $]_i$, $[_{IP}$ $[_{DP}$ ta$_i$ de zhuren] hui $[_{V'}$ OP$_I$ $[_{V'}$ e$_i$ XIHUAN]]]]
　　　　　　　 this CL lovely SUFF dog, 　　　　it SUFF master surely 　　　　　 like

In (44') the anaphoric operator connects the null constant to the base-generated topic in [Spec, Top2P], which serves as the antecedent of the null constant. At the same time, the topic binds the possessive pronoun in the subject DP that is used as a variable. Since the anaphoric operator is located in a hierarchically lower position than the possessive pronoun, none of the rules set up in (33) to (35) are violated.

To summarize, the decisive difference between Rizzi's structure (43) and our structures (37'), (38') and (44') is that the anaphoric operator in our structures does not take scope over the possessive pronoun in the subject DP.

In the cases (37) and (38), which involve a co-indexed possessive pronoun, the second leap of the object DP from [Spec, Foc2P] to the left periphery of the sentence is obligatory. The irony here is that what was forbidden in cases of operator movement at LF, such as in (30) to (32) above, is actually REQUIRED in (37) and (38): The possessive pronoun MUST be crossed by the co-indexed DP in order to be C-COMMANDED by the DP that serves as its binder.[27]

As a result, sentences like (37") and (38") are ill-formed, since the possessive pronoun lacks such a c-commanding antecedent. Consequently, the possessive pronoun cannot be interpreted as a bound variable:

(37") *$[_{IP}$ $[_{DP}$ Ta$_i$ de zhuren] $[_{Foc2P}$ $[_{DP}$ ZHE tiao ke'ai de gou]$_i$ hui xihuan e$_i$]]
　　　　　　 it SUFF master 　　　　　 this CL lovely SUFF dog, surely like

(38") *$[_{IP}$ $[_{DP}$ Ta$_i$ de zhuren] $[_{Foc2P}$ $[_{DP}$ ZHE tiao ke'ai de gou]$_i$ hui XIHUAN e$_i$]]
　　　　　　 it SUFF master 　　　　　 this CL lovely SUFF dog, surely like

Comparing (30) - (32) with (37') and (38'), a preliminary conclusion that can be drawn is that the intermediate landing site [Spec, Foc2P] is only accessible at S-structure, not at LF.

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[26] As we will claim in section 7, the sentence constituent V' is head-final at the level of D-structure. Therefore, the null constant in (44') is placed on the left of the verb.

[27] The requirement that a possessive pronoun used as a variable must be c-commanded by its binder is also valid in the case of (36)/(44), where the possessive pronoun is bound by a base-generated topic.

5.2.3. More evidence for the existence of Foc2P

That the existence of a functional category Focus2 Phrase in Chinese is not pure conjecture can be concluded from the fact that the position [Spec, Foc2P] is necessary independent of weak crossover cases. This is, for example, the case in sentences like (45) and (46), which are altogether well-formed:

(45) Wo ZHE ben shu bu yao.
    I this CL book not want
    'It is this book that I don't want.'

(45') [$_{IP}$ wo [$_{Foc2P}$[$_{DP}$ ZHE ben shu]$_i$ bu yao e$_i$]] (SS)
    I   this CL book   not want

(46) Wo ZHE ben shu bu YAO.
    I this CL book not want
    'As for THIS book, I don't WANT [it].'

(46') [$_{IP}$ wo [$_{Foc2P}$[$_{DP}$ ZHE ben shu]$_i$ bu YAO e$_i$]] (SS)
    I   this CL book   not want

What both these examples have in common is that an object DP bearing a [+contrastive] feature has moved in a single leap from its base position into the Spec position of Foc2P, which, in (45) and (46), serves as a final landing site.

    The important thing here is that, since the object is not compelled to bind (and c-command) a co-indexed possessive pronoun, its second movement step out of [Spec, Foc2P] to a sentence-initial position appears to be "optional". Indeed, outside of some possible contexts, sentences like (47) and (48), in which the second movement step has been carried out, come extremely close to (45) and (46):

(47) ZHE ben shu wo bu yao.
    this CL book I not want
    lit. 'THIS book (FOCUS) I don't want to have.'

(47') [$_{Foc1P}$ [$_{DP}$ ZHE ben shu]$_i$ [$_{IP}$ wo [$_{Foc2P}$ t'$_i$ [bu yao e$_i$]]]]
    this CL book   I   not want

(48) ZHE ben shu wo bu YAO.
    this CL book I not want
    'THIS book (TOPIC) I don't WANT to have.'

(48') [$_{Top2P}$ [$_{DP}$ ZHE ben shu]$_i$ [$_{IP}$ wo [$_{Foc2P}$ t'$_i$ [bu YAO e$_i$]]]]
    this CL book   I   not want

We might imagine that, considered from the viewpoint of discourse, the contrastiveness feature of the objects concerned is dominant in (45) and (46). However, in cases like (47) and (48), their prominence features, i. e. [+prominent] in (47) and [-prominent] in (48), are more dominant than their contrastiveness features.

An alternative explanation more conclusively meeting our feature approach might be to say that the object in (45) has no [+prominent] feature at all, while the object in (46) does not carry a [-prominent] feature.

Our claim that the Spec position of the Focus2 Phrase is a contrastive focus position within IP can be verified by the fact that objects lacking the feature [+contrastive] are not allowed to appear in this position, as (49) shows:

(49) *Wo zhe ben shu bu YAO.
    I this CL book not want

(49') *[$_{IP}$ wo [$_{Foc2P}$ [$_{DP}$ zhe ben shu]$_i$ [bu YAO e$_i$]]]
    I   this CL book   not want

In other words, the direct object in (49) is only permitted to occur in its base-position:

(50) Wo bu YAO zhe ben shu.
    I not want this CL book
    'I don't WANT to have this book.'

(50') [$_{IP}$ wo bu [$_{V'}$ YAO [$_{DP}$ zhe ben shu]]]]
    I not   want   this CL book

5.2.4. Focus phrases, topic phrases and resumptive pronouns

Whether a sentence-initial DP is a topic occupying the Spec-position of Top2P or, rather, whether it is a focus phrase in Spec of Foc1P, carrying the feature [+prominent], can be verified with the help of resumptive pronouns.

Both contrastive and non-contrastive topics in [Spec, Top2P], having the feature [-prominent] in common, allow a resumptive pronoun to appear in the argument position, anaphorically bound by them, such as in (51) and (52):

(51) [$_{Top2P}$ [$_{DP}$ ZHEME taoyan de xiaohai]$_i$, [$_{IP}$ ni ye XIXUAN ta$_i$]] ma?
        such repugnant SUFF child   you also like it ST°
    lit. 'Such a repugnant child (CONTRASTIVE TOPIC), do you also LIKE it?'

(52) [$_{Top2P}$ [$_{DP}$ Zhe ge ren]$_i$, [$_{IP}$ wo hen xiang RENSHI ta$_i$]]
        this Cl man   I very want get to know ta
    lit. 'This man (NON-CONTRASTIVE TOPIC), I really want to get to know him.'

In opposition to (51) and (52), contrastive foci in [Spec, Foc1P] do not allow resumptive pronouns. This is illustrated by sentence (53), used as an infelicitous reply to the question: *'Which of those children do you like?'*:

(53) *ZHE ge xiaohair$_i$ wo xihuan ta$_i$.
     this CL child   I like it
    lit. 'THIS child (FOCUS), I like it.'

It appears sensible to assume that optional resumptive pronouns like those in (51) and (52) are inserted at the level of Phonetic Form.

6. Left-dislocated Subjects

In this section it is claimed that only those subjects which are characterized by a [+contrastive] feature can be extracted out of IP.

Subjects are base-generated in the highest V'-shell. If not used contrastively, they obligatorily move to [Spec, IP] by S-structure to be licensed, such as in (54):

(54) [$_{IP}$ [$_{IP}$ Li Xiao'er]$_i$ yijing [$_{V'}$ t$_i$ [$_{V'}$ HUIQU le]]]]
       Li Xiao'er   already   return ASP
    'Li Xiao'er (SUBJECT) has already RETURNED.'

This is the default case. As the subject in (54) is not contrastively used, no Focus2 Phrase is generated within IP.[28]

According to Koopman & Sportiche (1991: 212), there are two classes of languages: One class of them, represented by English, French and other languages, is characterized by the obligatory movement of the subject to [Spec, IP]. The sentence subject of the other class of languages must also be raised obligatorily, although not necessarily to [Spec, IP].
As we will show in the following, Chinese belongs to this second class of languages.

6.1. "Invisible" subject left-dislocation

If a subject, in contrast to (54), bears the feature [+contrastive], the whole mechanism of feature checking that we have applied to objects in section 5, goes into effect. That means that the subject obligatorily moves directly to [Spec, Foc2P] in order to check its [+contrastive] feature.

If the contrastive subject is [+contrastive] and [-prominent], such as in the following cases, it will move on in a second movement step to [Spec, Top2P]:

(55) [$_{Top2P}$ [$_{DP}$ LI XIAO'ER]$_i$ [$_{Foc2P}$ t$_i$ yijing [$_{V'}$ e$_i$ [$_{V'}$ HUIQU le]]]]
            Li Xiao'er   already   return ASP
    lit. 'LI XIAO'ER (CONTRASTIVE TOPIC), I was told [he] had already RETURNED.'

(56) Qianmian lai le yi-qun   xiaohair. ...
        ahead   come ASP one-group child
    'There came a group of children at the head.'

[$_{Top2P}$[(Qizhong) LIANG-ge haizi]$_i$ [$_{Foc2P}$ t$_i$ [$_{V'}$ e$_i$ [$_{V'}$ chuan   de   POPO-LANLAN de]]]]
        among them   two-Cl   child   be dressed SUFF very ragged SUFF
    'TWO children (among them) were dressed very RAGGEDLY.'

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[28] The head position of IP is the place where the finiteness features of a sentence are located. Finiteness manifests itself in Chinese in that the Spec position of IP may be filled lexically. That is impossible in control structures lacking finiteness features (cf. Gasde (1991; 1993)).

The interesting point here is that the contrastive topic in the second sentence of (56), *(qizhong) LIANG-ge haizi ('two children (among them)')*, is GIVEN OR KNOWN INFORMATION, as required by Gundel (1988). It is, however, neither a DEFINITE nor a GENERIC TOPIC. Evidently, the topic is an INDEFINITE topic with a WEAK QUANTIFIER and a necessarily PARTITIVE interpretation.[29] Cases like (56) have previously been overlooked by Li & Thompson (1981) and others.

If the subject, however, is [+contrastive] and [+prominent], it undergoes "Foc-to-Foc" movement, yielding an S-structure similar to (57):

(57) $[_{Foc1P}$ $[_{DP}$ LI XIAO'ER$]_i$ $[_{Foc2P}$ t'_i yijing $[_{V'}$ e_i $[_{V'}$ huiqu le $]]]]$
         Li Xiao'er   already   return ASP
  'LI XIAO'ER (FOCUS) has already returned.'

There might seem to be a flaw in our analysis in that the different sentence positions of the subject suggested here, namely [Spec, IP] in (54), [Spec, Top2P] in (55) and (56), and [Spec, Foc1P] in (57), are "invisible", in so far as they are seen from the viewpoint of Surface Structure. The subject appears simply SENTENCE-INITIALLY in all those examples. As a result, one might question, for example, if the subjects in (55) - (57) are actually extracted out of IP.

6.2. "Visible" subject left-dislocation

The extraction of the subject out of IP becomes, metaphorically speaking, "visible", if a contrastively used subject emerges in an embedded clause, from which it is raised to the leftmost position of the matrix clause, as in the following examples:

(58) $[_{Foc1P}$ $[_{DP}$ LI XIAO'ER$]_i$ $[_{IP}$ wo tingshuo $[_{IP}$ $[_{Foc2P}$ t_i $[_{V'}$ yijing $[_{V'}$ e_i $[_{V'}$ huiqu le $]]]]]]]$
         Li Xiao'er   I   be told   already   return ASP
  lit. 'LI XIAO'ER (FOCUS) I was told [he] had already returned.'

(59) $[_{Top2P}$ $[_{DP}$ LI XIAO'ER$]_i$ $[_{IP}$ wo tingshuo $[_{IP}$ $[_{Foc2P}$ t_i yijing $[_{V'}$ e_i $[_{V'}$ HUIQU le $]]]]]]$
         Li Xiao'er   I   be told   already   return ASP
  lit. 'LI XIAO'ER (Contrastive TOPIC), I was told [he] had already RETURNED.'

In contradiction to (58) and (59), sentence (60) is no case of left-dislocation, although the topichood of the sentence-initial DP is beyond question:

(60) $[_{Top2P}$ $[_{DP}$ Li Xiao'er$]_i$ $[_{IP}$ wo tingshuo $[_{IP}$ yijing $[_{V'}$ OP_i $[_{V'}$ e_i $[_{V'}$ HUIQU le $]]]]]]$
         Li Xiao'er   I   be told   already   return ASP
  lit. 'Li Xiao'er (TOPIC), I was told [he] had already returned.'
  Lü Shuxiang (1986)

Sentence-initial non-contrastive topics that are aphorically related to the subject of an embedded clause are base-generated in [Spec, Top2P] of the matrix clause. This is because non-contrastive subjects are not allowed to "stop over" in [Spec, Foc2P] for the reasons discussed in section 5.

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[29] Cf. Jäger (1996: 127ff.) who gives a similar English example.

In a similar manner, the topic is base-generated in a simplex sentence like (61), where the leftmost DP is separated from the rest of the sentence by an overt topic marker, namely '*me*', and a pause at the level of PF:

(61) Li xiansheng me,   RENSHi wo!
    Li   mister   PART   know   I
    lit. 'Mr. Li (TOPIC), [he] knows me!'

(61') [$_{Top2P}$ [$_{DP}$ Li xiansheng]$_i$ [$_{Top2'}$ [$_{Top2°}$ me] [$_{IP}$ [$_{V'}$ OP$_i$ [$_{V'}$ e$_i$ [$_{V'}$ RENSHi wo]]]]]]]
    Li   mister   PART   know   I

In cases distinguished by the subject crossing a co-indexed possessive pronoun located in the subject-DP of the matrix clause, the Bijection Principle is not violated, as shown in (62):

(62) [$_{Top2P}$ [$_{DP}$ LI XIAO'ER]$_i$ [$_{IP}$ [$_{DP}$ ta$_i$ baba] shuo [$_{IP}$ [$_{V'}$ OP$_i$ [$_{V'}$ e$_i$ yijing HUIQU le]]]]]]
    Li Xiao'er   he dad   say   already return ASP
    'LI XIAO'ER (Contrastive Topic), his dad says [he] has already returned.'

The c-commanding subject in (62) binds the pronoun used as variable, while the operator connects the null constant that it licenses with its antecedent.

6.3. Subject left-dislocation through arguing by analogy

Based on the obligatory object raising that is triggered by focus-sensitive particles, it shall be concluded in this section that the same focus-sensitive particles trigger subject raising in the same manner.

We have not yet discussed contrastive topics and contrastive foci that are lexically marked by a focus-sensitive particle.

Nevertheless, all the contrastive topics and contrastive foci treated in section 5 had a systematic phonological manifestation in the form of accent. It should, however, be noted that sentences with a contrastive topic contain a second prosodic peak that falls on the predicate of the sentence, whereas sentences with a contrasive focus do not contain a second prosodic peak. Both this accent and the placement of the object in a pre-verbal or pre-subject position allow us to identify those constituents as contrastive foci or contrastive topics.

Although direct objects, if accented, are accessible to overt movement into appropriate functional Spec-positions, as demonstrated by the examples (28) - (29) and (45) - (48) above, such raising procedures are not obligatory, as the following examples show:

(63) A: Tamen dangzhong ni xihuan na   ge xiaohair?
        they   among   you   like   which   CL   child
        'Which child do you like among them?'

    B: Wo xihuan ZHE ge xiaohair .
        I   like   this   CL   child
        'I like THIS child.'

(64) Wo XIHUAN ZHE ge xiaohair, er   TAOYAN NA ge xiaohair.
    I   like   this   CL   child   but   dislike   that   CL   child
    'I LIKE THIS child, but [I]DISLIKE THAT child.'

Seen in the light of (63) and (64), features like [+contrastive] and [+/-prominent] cannot be "strong" features in the sense of Chomsky (1995). For, "if a strong feature remains after Spell-Out, the derivation crashes"[30]. Yet, if the features in question were "weak", structures like (28) to (29) and (45) to (48) should be excluded, since weak features block overt movement.[31] Obviously, (28) - (29) and (45) - (48) represent unforced violations of the Procrastinate Principle. Chomsky suggests two options for cases like these:

a. The feature concerned may be strong or not

b. The feature concerned may or may not tolerate an unforced violation of Procrastinate.[32]

Both options allow us to assume that object raising in (63) and (64) is "procrastinated" in such a way that it will be "caught up on" at the level of Logical Form.

6.3.1. Direct objects lexically marked by focus-sensitive particles

In contradistinction to examples like (28) to (29), which have undergone an OPTIONAL left-detachment of the object, as proved by the correctness of (63) and (64), an accented object must be OBLIGATORILY detached from its base-position in other cases. This occurs if there is an adjacent focus-sensitive particle that is designed to mark it as a contrastive topic or a contrastive focus. As we will see, contrastive topics and contrastive foci have different lexical markers.

6.3.1.1. Contrastive objects marked by *shenzhi* or *lian*

The raising of an accented object is obligatory if it is lexically marked by *shenzhi* or *lian*. If such an object fails to be raised, the resulting structure will be totally ill-formed, as (65) a. shows:

(65) a. *Ta (ye / dou) renshi [$_{DP}$ shenzhi / lian [$_{DP}$ LI SI]].
     he   also   know   even   Li Si

In (65) b., however, the object goes, as is required, to [Spec, Foc2P]. There it triggers the appearance of *ye* or *dou* in Foc2[0], the two head elements being allowed to freely replace each other:

(65) b. Ta [$_{Foc2P}$ [$_{DP}$ shenzhi / lian [$_{DP}$ LI SI]]$_i$ [$_{Foc2'}$ ye / dou [$_{V'}$ RENSHI e$_i$]]]
    he   even   Li Si   also   know
    'He even knows Li Si.'

According to Lai (1994: 518), the *lian* constituent indicates "the biggest sum individual including the focus", the latter being denoted as "the extreme value". The elements *ye* and *dou* respectively signal that there are some other alternatives to the focus which also satisfy the property of the predication.

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[30] Chomsky (1995), p. 198.

[31] Chomsky (1995: 198) argues that there is a natural economy condition: LF movement is "cheaper" than overt movement. The system tries to reach PF "as fast as possible", mimimizing overt syntax.

[32] Cf. ibid, 374.

Whereas in (65b) the contrastive object lexically marked by *shenzhi / lian* selects [Spec, Foc2P] as its final landing site, it moves on to [Spec, Top2P] in (65) c.:

(65) c. [Top2P [DP Shenzhi / lian [DP LI SI]]i [IP ta [Foc2P ti [Foc2' ye / dou [V' RENSHI ei]]]]]
             even   Li Si   he   also   know
      lit. 'Even Li Si (CONTRASTIVE TOPIC) he also knows.'

Along the lines of Fang (1995: 283), Shyu (1995: 87), Zhang & Fang (1986: 80), and Liu & Xu (1997), I consider *lian*-phrases to be in pre-subject positions as contrastive topics or, in the terms of Liu & Xu (1997), as "topic foci" (huati jiaodian). This means that *lian*-phrases check their [+contrastive] feature in [Spec, Foc2P] before moving to [Spec, Top2P] in order to check its [-prominent] feature, if it has such a second feature.[33]

6.3.1.2. Contrastive foci marked by *shi*

Just as *shenzhi* and *lian*, the focus-sensitive particle *shi* obligatorily triggers object left-detachment:

(66) a. *Ta zui ai kan [DP shi [DP ZHE zhong shu]].
       he most love read PART   this kind of book

In contrast to *shenzhi* and *lian*, the focus-sensitive particle *shi* is a "pure" focus marker. In (66) b. it yields a structure with a sentence-initial focus phrase, which is located in [Spec, Foc1P]:

(66) b. [Foc1P [DP Shi [DP ZHE zhong shu]]i [IP ta [Foc2P ti [V' zui ai kan ei]]].
        FM   this kind of book   he   most love read
      'It is this kind of books that he loves most.'

Sentences involving a phrase that is marked by the focus marker *shi*, such as (66) b., are often called "*it*-cleft" structures, a term that is misleading to some extent.[34]

To summarize, the aim of section 6.3.1. was to demonstrate that lexical marking by a focus-sensitive particle adjoined to a direct object automatically triggers its left-detachment from V'.

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[33] Phrased differently, *lian*-phrases are a MIXED category sharing features of the categories of topic AND focus. Granted this is true, the long-lasting vivid dispute whether *lian*-phrases are topics OR foci can be resolved. The same applies to *shenzhi*-phrases, provided they occur in structures like those that *lian*-phrases appear in. Respecting the nature of *lian*-phrases, cf. Tsao (1990: 264ff.) who argues for treating the *lian* constituent as a topic. Disagreeing with Tsao, Paris (1995: 149) shows convincingly that *lian*-phrases do not function as pure topics. Thus, she underlines: "The constituent over which *lian...ye/dou* has scope... does not bear the informational role of a topic; rather, it carries new information and behaves like a focus."

[34] Though being akin as far as their function is concerned, sentences containing a "*shi*-phrase" differ from "*it*-clefts" in languages such as English or German in two respects: First, the lack of an expletive pronoun such as *it*, and second, the position of the focused element is not limited to the left periphery of the sentence. Finally, no "clefting" takes place in Chinese (cf. Huang (1981/1982: 396)).

6.3.2. Subjects lexically marked by focus-sensitive particles

Given that focus-sensitive particles obligatorily trigger the raising of the direct objects they are adjoined to, we can infer that the same particles trigger a similar form of left-dislocation in the case of subjects.

6.3.2.1. Subjects marked by *shenzhi* or *lian*

Left-dislocation of subjects marked by *shenzhi* or *lian* comprises two cases:
First, the Spec-position of Top2P is not otherwise occupied. Therefore, the *lian*-subject can end up in that position, as exemplified by the following structure:

(67) [$_{Top2P}$ [$_{DP}$ shenzhi / lian [$_{DP}$ san-sui de HAIZI]]$_i$ [$_{Foc2P}$ t$_i$ [$_{Foc2P}$ [$_{Foc2'}$ ye / dou [$_{V'}$ ZHIDAO
           even   three-year SUFF child   also   know
    zheyang qianjin de daoli.]]]]]
      such   simple SUFF truth
    'Even a three-year-old child knows such a simple truth.'

Second, if [Spec, Top2P] is occupied by another constituent such as a base-generated topic, the *lian*-subject will "get stuck" in [Spec, Foc2P]:

(68) [$_{Top2P}$ [$_{DP}$ Zhe kuai shitou]$_1$, [$_{IP}$ [$_{Foc2P}$ [$_{DP}$ lian [$_{DP}$ si-ge nanren]]$_2$ [$_{Foc2'}$ dou
           this CL boulder   even   four-CL man   ye
    [$_{V'}$ t$_2$ [$_{V'}$ Op$_1$ [$_{V'}$ e$_1$ ban-bu-dong]]]]]]]]
                   cannot remove
    'This boulder (TOPIC), four men cannot even remove it.'

6.3.2.2. Subjects marked by *shi*

If no topic appears in [Spec, Top2P], subjects marked by the "pure" focus marker *shi* will undergo "Foc-to-Foc" movement:

(69) [$_{Foc1P}$ [$_{DP}$ shi [$_{DP}$ ЛЕЛЕ]]$_i$ [$_{Foc2P}$ t$_i$ [$_{V'}$ e$_i$ [$_{V'}$ rang wo jin de wu]]]]]
        FM   elder sister   let   I   enter SUFF room
    'It was my elder sister who let me enter the room.'
    Liu & Pan & Gu (1983)

If [Spec, Top2P] is, however, occupied, the subject ends up in [Spec, Foc2P]:

(70) [$_{Top2P}$ [$_{DP}$ Zhe ge zhuyi]$_1$, [$_{IP}$ [$_{Foc2P}$ [$_{DP}$ shi [$_{DP}$ TA]]$_2$ [$_{V'}$ t$_2$ [$_{V'}$ Op$_1$ [$_{V'}$ e$_1$ chu de]]]]]]
        this CL advice   FM   he   offer SUFF
    lit. this advice (TOPIC), it was HIM who offered it.'

Comparing structures like that of Chinese (70) with corresponding English structures, Huang (1981/82: 392f., 396) examined the reasons why the latter is ill-formed:

(71) *That dog$_1$, it was John$_2$ that t$_2$ bought t$_1$ from me.

(72) Neizhi gou, shi Zhang San xiang wo mai-de.
　　　 that　dog　FM　　　　 from　me　bought
　　 'That dog, it was Zhang San that bought [it] from me.'

Huang's hypothesis is: "Since clefting applies before topicalization in English, the island formed by the former has the effect of blocking the application of the latter. But in Chinese, no island is formed before topicalization applies in Syntax, and when FOCUS applies in LF it need not cross any island"[35].

　　 Phrased differently, "Foc-to-Foc" movement of the subject is "procrastinated" in (70) and (72). Unlike Huang, we assume that the topic in (70) and (72) are base-generated.

6.4. Conclusions about left-dislocation of subjects

In section 6.2. above, we adduced evidence that there is a type of "visible" subject left-dislocation in Chinese. This type was represented by the examples (58), (59) and (62), which were distinguished by a contrastive subject of an embedded clause being raised to the leftmost periphery of the matrix clause.

　　 In section 6.3., we drew an analogy between the obligatory left-dislocation of objects that are lexically marked by focus-sensitive particles and subjects marked by the same particles. We reached the conclusion that focus-sensitive particles trigger obligatory left-dislocation of the subjects they are adjoined to just as they trigger left-dislocation of direct objects.

Granting that this is true, we infer that subject left-dislocation takes place in exactly the same way, if it is "invisible", as in (55) to (57), treated in section 6.1.

Sentence-initial DPs anaphorically related to an empty subject position but lacking the feature [+contrastive], are base-generated topics in [Spec, Top2P].

"Foc-to-Foc" movement of subjects carrying a [+contrastive] and a [+prominent] feature is blocked at the level of S-structure (but not at LF), if there is an intervening topic in [Spec, Top2P].

Taken as a whole, subjects containing the feature [+contrastive] are left-dislocated without exception. The procedure of left-dislocation that they are subject to is, in principle, the same that applies to contrastive direct objects.

7. The syntactic immobility of indirect objects

Contrary to direct objects and subjects, indirect objects are not accessible to the procedures of left-dislocation depicted in sections 5 and 6 above. In this section, the reasons for this phenomenon shall be investigated.

7.1. The internal structure of V' in Chinese

Before showing the effects of the Empty Category Principle (ECP), established by Chomsky (1981), on indirect objects, it is evident that we must take a look at the make-up of the V' con-

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[35] Ibid, p. 396.

stituent[36] of Chinese sentences. Contrary to Huang (1982), I will argue that V' is underlyingly head-final in Chinese.

7.1.1. The head-final vs. head-initial parameter in Huang (1982)

Huang (1982) claims that the head-final vs. head-initial parameter need not have its value fixed, in a given language, for all lexical categories and for all levels of phrase structure.
Taking this for granted, Huang points out that Chinese exhibits a full range of head-final constructions, but allows only a limited range of head-initial constructions. Verbal phrases,· for example, are head-initial, but only at the lowest level of phrasal expansion:[37]

(73) a. $[_{X^n} X^{n-1} YP^*]$ iff n=1 and X ≠ N
    b. $[_{X^n} YP^* X^{n-1}]$ otherwise

There is no flaw in Huang's rule, except for the fact that it exclusively takes surface orders of constituents into account.

7.1.2. V' as head-final construction

In contrast to Huang (1982) but in accordance with Koopman (1984), Travis (1984), and Li (1990), I will assume, in this paper, that the sentence constituent V' is a head-final construction at the level of D-structure:

(74) [SU $[_{V'}$ IO $[_{V'}$ DO V^0]]]

This assumption is based on the idea that
• θ-role assignment by the verb to its arguments and
• Syntactic Licensing of verbal arguments[38]
are two independent procedures.

Given this, it is further supposed that
• these procedures can take place at different levels of the derivation of sentences, and that
• they can be opposed respecting their direction.

More specifically, I will hold that multi-place verbal heads like that in (74) reach their S-structural position by being raised into head positions of higher V'-shells[39]:

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[36] In accordance with Fukui & Spies (1986) I will operate on the premise that there is a fundamental asymmetry between lexical categories and functional categories in that the latter project to X" and are limited to a single specifier position and a single complement position, "while all projections of lexical categories are X', which is indefinitely iterable..., limited only by the Projection Principle and other independent principles of licensing" (ibid., p. 128). See also Fukui (1986).

[37] Cf. Huang (1982), pp. 14f. and 41.

[38] In inflectional and agglutinating languages, Syntactic Licensing corresponds to the operation of Case assignment. Our conviction, that only in languages that have a case morphology Syntactic Licensing taking place by Case assignment, is supported by (Kiparsky (1991: 1): "Abstract Case and AGR (syntactic elements assumed to be present in all languages independently of morphology) do not exist.".

[39] Cf. Larson (1988; 1990). In sharp contrast to the approach outlined in (75), Koopman (1984), Travis (1984) and Li (1990) achieve their S-structural order by NP movement within X'. As for that approach, cf. Goodall (1990: 246), who points out that such argument movement from one side of the head to the other leads to theory-internal and conceptual difficulties, besides the fact that there is very little empirical support for such kinds of movement.

(75) $[_{XP}$ SU$_1$ $[_{V'}$ t$_1$ $[_{V'}$ $[_{V°}$ V$^0{}_2$ $]$ $[_{V'}$ IO $[_{V'}$ $[_{V°}$ t'$_2$ $]$ $[_{V'}$ DO t$_2$ $]]]]]]$

This means that Chinese has an SOV order at the level of D-structure but an SVO order at S-structure.

7. 2. Syntactic licensing in V'

On the lines of the basic model of V' given in (75), the verb is enabled to assign θ-roles from the right to the left at the level of D-structure.

In contradistinction to this, Syntactic Licensing goes from the left to the right[40]. This means that for the DO to be licensed, the verbal element V^0 has to move to the V'-shell head position marked with t'$_2$ in (75). Having licensed the DO from this position, the verb moves on to the lowest V'-shell head position, which c-commands the IO. From there, it licenses the IO.

As for the subject, no syntactic licenser is required, just as the subject in nominative-accusative languages does not need any authority assigning it the nominative.

According to Falk (1991: 199f.), in languages like English or German, nominative case is not actually a case, for nouns (or NPs) used in isolation (in the 'citation form') are nominative, and there is, naturally, no source for case to be assigned to a form in isolation.[41]

In the following, we will see that licensing of the indirect object by the verbal head V°, such as illustrated in (75), merely represents the simplest case. It will be shown that there are verbs whose indirect object is not licensed by V^0 but by the element *gei*, which I will treat as a DUMMY VERB generated in the head position of a higher V'-shell. Furthermore, in certain circumstances, the DO can be licensed by the element *ba*, which I will also treat as a dummy verb occurring within the sentence constituent V'.

Finally, it will become evident that licensing of DOs and IOs by the dummy verbs *ba* and *gei,* respectively, may be accompanied by two possible inversions of constituent order that I will label as "NP-shift".

7.2.1. Indirect objects licensed by a regular verb

The following example exemplifies the abstract structure (75):

(76) Wo $[_{V'}$ gaosu$_i$ $[_{V'}$ ni $[_{V'}$ t'$_i$ $[_{V'}$ yi-ge   hao xiaoxi $[_{V°}$ t$_i$ $]]]$
    I   tell   you   one-CL good news
    'I (want to) tell you some good news.'

---

[40] Cf. Koopman (1984: 124), who claims that in Chinese "Case" is assigned to the right.

[41] "If nominative forms are really Caseless, then, of course, nothing 'assigns' nominative Case." (Falk (1991), p. 200). Brandt & Reis & Rosengren & Zimmermann (1992: 18) emphasize that it cannot be taken for granted that nominative in German is actually connected with finiteness or agreement features. For, the nominative occurs in infinite constructions as well, and, inversely, the agreement features in question may appear in constructions lacking a nominative:
(i) Man schlug ihnen vor, einer nach dem anderen zurückzutreten.
(ii) Keiner aufstehen.
(iii) Ihm liegt sehr viel an dir.
Cf. also Mayerthaler & Fliedel (1990: 29), who consider the nominative as "Non-Case".

(76')

$$
\begin{array}{c}
V' \\
\diagup \quad \diagdown \\
SU \qquad V' \\
t_2 \qquad \diagup \quad \diagdown \\
\quad V^0 \qquad V' \\
\quad gaosu_1 \quad \diagup \quad \diagdown \\
\qquad IO \qquad V' \\
\qquad ni \quad \diagup \quad \diagdown \\
\qquad V^0 \qquad V' \\
\qquad t'_1 \quad \diagup \quad \diagdown \\
\qquad\qquad DO \qquad V^0 \\
\qquad\qquad \text{yi-ge hao xiaoxi} \quad t_1
\end{array}
$$
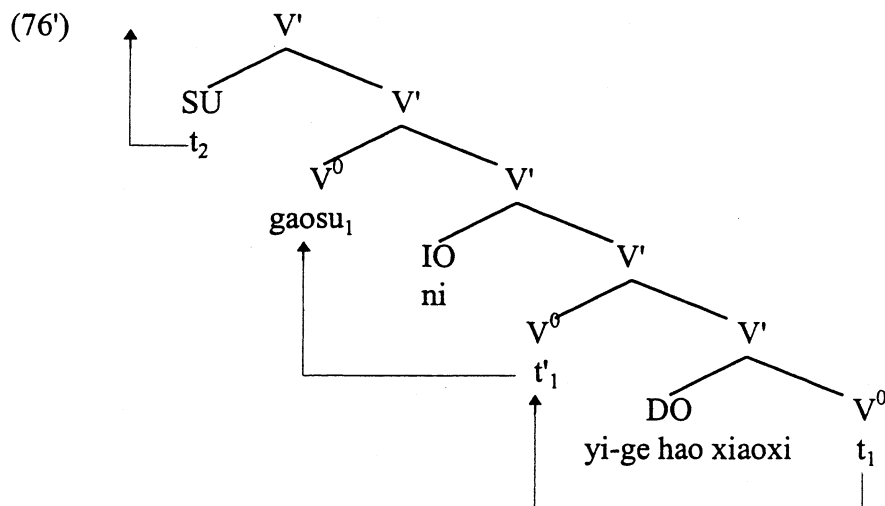
This example is simple in that the constituent V^0 is represented by a single verbal stem.

Yet the stems of Chinese verbs can be followed by certain (semi-)suffixes and other elements such as non-referential objects or postverbal manner adverbials, all of them being constitutive components of the head constituent V^0. That is to say, the head constituent V^0 can consist of a Verbal Complex (VC) with the stem of the verb in the leftmost positionf of V^0.

Aspectual suffixes such as the 'perfective' morpheme *le*-1 and the 'experiential' morpheme *guo* are obligatorily raised together with the verbal stem, as (77) and (78) demonstrate[42]:

(77) Wo yijing [$_{V'}$ huan-le$_i$ [$_{V'}$ ta [$_{V'}$ t'$_i$ [$_{V'}$ zhe ben shu t$_i$]]]]
     I already returned-ASP he   this Cl book
     'I have already returned this book.'

(78) Liu Gang [$_{V'}$ song-guo$_i$ [$_{V'}$ wo [$_{V'}$ t'$_i$ [$_{V'}$ xiangce t$_i$]]]]
     Liu Gang   give-ASP   I   photo album
     'Liu Gang once gave me a photo album.'

Whereas the θ-role Goal carried by the indirect object in (77) and (78) above is determined to serve as "Receiver", it functions as "Source" in the following example:

(79) Ta [$_{V'}$ tou-le$_i$ [$_{V'}$ wo [$_{V'}$ t'$_i$ [$_{V'}$ shi kuai qian t$_i$]]]]
     he steal-ASP   I   ten Yuan money
     'He has stolen ten Yuan from me.'

Contrary to *le*-1, the element *le*-2, which expresses inchoativity or perfectivity, is obligatorily left behind by the verbal stem:

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[42] In (79) and (80), the verbal stem consists of a base morpheme: *huan* ('return') and *song* ('give') respectively. In addition, there are compound verbal stems such as *huangei* (return+give) and *songgei* (make a gift + give), which are able to replace the base morpheme in (79) and (80) without any change in meaning. Note that the morpheme *gei*, which serves as a compositional element in the process of word formation in *huangei* and *songgei*, is not identical with the dummy verb *gei* which we will talk about below.

(80) Liu Gang   zai   ye bu hui [$_{V'}$ songgei$_i$ [$_{V'}$ wo [$_{V'}$ t'$_i$ [$_{V'}$ shenme dongxi t$_i$ le]]]]
　　　Liu   Gang once more also not will   give   I   any   thing   LE-2.
　　　'Liu Gang will not give you anything any longer.'

(81) Liu Gang [$_{V'}$ song-le$_i$ [$_{V'}$ wo [$_{V'}$ t'$_i$ [$_{V'}$ xiangce   t$_i$ le]]]]
　　　Liu Gang   give-LE-1   I   photo album   LE-2
　　　'Liu Gang once gave me a photo album.'

7.2.2. Indirect objects licensed by the dummy verb *gei*

If the verbal system is obligatorily tied to the Verbal Complex, with the result that it cannot be raised into higher V'-shells, the indirect object must be licensed by the dummy verb *gei*, which at this juncture occurs in the lowest V^0-position c-commanding the indirect object.

In the following examples the verb is followed by a non-referential object, forming a Verbal Complex with an idiomatic meaning:

(82) Wang daifu hai mei-you [$_{V'}$ [$_{V°}$gei] [$_{V'}$ wo [$_{V'}$ kan-guo   bing]]]
　　　Wang doctor yet not-have   DV   I   look-ASP at disease
　　　'Doctor Wang was not yet examining me.'

(83) Wo yijing [$_{V'}$ [$_{V°}$gei] [$_{V'}$ ta [$_{V'}$ dao   xi   le]]]
　　　I   already   DV   he   say   happy event LE-2
　　　'I have already congratulated him.'

(84) Yisheng [$_{V'}$ [$_{V°}$gei] [$_{V'}$ ta [$_{V'}$ da-le   zhen   le]]]
　　　doctor   DV   he   jab-ASP needle LE-2
　　　'The doctor gave him an injection.'

7.3. V'-internal NP-Shift in Chinese

If an ordinary verb syntactically licenses one of its arguments, this argument will automatically get into the range of the focus projection of that verb. This side-effect is undesired in cases of an argument which is in some context background information, since such an argument is unable to serve as focus.

Yet there are certain possibilities of thwarting the undesired side-effect by generating the argument concerned in a V'-shell outside the range of the verb. Such an argument must be licensed by a dummy verb. As we will immediately see, such procedures result in a reorganization within V' that is comparable to NP-Shift in English.

There are two possibilities of shifting the relative order of the direct and the indirect object in respect to each other in Chinese.

The first of them, which is generated with the help of the dummy verb *ba,* represents the archetypal manner of NP-Shift in Chinese, while the second one is a highly marked construction that is supported by the dummy verb *gei.*[43]

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[43] In the history of Chinese Linguistics, elements like *gei* and *ba* were called Co-Verbs at be beginning, later they were analysed as prepositions or functional heads (cf. Zou (1993) for *ba*). Considering *gei* and *ba* as dummy verbs, basically, is equal to harking back to the pioneers of Chinese grammatical research. That does not mean that there are no prepositions in Chinese. Thus, there is, for example, a preposition *gei* which introduces benefactive PPs.

Both constructions have in common that the direct object is not base-generated in the lowest V'-shell as the left sister of V^0. Instead, it is generated in a position that is located hierarchically higher than that of the indirect object. According to this approach, NP-shift·in Chinese is not engendered by any movement of an internal argument of V^0.

7.3.1. NP-Shift with the help of the dummy verb *ba*

As mentioned above, there is a dummy verb serving as licenser of direct objects representing background information, namely the element *ba*:

(85) Jiujiu ba shoubiao song wo le.
    uncle DV wrist watch give I LE-2
    '[My] uncle GAVE the watch to ME.'

(85') [$_{IP}$ jiujiu$_1$ [$_{V'}$ t$_1$ [$_{V'}$ [$_{V^0}$ ba] [$_{V'}$ shoubiao [$_{V'}$ song$_2$ [$_{V'}$ wo [$_{V'}$ t$_2$ le]]]]]]]
    uncle   DV   wrist watch   give   I   LE-2

Note that the DO in (85) cannot be generated as a left sister of the verb:

(85") *[$_{IP}$ jiujiu$_1$ [$_{V'}$ t$_1$ [$_{V'}$ [$_{V^0}$ ba] [$_{V'}$ shoubiao$_3$ [$_{V'}$ song$_2$ [$_{V'}$ wo [$_{V'}$ t'$_2$ [$_{V'}$ t$_3$ t$_2$ le]]]]]]]]
    uncle   DV   wrist watch   give   I   LE-2

The structure (85") is wrong, because the DO, as a result of being generated as left sister of the verb, is licensed twice, namely by the full verb *song* (from the position marked with t'$_2$) and the dummy verb *ba*.

The position occupied by the DO in (85) may be characterized as a preverbal but V'-internal TOPIC POSITION. [44]

Goodall (1990: 248) provides an example determined to prove that the analysis of Koopman (1984), which treats the element *ba* as a dummy Case marker, cannot be held up:
(i) Neige nühaizi ba Zhangsan ku-de hen shangxin.
    that girl BA   cry-DE very sad
    'That girl cried so much that Zhangsan was very sad.'
Goodall is right in emphasizing that *Zangsan* in (i) cannot be an object of the intransitive verb *ku* ('cry') but must be the subject of the embedded clause. Yet (i) does not falsify the analysis of *ba* in other cases as syntactic licenser (or Case marker in the lines of Koopman's system). For, *ba* in (i) is a full verb like the causative full verb *shi,* both meaning '*cause*'. As a result, the verb *ba* in (i) can be replaced by the full verb *shi* ('*cause*'). This is not possible in cases in that *ba* functions as dummy verb. Other examples containing the causative full verb *ba* are given in Li & Thompson (1981: 480). Cf. also Xue (1994).
[44] In cases of sentences containing a two-place verb, the occurrence of *ba* may be structurally coerced, if the verbal stem is tied to its complement as in
(i) [$_{IP}$ Zhang San [$_{V'}$ ba [$_{V'}$ chuanghu ma-de   gangan-jingjing]]]
    Zhang San   DV   window polish-SUFF   sparkling clean
    'Zhang San polished the window [so that it was] sparkling clean.'
It is a notable peculiarity of Chinese that, in cases like (i), the dummy verb *ba* can be replaced by a copy of the verb stem, which functions as a dummy verb in this case, just like *ba* in (i):
(i') [$_{IP}$ Zhang San [$_{V'}$ ma [$_{V'}$ chuanghu ma-de   gangan-jingjing]]]
    Zhang San   DV   window polish-SUFF   sparkling clean

7.3.2. "Heavy NP-shift" with the help of the dummy verb *gei*

There is a highly marked construction treated by Zhu Dexi (1980; 1983), Paul (1988a; 1988b). and others. This construction is characterized by the fact that an IO functioning as "Receiver" (cf. (77), (78) and (80) above), and licensed by *gei,* appears in the rightmost position of the sentence:

(86) Wo xiang song yi-jian yifu gei ta.
    I   want   give one-CL garment DV she
    'I'd like to give her a garment.'

In opposition to the prevailing trend, I will not analyse the element *gei* in (86) as a preposition but, in accordance with our approach, as a dummy verb. The tentative analysis I will give for (86) is the following:

(86') Wo xiang [$_{V'}$ [$_{V°}$ song]$_i$ [$_{V'}$ yi-jian yifu [$_{V'}$ gei [$_{V'}$ ta [$_{V'}$ t$_i$]]]]]
    I   want   give   one-CL garment DV   she

The difference between (85) and (86) is that the DO is licensed by a dummy verb in (85) but by the full verb in (86). As for the IO, it is licensed by the full verb in (85), whereas it is licensed by a dummy verb in (86).

In (85), the IO but not the DO is in the range of the focus projection of the verb. In (86), quite the opposite is the case: Only the DO licensed by the full verb, but not the IO licensed by a dummy verb, lies within range of the focus projection of the verb.

"Heavy NP-shift" like that in (86) is NOT allowed in cases in which the IO is the Addressee, as in (76), or the Source, as in (79). It is also not permitted in cases like (82) - (84) above.

For the sake of completeness, it must be mentioned that there is group of two-place verbs like *mai ('buy'), da ('knit'), qi ('brew up','make')* etc., building verb-object phrases like *buy yi-ben shu ('buy a book'), da maoyi (' knit a sweater'), qi cha ('make tea'),* and others which can be completed by a benefactive adjunct introduced by the preposition *gei ('for').* Benefactive adjunct-PPs of this kind can be adjoined to the left of V' and, in analogy to the syntactic pattern of (86), to the right of V':[45]

(87) Zhang San [$_{V'}$ [$_{PP}$ gei ta] [$_{V'}$ mai-le$_1$ [$_{V'}$ yi-ben shu t$_1$]]]
    Zhang San   for she   buy-ASP   one-CL book
    'Zhang San bought her a book.'

---

[45] Cf. Speas (1990), who denies the hypothesis of Lebeaux (1988) that D-structure includes heads and arguments and nothing else, i. e. the allegation that all adjuncts are added to the phrase marker after D-structure. Speas (1990) shows by means of English examples, which hold good for Chinese as well, that benefactive, locative and instrumental PPs "do not show anti-reconstruction effects", what means, that "these phrases must be present at D-structure" (ibid., p. 52). As for Chinese benefactive PPs, see a strong crossover case like (i) b. which is analogous to example (i) a given by Speas:
(i) a. *For Mary$_1$'s brother, she$_1$ was given some old clothes.
    b. *Weile Zhang San$_1$ de anquan, ta$_1$ duobi-zai cheng-li.
        for   Zhang San SUFF safty   he hide-in   town-inside
      *'For Zhang San$_1$'s safty, he$_1$ was hiding in the town.'
Concerning the relative position of different adjuncts to each other, see Zhang & Fang (1996).

(88) Zhang San $[_{V'}$ $[_{V'}$ mai-le$_1$ $[_{V'}$ yi-ben shu t_1]]] gei ta]
     Zhang San   buy-ASP   one-CL book   for she
     'Zhang San bought a book for her.'

7.4. Why indirect objects cannot be left-dislocated

Chomsky's (1981: 250) Empty Category Principle reads as follows:

(89) $[_\alpha$ e] must be properly governed.

If the nearly total syntactic immobility of indirect objects is regulated by this principle, then all ECP effects are the result of the internal structure of the V' constituent, which we have worked out in relative detail in this section. Let us revert to our V'-model (74)/(75) introduced in section 7.1:

(74) [SU $[_{V'}$ IO $[_{V'}$ DO V^0]]]

(75) $[_{XP}$ SU$_1$ $[_{V'}$ t$_1$ $[_{V'}$ $[_{V°}$ V^0_2] $[_{V'}$ IO $[_{V'}$ $[_{V°}$ t'$_2$] $[_{V'}$ DO t$_2$]]]]]]

This model implies that government of an internal argument by its lexical head is regressive at the level of D-structure but progressive at S-structure. This implication is consistent with the parameter of directionality, which is valid for government.

It is evident from (74)/(75) that D-structural regressive government is θ-government along the lines of Chomsky (1986b: 15):

(90) α θ-governs β iff α is a zero-level category that θ-marks β, and α, β are sisters.

Note that θ-government only requires SISTERHOOD of a verbal head and the complement that it θ-marks. The relative position of the head and its complement to each other, however, is irrelevant in Chomsky's definition.
    Based on (74)/(75), referential DOs as left sisters of V^0 are θ-governed.

The possibilities of applying the rule Move α to constituents like DO, IO, and SU are subject to the Empty Category Principle (89), which determines that the a trace left behind by any movement operation must be "properly governed".
    Chomsky's (1986b: 17) definition of Proper Government is primarily based on two notions: the notion of θ-Governmment depicted in (90), and the notion of Antecedent-Government[46]:

(91) α properly governs β iff α θ-governs or antecedent-governs β.

Granting (90) and (91) are valid, the verbal head V^0 in (74)/(75) properly governs the DO at the level of D-structure. The IO is, however, "improperly" governed at the level of S-structure merely by being c-commanded by the raised V^0.

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[46] The concept of Antecedent-government goes back to the *[that-t] filter discussed by Chomsky & Lasnik (1977). Chomsky needs Antecedent-government to explain certain subject-object asymmetries with respect to wh-movement out of sentences introduced by the complementizer *that*.

Whereas the DO and the IO are governed by the verbal head V^0, the subject constituent SU in the highest V'-shell is not governed at all. This forces the subject to move to [Spec, IP] in the unmarked case[47]. The trace t_i it leaves behind is antecedent-governed and therefore properly governed by virtue of Chomsky's tenet (91).

To put it briefly: The framework outlined here implies that the traces left behind by direct objects and subjects, but not those of indirect objects, are properly governed.

Based on these principles, it goes without saying that any movement of an indirect object violates the ECP.

Therefore, the ECP predicts that indirect objects in Chinese should not be permitted to be topicalized, passivized, focused in "pseudo-cleft" constructions, or relativized. These predictions are supported by the Chinese data, independent of whether the IO is licensed by a full verb or by the dummy verb *gei*, as illustrated by the following examples:

(92) *Li Si, women yinggai gaosu zhe ge hao xiaoxi. (Topicalization)
     Li Si   we   should   tell   this CL good   news
     lit. 'Li Si (TOPIC), we should tell [him] this good news.'

(93) *Li Si yijing bei wo huan-le zhe ben shu. (Passivization)
     Li Si already by I returned-ASP this CL book
     'Li Si has already been given back this book by me.'

(94) *Liu Gang song-guo xiangce de shi wo. (Pseudo-Clefting)
     Liu Gang give-ASP photo album SUFF FM   I
     lit. 'Who Liu Gang once gave a photo album to was me.'

(95) *Zhang San tou-le shi-kuai qian de Li Si. (Relativization)
     Zhang San steal-ASP ten-Yuan money SUFF Li Si
     'Li Si whom Zhang San has stolen ten Yuan from'

(96) *Li Si, Wang daifu hai mei-you (gei) kan-guo bing. (Topicalization)
     Li Si Wang doctor yet not-have   DV look-ASP at disease
     lit. 'Li Si (TOPIC), doctor Wang was not examining [him].'

(97) *Yisheng (gei) da-le zhen de shi Li Si. (Pseudo-Clefting)
     doctor   DV give-ASP injection SUFF FM Li Si
     'Whom the doctor gave an injection was Li Si.'

In all NP-Shift cases such as (85) and (86) above neither the indirect object nor the direct object can be extracted.

7.5. Counter-examples

Nevertheless, there are two types of apparent counter-examples which we will briefly dwell on in this section.

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[47] If contrastive, the subject ends up in [Spec, Foc2P], [Spec, Top2P], or [Spec, Foc1P], as described in chapter 6.

7.5.1. Can indirect objects be passivized?

The first type of counter-examples, which I owe to Marie-Claude Paris (p. c.), concern the role of the IO in certain passive sentences. The possibility of some IOs being able to be passivized is inexplicable without looking at some peculiarities of the passive construction in Chinese.

7.5.1.1. Some peculiarities of the passive construction in Chinese

Just as in Japanese, Vietnamese, Thai and other Asian languages, in Chinese the passive is used essentially to express an adverse situation, i. e. in so-called "*bei*-sentences" the happening is unfortunate to the patient[48]:

(98) Zhang San bei Li Si shahai-le.
    Zhang San DV Li Si kill-ASP
    'Zhang San was killed by Li Si.'

(99) Zhang San bei Li Si kanjian-le.
    Zhang San DV Li Si see-ASP
    '[Unfortunately], Zhang San was seen by Li Si.'

Recently, under the influence of Western languages, especially English, the use of the passive construction has been widening so that the great majority of native speakers of Chinese are accepting passive sentences without adverse implications such as the following:

(100) Ni de   laixin   yijing bei wo shoudao-le.
     you SUFF incoming letter already DV I receive-ASP
     lit. 'Your letter has already been received by me.'

In our framework, passive sentences like (98) - (100) should have the following abstract S-structure:

(101) $[_{IP} DO_1 [_{V'} bèi [_{V'} SU [V_2 [_{V'} t_1 t_2]]]]]$

More specifically, a sentence like (98) would have the following S-structure:

(98') $[_{IP}$ Zhang San$_1$ $[_{V'}$ bèi $[_{V'}$ Li Si $[$ shahai-le$_2$ $[_{V'}$ t$_1$ t$_2$ $]]]]]$
    Zhang San   DV   Li Si   kill-ASP

As indicated in (98'), after having been syntactically licensed by the verb, the direct object *Zhang San* moves to [Spec, IP]. The D-structural subject argument *Li Si*, however, must be licensed by a dummy verb, prototypically by the dummy verb *bèi*. This element, which came into use at the time of the Han dynasty (206BC - 220 AD)[49], originally had a meaning similar to *'suffer'*, *'sustain'*, or *'endure'*. This meaning, which has been shimmering through until now,

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[48] Cf. Wang Li (1958), Chao Yuen Ren (1968), Li & Thompson (1981), Chu Chauncey Cheng-hsi (1983), Lü Shuxiang (1984), Ohta, Tatsuo (1987), Tsao Feng-Fu (1990), Li, Yen-hui A. (1990), Ren Xiaobo (1991), Liu Shuxin (1993), Chen, Lilly Lee (1994), Xue Fengsheng (Hsueh, Frank S.) (1994), Tsai, Wei-Tien Dylan (1995), Cheng, Lisas Lai-shen (1995), Paris (1996), Shi Dingxu (1997) etc.
[49] Cf. Wang Li (1958: 424).

makes clear why the use of the passive construction was limited to unfortunate happenings for such a long time.

There are several reasons causing me to treat the element *bei* as a dummy verb located within V':

- the verbal origin of *bei* mentioned just now
  There are attempts to treat the element *bei* even in Modern Chinese as a two-place predicate, which takes a Patient as its external argument and a proposition as its complement.[50]

- the position of negations
  Negations, I believe, appear before *bei* and *ba* - outside V', in a functional Position Phrase.[51]

(102) a. Ta [$_{PosP}$ mei [$_{V'}$ ba [$_{V'}$ yifu   nongzang]]].
          he   not   DV   clothes get dirty
          'He hasn't got his clothes dirty.'

   b. *Ta ba   yifu mei nongzang.[52]
        he DV clothes not get dirty

(103) a. Nianqing ren   wangwang [$_{Posp}$ bu [$_{V'}$ bei [$_{V'}$ bieren   zhongshi]]].
         young   people commonly   not   DV   other people take seriously
         'Youngsters are commonly not taken seriously by other people.'

   b. *Nianqing ren   wangwang bei bieren   bu zhongshi.
        young   people commonly DV other people not take seriously

- striking similarities between *bei* and *ba* observed in the relevant literature
  Cf. Chu (1983: 219): Just like for the *ba*-sentence, there are three major syntactic requirements for the *bei*-sentence:
  (i) The Patient must be either definite or specific.
  (ii) The verb must be an action verb, and
  (iii) In many cases, there must be a verbal complement of some form.[53]

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[50] Cf. the discussions regarding this in Cheng (1995) and Tsai (1995). Tsai (1995: 296) argues that in a sentence like
(i) *Li Si bei [Akiu   da-le   san-zhi quanleida]*
     Li Si by Akiu hit-Perf three-CL home run
'Li Si suffered from Akiu's hitting three home runs'.
there is no gap which suggests that the Patient *Li Si* might originate from within the complement of *bei*. That claim is at odds with our analysis based on the assumption that *Li Si* in (i) is base-generated as left sister of the verbal complex, i. e. the verb form *da-le ('hit'-*ASP) + its complement *san-zhi quanleida ('three-CL home run')*.
     As for the bi-clausal analysis proposed here, cf. Li (1990: 158ff.) who tries to prove that a biclausal analysis of *bei*-sentences (a hypothesis advocated as early as by M. Hashimoto (1969), A. Hashimoto (1971) and Chu (1973)) does not hold water.
[51] The same applies to the question operator shi-bu-shi, which may appear direct before *bei* and *ba*.
[52] Merely in some idiomatic phrases is there a possibility that the negation alternatively appears direct before the verb. Cf. Lü Shuxiang (ed.) (1981), p. 51f.
[53] If an object is affected by some happening or effect, then a mere action does not necessarily produce the effect.

(iv) Furthermore, both in *ba*-sentences and in *bei*-sentences, the full verb can be optionally accompanied by an instance of the morpheme *gei*, which I will treat as a semi-prefix of the verb. Compare the following examples:

(104) Ta [$_{V'}$ ba [$_{V'}$ shu   gei-nazou-le].
      he   DV   book PREF-take-away-ASP
      'He has taken away the book.'

(105) Shu$_2$ [$_{V'}$ bei [$_{V'}$ ta [$_{V'}$ gei-nazou-le$_1$ [$_{V'}$ t$_2$ t$_1$]]]]
      book   DV   he   PREF-take-away-ASP
      'The book has been taken away by him.'

In some sense, the syntactic relationship between *ba*-sentences and *bei*-sentences is closer than the analogy between Chinese *bei*-sentences and English passive sentences containing the preposition *by*.[54]

• the status of the Agent-DP following *bei*

In contradistinction to the *by*-phrase in English passive sentences, the *bei*-phrase in Chinese sentences does not function as an adjunct, as observed by Li (1990: 162). Quoting the generalization proposed by Zubizarreta (1985: 256), that "If X is an argument of Z and Y is an adjunct of Z, then X cannot be referentially dependent on Y.", Li compares the following examples:

(106) *His$_i$ mother is loved by John$_i$.

(107) Wode shu bei Zhangsan$_i$ song gei tade$_i$ erzi   le.
       my book by Zhangsan give to his son LE-2
       'My book was given to his son by Zhangsan.'

If the Agent phrase *Zhang San* in (107) were an adjunct like *John* in (106), coreference between *Zhang San* and *tade ('his')* would not be allowed in (107). I infer from this, that the Agent phrase in (107), *Zhang San*, occupies an argument position, namely its base position; in that it is syntactically licensed by the dummy verb *bei*.[55]

• the possibility of replacing *bei* by a verb copy in certain special cases

Xue (1994) notes that in Chinese passive sentences, the *bei*-phrase is not necessarily the Agent, as in (108), and the S-structural subject is not necessarily the Patient, as in (109):

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[54] Li & Thompson (1981: 498ff.) show that English passive sentences often correspond to a Topic-Comment sentence in Chinese or to an "*it*-cleft" sentence, if the focus is on the agent of the transitive action verb.

[55] This analysis is consistent with Rosenbaum's (1970) Minimal Distance Principle (MDP), applied to sentences like the following by Huang (1992):

(i) Lisi bei Zhangsan ku-de [[e] hen shangxin].
    Lisi by Zhangsan cry-DE   very   sad
    'Lisi was made very sad as a result of Zhangsan's crying.'

Within our framework, the Pro-element in the complement of the verb *ku ('cry')* is controlled by the D-structural direct object via its trace left in its base position:

(i') [$_{IP}$ Li Si$_i$ [$_{V'}$ bei [$_{V'}$ Zhang San [$_{V'}$ t$_i$ [$_{V°}$ ku -de [Pro$_i$ hen shangxin]]]]]]
     Li Si   DV   Zhang San   cry-DE   very   sad

(108) Tamen bei lan mi chi bing le.
      they BEI bad rice eat ill PART
      'They spoilt their stomach by eating rice having gone bad.'

(109) Lao Zhang bei dasuan chi-de man zui chou qi.
      Lao Zhang BEI garlic eat-SUFF whole mouth stinking breath
      'Lao Zhang is stinking terribly from his mouth by having eaten garlic.'

In truth, both in (108) and in (109) the DP marked by *bei* is not the Agent but rather the Patient of the verb *chi ('eat')*. Yet, since the result of eating, i. e. *bing ('being ill')* and *man zui chou qi ('stinking terribly from one's mouth')* respectively, is related to the subject but not to the "*bei*-phrase", the element *bei* cannot be replaced by the element *ba*.[56] There is, however, a possibility of replacing the element *bei* by a copy of the verb, as (108') and (109') illustrate:

(108') Tamen chi lan mi chi bing le.
      they DV bad rice eat disease PART

(109') Lao Zhang chi dasuan chi-de man zui chou qi.
      Lao Zhang DV garlic eat-suff whole mouth stinking breath

(108') and (109') prove that the DPs licensed by the verb copy are nothing but a direct object placed in situ. The same holds true for the Patient-DPs in (108) and (109) licensed by *bei*:

(108") [$_{IP}$ Tamen [$_{V'}$ bei/chi [$_{V'}$ lan mi [$_{VC}$ chi bing le]]]]
      they DV bad rice eat disease PART

(109") [$_{IP}$ Lao Zhang [$_{V'}$ bei/chi [$_{V'}$ dasuan [$_{VC}$ chi-de man zui chou qi]]]]
      Lao Zhang DV garlic eat-suff whole mouth stinking breath

The conclusion we can draw once more is that the element *bei* in modern Chinese is a dummy verb.[57]

7.5.1.2. Passivized indirect objects

Based on the ECP and on our assumptions regarding the passive construction in Chinese, it should not be in question that direct objects but by no means indirect objects are permitted to be passivized. For, just as in active sentences, indirect objects are never properly governed. And indeed, the example (93) given above, was ill-formed:

(93) *Li Si yijing bei wo huan-le zhe ben shu.
      Li Si already by I returned-ASP this CL book
      'Li Si has already been given back this book by me.'

---

[56] The result of an action depicted in sentences containing the element *ba* is related to the element licensed by *ba* (see above) but not to the subject of the sentence, as in (104) and (105).
The event depicted by the *ba*-construction must apply to an attained orp result respecting the Patient - see above.

[57] Not only in (108) and (109) but also in (108') and (109') the superficial subject is identical with the D-structural one. Both (108) and (109) are pseudo-passive constructions.

However, in contrast to the ungrammaticality of examples like (93), passivization of indirect objects becomes more or less acceptable if the sentence represents a typical Chinese adversity passive construction, as in the following examples:

(110) [?]Wo bei tamen ti-le   hen duo wenti.
      I   DV they ask-ASP very many question
      'I was asked a lot of [embarrassing] questions by them.'

(111) [?]Ta bei yisheng da-le   yi zhen
      he DV doctor give-ASP one injection
      'He was given an injection by the doctor.'

Clearly, it is the original meaning of the dummy verb *bei* mentioned above that, in (110) and (111), enables the indirect object to violate the ECP. That is to say, what are shimmering through in (110) and (111) are meanings like *'I suffered from the embarrassing questions they asked me.'* in the case of the former and *'I got a painful injection by the doctor.'* in the case of the latter. To put it another way, in that in (110) and (111) the indirect objects are SUFFERING from an event, their thematic roles are re-interpreted pragmatically. This re-interpretation qualifies them for behaving grammatically like a Patient object. It seems that some pragmatic procedures, like the reinterpretation of a θ-role, are able to partially disregard certain grammatical rules.

7.5. 2. Can indirect objects be topicalized?

Tsao (1977: 104: (4); (1990: 56: (75)) provides an example in which an indirect object appears to be topicalized:

(112) Li Si (a),   wo yijing song-le yi-fen li.
      Li Si PART, I already give-ASP a-CL gift
      'Li Si (TOPIC), I have already given [im]a present.'

In fact, this example, which is questioned by some native speakers, does not falsify our claim that indirect topics cannot be topicalized. According to the framework elaborated in section 5, the topic in (112) must base-generated. For, lacking the feature [+contrastive], the topic in (112) cannot come from IP, because a "stop over" in [Spec, Foc2P] would lead to a crash of the derivation. Consequently, (112) has the following S-structure:

(112') [Top2P [DP Li Si]$_1$ [Top2' [Top2° (a)], [IP wo$_2$ yijing [v' t$_2$ [v' Op$_1$ [v' e$_1$ [v' song-le$_3$
        Li Si   PART   I   already   give-ASP
      [v' [DP yi-fen li] t$_3$]]]]]]]]]
           one-CL gift

A sentence like (112) becomes acceptable, because, in corresponding contexts, the indirect object of "Give verbs" like *song ('give')* may be lexically unspecified, as (113) shows:

(113) Zhang San song dongxi, Li Si song qian.
      Zhang San give things Li Si give money
      'Zhang San gives things, [whereas] Li Si gives money.'

If, however, the indirect object is required to appear obligatorily, as in the case of "Verbs of Communication" as *gaosu ('tell')*, then base-generated topics are not allowed:

(114) a. *Zhang San gaosu zui zhongyao de xiaoxi, Li Si gaosu bu zhongyao de xiaoxi.
      Zhang San tell most important SUFF news Li Si tell not important SUFF news

    b. * Li Si , Zhan San yijing gaosu-le zhe ge xiaoxi.
        Li Si Zhang San already tell-ASP respectabe respectabe this CL news

Whereas in (114) a. the IO is incorrectly omitted, (114) b. contains a base-generated topic anaphorically related to the empty IO position.

In short, (112) is no counter-example falsifying our assumption that indirect objects cannot be topicalized.

8. Pseudo-Cleft sentences

8.1. The problem

Beginning in the late sixties, the problem of how to syntactically analyse pseudo-clefts in Western languages has been discussed. Peters and Bach (1968), Akmajian (1970), and others derived English pseudo-clefts from simplex sentences:

(115) What John read was a book about himself. ← John read a book about himself.

Contrary to these pioneers, Higgins (1979) put forward his "null hypothesis". According to this hypothesis there is no transformational derivation of pseudo-clefts. No simple unclefted sentence underlies the pseudo-cleft sentence; rather, the surface structure form of a specificational pseudo-cleft sentence[58] is essentially identical to its deep structure form. In plain English, Higgins regards the pre-copular constituent (the WH-clause) as the subject of pseudo-cleft sentences and the post-copular constituent (the focused phrase) as a predicate nominal.

       Superficially considered, this assumption seems plausible. Nevertheless, in contrast with Higgins, Williams (1983: 428) proved, with the help of various structural tests, that quite the opposite is the case. Thus, he showed, for example, that a raising verb like *seem*, which contains a pseudo-cleft construction as its complement, allows the post-copular but not the pre-copular constituent to move into the subject position of the matrix sentence:

(116) a. It seems that what John is is important to himself.
     b. Important to himself seems to be what John is.
     c. *What John is seems to be important to himself.

---

[58] Pseudo-clefts in Higgin's sense are required to have a specificational reading. That is to say, the free relative clause is not acting like a deitic, i. e. it does not refer to any object. Rather, the relative clause contains a semantic variable, and this variable is specified by the postcopular item. Thus, a sentence like
(i) What we must avoid is the draft.
receives a semantic interpretation as
(ii) [we must avoid x], [x = the draft].
Cf. Higgins (1979: 17), who gleans this example from Akmajian (1970).

On the basis of such facts, Williams concluded that it must be the post-copular constituent that is the D-structural subject in pseudo-cleft sentences. This means that pseudo-clefts on the lines of Williams have the following abstract underlying structure:

(117) $[_{IP}$ [Focused phrase] $[_{VP}$ be [WH-phrase]]]

Williams' assumptions imply that both the copula and the underlyingly post-copular constituent must be raised by S-structure. Whereas the copula moves to a higher head position, the WH-phrase has to be topicalized:

(118) [[WH-phrase$_1$] [be$_2$ $[_{IP}$ [Focused phrase] $[_{VP}$ t$_2$ t$_1$]]]]

Williams' analysis is apparently underpinned by a Japanese example given by Drubig (1991: 118, (249)), in which the sentence-initial "WH-phrase" carries the overt topic marker *wa*:

(249) [Mado a watta no] wa Taro da.
      window   broke NO WA Taro was
    'Who broke the window was Taro.'

Heggie (1988) provides a variant of Williams' proposal by treating the copula *be* as a raising verb selecting a Small Clause. Yet, in accordance with the analysis of Williams, it is the focused phrase that serves as the subject within this SC.

Despite of their differences, the approaches proposed by Higgins, Williams, and Heggie have a biclausal analysis of pseudo-cleft sentences in common. That is, pseudo-clefts are analysed as consisting of a matrix clause (containing the copula) and a WH-clause (which is embedded in the matrix clause).

As for Chinese, such a biclausal analysis is advocated by Hashimoto (1966), Paris (1979), James Huang (1982), and Lu Jianming & Ma Zhen (1985), among others.

Nonetheless, there is a dilemma shared by all biclausal approaches. This is the fact that lexical anaphors and other elements simply ignore the presupposed biclausal structure of pseudo-cleft sentences. Thus, the question arises of how the reflexive pronoun *himself* is "connected" to its antecedent *John* in a pseudo-cleft sentence like (115):

(115') [What John$_1$ read] was [a book about himself$_1$]

In (115"), but not in (115'), the reflexive pronoun *himself* is properly bound in its governing domain by an antecedent that c-commands it:

(115") John$_1$ read a book about himself$_1$.

Thus, in (115'), but not in (115"), Chomsky's Binding Principle A seems to be violated.

Barss (1986) tried to solve the "connectedness problem" in sentences like (115') with the help of the notion of "chain":

(119) [what John saw e] was [NP a picture of himself]
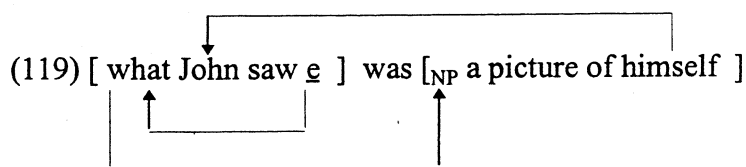
In Barss' (1986: 155) theory, the anaphor *himself* in (119) is indeed not c-commanded by its understood antecedent at SS, but the antecedent does c-command a trace which is anaphorically related to a constituent containing the anaphor. The phrase [a picture of himself] heads an A' chain containing the EC, the chain being [a picture of himself, what, e]. *John* c-commands e , and thus is chain-accessible to the anaphor *himself*, and may therefore antecede it, satisfying the Binding theory.

Chinese pseudo-cleft sentences corresponding to English (115) are easy to form:

(120) [Zhang San suo kan de] shi [NP guanyu ta   ziji   de   shu]
      Zhang San PART read SUFF be   about   he   himself SUFF book
    'What Zhang San reads are books about himself.'

8.2. A monoclausal proposal for Chinese pseudo-cleft sentences

The complexity of describing binding relations within such simple pseudo-cleft sentences as English (115) or Chinese (120) on the lines of a biclausal approach was a strong motive for me to follow Meinunger (1996; 1997), who proposes looking back to the pioneers of pseudo-cleft sentence research, analysing pseudo-clefts as underlyingly monoclausal structures.

Besides the fact that all attempts to solve the connectedness problem in pseudo-cleft sentences have been unsatisfactory up to now, there are still other reasons for preferring a mono-clausal analysis of Chinese pseudo-clefts. Thus, it can be shown, for example, that a biclausal approach to pseudoclefts runs into insurmountable difficulties, if a contrastive negative element appears on the scene, as in (121):

(121) Wo zai shudian   li maidao de bu shi ZHE ben shu, er shi NA ben shu.
    I   in bookshop inside buy Part not COP this CL book but COP that CL book
    'What I bought in the bookshop was not THIS book but THAT book.'

Starting from an biclausal approach, we have to assume that the element *shi* in (121) is a copula carrying the finitesness features of the sentence. Granted this is true, the sentence constituent *wo zai shudian li maidao de ('what I bought in the bookshop')* would be something like a topicalized free relative clause that is generated in the complement position of the copula. In fact, there are at least three serious objections to the resulting representation, which would be similar to (121'):

(121')　　　　*Top1P

[RC wo zai...de]3　　　Top1'
what I bought in...
　　　　　　　bu　　　　　Top1'
　　　　　NEGATION
　　　　　　　　　Top1°　　　Foc1P
　　　　　　　　　shi₂
　　　　　　　　　　　　DP₁　　　　　　　　　　Foc1'
　　　　　　　　　　　　　　　　　　　　　　　　|
　　　　　　　zhe ben shu　　BoolP　　　　　IP
　　　　　　　this CL book　　　　　　　　　　／＼
　　　　　　　　　　　er　?shi　na ben shu　Subj.　VP
　　　　　　　　　　　but　SHI　that CL book　t₁　／＼
　　　　　　　　　　　　　　　　　　　　　　　Copula　RC
　　　　　　　　　　　　　　　　　　　　　　　t₂　　t₃
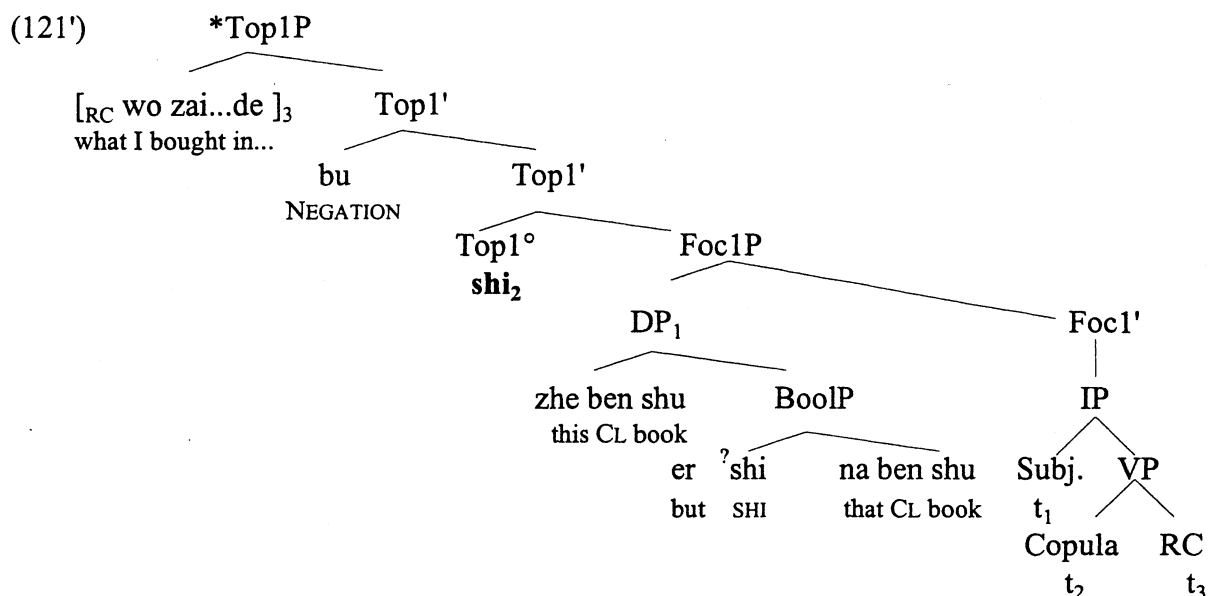
The main objection to (121') is that the contrastive negative element *bu ('not')* takes a wide scope not only over the corrigendum, i. e. the first conjunct of the coordinated DP *zhe ben shu ('this book')*, but also over the corrigens, the conjunct *na ben shu ('that book')* that is to be replaced for the one rejected as wrong. This scope violates the principle that focus operators must have "the most narrow possible scope"[59].

Secondly, there is no appropriate landing site for the copula *shi*, which should be raised by reasons of the superficial constituent order in Chinese pseudo-clefts. The only available head position for *shi* is Top1°. But this landing site does not make sense in terms of specifier-head agreement. The finiteness features carried by the copula are incompatible with topic features such as [-prominent].

Thirdly, the appearance of the second *shi*, the one in the Boolean Phrase, cannot be explained, unless you assume that two complete sentences are conjoined by the connecting element *er ('but')*, with the background constituent of the second conjunct deleted:

(121") Wo zai shudian　li　maidao de　bu　shi ZHE ben shu,
　　　I　in bookshop inside　buy　Part　not　COP this CL book
　　　er　~~wo zai shudian　li　maidao de~~　shi NA ben shu.
　　　but　I　in bookshop inside　buy　SUFF　COP that CL book

But this option does not solve the problem either. Just like the copula *shi* in the first conjunct, the copula *shi* in the second adjunct would occupy the wrong head position.

The situation is totally different, if we use a monoclausal analysis as a basis, supposing that *bu-shi* in (121) is a complex replacive negation. In this case, (120) is derived from a D-structure like (122):

(122) [IP Wo [V' zai shudian li [V' [DP bu-shi　zhe ben shu　er　shi na ben shu]
　　　　I　　in bookshop inside　REPL NEG　this CL book　but FM　that CL book
　　maidao de]]]]
　　buy　SUFF

---

[59] Cf. Krifka (1992), p. 39.

In (122), the object DP, which consists of two DPs conjoined by the connective element *er* *('but')* that serves as the head of a Boolean Phrase, would have the following internal structure:

(123) [$_{DP}$ [$_{DP}$ bu-shi [$_{DP}$ zhe ben shu]] [$_{BP}$ er [$_{DP}$ shi [$_{DP}$ na ben shu]]]]
           REPL NEG   this CL book   but   FM   that CL book

Given (122) and (123), a slightly simplified S-structure of (121) that I suggest is (124):

(124)   Topc1P
                       ╱   ╲
[$_{IP}$ wo zai shudian li maidao$_1$ t$_2$ t$_1$ de]$_3$ Top1'
What I bought in the bookshop   ╱   ╲
                              Top1°   Foc1P
                                       ╱   ╲
                                  DP$_2$ Foc1'
                                 ╱   ╲
                 [bu-shi [zhe ben shu]]   BoolP |
                 [Comp Neg. [this book]] ╱   ╲ |
                                      er   [shi [zhe ben shu]] |
                                      but   [FM [this book]]   IP$_3$
                                                                |
                                                              COPY
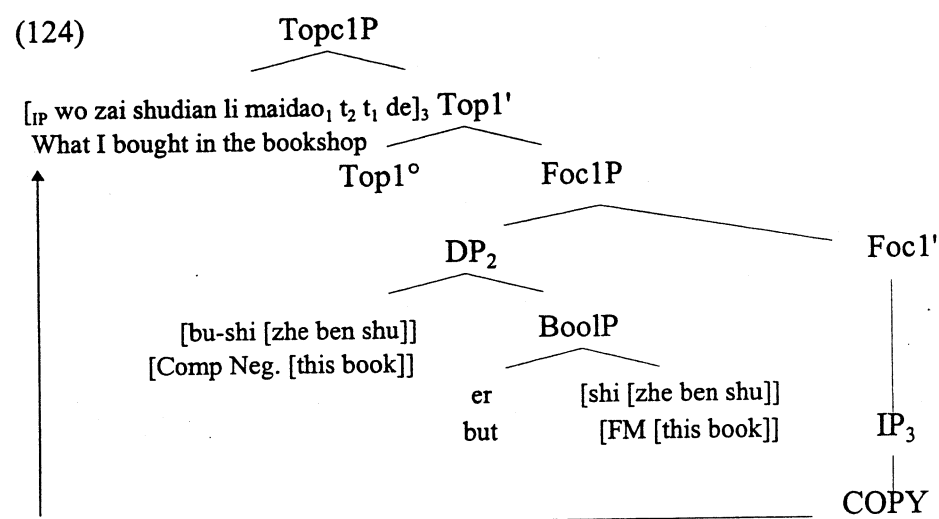
A more detailed structure of IP in (124) is (125):

(125) [$_{IP}$ wo$_4$ [$_{V'}$ zai shudian   li [$_{V'}$ t$_4$ [$_{V'}$ maidao$_1$ [$_{V'}$ t$_2$ t$_1$ de]]]]^{60}
         I   in bookshop inside   buy   SUFF

That is to say that, in our analysis of Chinese pseudo-clefts, the focused constituent moves in [Spec, Foc1P] first. After that, the remaining IP is raised into [Spec, Top1P], leaving a copy (or a trace) in its base position. As a result, Chinese pseudo-cleft sentences consist of a topic and a focus phrase:

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[60] Note that the element *de* in this structure is not a head introducing a free relative clause but a particle within the verbal complex V^0 - cf. above, section 7.

(126)　ST'

```
                ST'
              /     \
          Top1P      ST⁰
         /    \
      Spec    Top1'
       ↑     /     \
      |   Top1⁰     Foc1P
      |          /      \
      |       Spec      Foc1'
      |              /       \
      |          Foc1⁰         IP
      |            ↑         /    \
      |           |       /  [shi [DP]]  \
      |           |      /_____\
      |_____|_____|
```
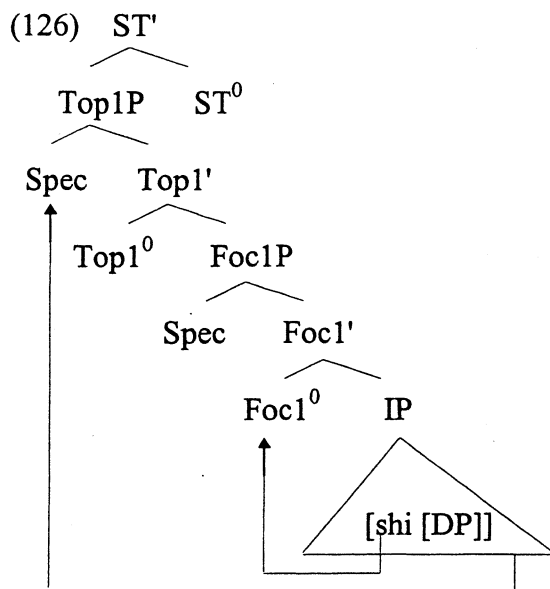
Regarding (121), a monoclausal representation along the lines of (122) through (126) has the following advantages:

First, *bu-shi* as a compound negation has the most narrow possible scope and is restricted to the corrigendum, i. e. the first conjunct of the coordinated DP, *zhe ben shu ('this book')*.

Second, the occurrence of *shi* the in the Boolean Phrase can, in a natural way, be explained as a focus-sensitive particle marking the conjunct *na ben shu ('that book')* which is to be replaced for the one rejected as wrong.

Third, the connectedness problem, described by Higgins (1979)and Barss (1986), disappears because the lexical anaphors are duly bound in their governing category at D-structure.

A general advantage of our approach is that it enables the morpheme *shi* to be uniformly described as a focus marker in "*it*-clefts"[61] and "pseudo-clefts". As the examples (70) and (72) above[62] illustrate, Chinese "*it*-Clefts" differ from English *it*-Clefts in that the focused constituent is not restricted to appearing as the leftmost sentence constituent.

In sum, no clefting takes place in Chinese "cleft" sentences, neither in "*it*-clefts" nor in "pseudo-clefts". To all intents, BOTH sentence types are PSEUDO-clefts in a literal sense.

In (121) above, the direct object was narrowly focused. In the same way, subjects can be focused, as the following example shows:

127) Kan-guo zhe ben shu　de　　shi Zhang San.
　　　read-ASP this CL book SUFF　FM Zhang San
　　　'Who has read this book once, is Zhang San.'

'　Cf. (66) b., (69), (70) and (72) above. In contrast, the morpheme *shi* is a copula in (19) and (23) above.
'　Cf. section 6.3.2.2. above.

(127') [$_{Top1P}$ [$_{IP}$ [$_{Foc2P}$ t'$_2$ [$_{V'}$ t$_2$ [$_{V'}$ kan-guo$_1$ [$_{V'}$ zhe ben shu t$_1$ de]]]]]$_3$ [$_{Foc1P}$ [$_{DP}$ shi [$_{DP}$ Zhang
                            read-ASP   this CL book SUFF   FM   Zhang

San]]$_2$ [$_{IP}$ t$_3$]]]
San

The focused direct object phrase can carry the semantic role of Locative and even that of Instrumental:

(128) Ta zhu de shi Beijing Fandian.
     he stay SUFF FM Beijing hotel
     'Where he has been staying is the Beijing Hotel.'

(129) Women xi   de shi liang shui.
      we   wash SUFF FM cold water
      'What we wash with is cold water.'

Yet, contrary to direct objects and subjects, indirect objects, like that in example (78) in section 7, are not allowed to appear as narrowly focused element in pseudo-clefts, as example (94) in section 7 also illustrates.

9. Summary

1. In this paper, we have developed a model of Chinese Sentence Structure containing obligatory and optional constituents.

      According to this model, the minimal structure of a Chinese sentence, illustrated in (i) below, contains a Sentence Type constituent of the complexity level ST', an Inflection Phrase carrying finiteness features, a Position Phrase in which affirmative and negative elements are located, and a Verb Phrase of the complexity level V':

(i) ST' > IP > PosP > V'

This structure can be enriched by two pragmatically driven topic phrases and two focus phrases:

(ii) ST' > Top1P > Foc1P > Top2P > IP > Foc2P > PosP > V'

That is to say, topic phrases and focus phrases are generated only if "needed".

2. Furthermore, we have developed criteria for a refined differentiation of base-generated and derived topics in a topic-prominent language.

      Base-generated topics are subdivided into scene-setting "Chinese style" topics related to a complete proposition on one hand, and topics anaphorically related to an argument position within IP on the other. The former are located in [Spec, Top1P], i. e. outside the scope of diverse operators which occupy the sentence position [Spec, Foc1P] at S-structure, or at the level of Logical Form. The latter, since they lie inside the scope of those operators, are located in [Spec, Top2P]. Both types of base-generated topics share the features [-prominent, -contrastive].

It has been shown in this paper that there is only one type of derived topics, namely contrastively used topics, which, consequently, are characterized by the features [-prominent, +contrastive].

Base-generated and derived topics share the feature of being " not prominent" in that the focus of the message (phonologically represented by the main stress) does not lie on them. That is to say, [-prominent] is a topic feature.

Only base-generated topics carrying the features [-prominent, -contrastive] are "genuine" topics. Contrastive topics carry mixed features, i. e. the topic feature [-prominent] and the focus feature [+contrastive]. That is the reason why they have been called "topic foci" in the relevant literature. Evidently, the topic feature [-prominent] and the focus feature [+contrastive] do not exclude each other.

Verbal arguments with the features [+prominent, +contrastive] are "genuine" foci.

3. The focus feature [+contrastive] carried by a verbal argument must be checked at S-structure or at LF. Focus-sensitive particles like *shenzhi / lian* and *shi*, if marking a direct object.or a subject, obligatorily trigger overt left-dislocation of the marked constituent.

There are three potential final landing sites for contrastively used direct objects and subjects that are to be left-dislocated: [Spec, Foc2P], [Spec, Top2P], and [Spec, Foc1P]. The actual choice in a given sentence is dependent on the information structuring of the whole sentence.

4. Among the potential landing sites of contrastively used direct objects and subjects, the position [Spec, Foc2P] is the location where the feature [+contrastive] must be checked.

In Weak Crossover cases, this position is obliged to be an intermediate landing site for the left-dislocated verbal argument involved in the configuration. The fact that topics never give rise to WCO effects, is accounted for in this paper as a result of the existence of a Foc2P within IP.

The existence an IP-internal focus phrase Foc2P is further confirmed by its Spec position being able to serve as final landing site in cases in that no weak crossover takes place.

5. Indirect objects are syntactically immovable at S-structure, the IO in certain adversity passive constructions excepted. This phenomenon is attributable to the internal structure of the V' constituent of Chinese sentences: Indirect objects are never θ-governed by V^0 at the level of D-structure. Instead, they are "improperly" governed at S-structure by the full verb·or the dummy verb *gei*. Thus any left-dislocation of an indirect object violates the ECP.

In order to become able to be left-dislocated, the direct object must not only be θ-governed but must also be syntactically licensed by the full verb itself. In other words, direct objects licensed by the dummy verb *ba* are not allowed to be left-dislocated. For this reason, in both of the cases of NP-Shift treated in this paper, neither the indirect object nor the direct object is permitted to be extracted from V'.

6. Within our framework, just as *ba* and *gei*, the element *bei* is treated as a dummy verb syntactically licensing the agent phrase in passive sentences.

This means that all of these elements are neither considered as prepositions nor as functional heads. The treatment of *ba*, *gei* and *bei* as dummy verbs seems justified from a diachronic point of view in that it allows for the verbal source of these elements.

In cases in which the occurrence of a dummy verb licensing the direct object is structurally forced, a copy of the full verb can serve as a dummy verb instead of *ba*.

7. The grammatical approach presented in this paper lays the foundation for syntactically deriving Chinese Pseudo-Clefts from a simplex D-structural source.

As a result, the morpheme *shi* uniformly serves as a focus marker in both "*it*-cleft" and "pseudo-cleft" sentences.

The element *de* in cleft sentences is a (semi-)suffix of the verb, which can be raised together with the stem in "*it*-clefts", as (69), but is always left behind in "pseudo-clefts", as (126). Contrary to *de*, so-called "sentence-*le*" (i. e. *le*-2) is always left behind by the verbal stem (cf. (80), (81)).

Selected abbreviations

ASP, aspect
BoolP, Boolean Phrase
BP, Boolean Phrase
CL, classifier
COP, copula
DV, dummy verb
FM, focus marker
LF, Logical Form
PART, particle
POSP, position phrase
PREF, prefix
REPL NEG, replacive negation
ST, Sentence Type
STP, Sentence Type Phrase
SUFF, suffix

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Features and Movement*

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1. Introduction

Syntactic representations contain features. I will call them syntactic features. A restrictive theory would treat all syntactic features on a par, i.e., the same conditions should apply to all features. In the minimalist framework (cf. Chomsky (1992, 1995)) additional functional structure has to be assumed to guarantee equal treatment for all syntactic features. These additional functional projections are problematic and, in some cases, not very plausible.

In this article, I suggest that the set of syntactic features be split up into two sub-sets: (i) morphosyntactic features and (ii) information-structure features, the pragmatically determined [TOP] and [FOC] features that assign a constituent the discourse function (communicative weight) of topic and focus, respectively. The two kinds of features are similar in that they both contribute to the formation of a clause's surface by allowing, forcing, or excluding overt movement. But whereas – in the course of the derivation – morphosyntactic features are checked, i.e., they need to find appropriate counterparts in some functional projection, information-structure features are not. Thus, morphosyntactic features are basically different from information-structure features.

Morphosyntactic features are doubly represented – they appear on syntactic constituents that correspond to the lexical items entering the derivation as well as on functional heads. An information-structure feature shows up in the syntax only once, *viz.* on the constituent that carries the corresponding communicative weight. Therefore, I claim, we can do without special functional projections like TopP and FocP and, consequently, build the structure of the clause more economically.

The structure of the present paper is as follows: Section 2 contains a brief outline of Checking Theory and the problems resulting from its application. Sections 3 and 4 investigate the various syntactic features, with the main emphasis on information-structure features and the way they are represented in the syntax. I will discuss cases that support my view that checking is not plausible or even excluded for the purposes of information structuring. Section 5 characterizes the possible solution, *viz.* a strict differentiation between morphological and information-structure features. Section 6 concludes the paper.

Russian serves as the main object language although the argumentation is not specifically meant for this particular language.

2. Checking Theory

The following is one version of Checking Theory:

(1) *Checking Theory*

   (i)   A syntactic feature F must be checked in the course of the derivation.

   (ii) Checking operates in special phrases using Spec-Head Agreement (SHAGR) or Head-Head Agreement (HHAGR), respectively.

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(2) illustrates the two configurations for feature checking:

(2)   Checking configurations:

   (a)   SHAGR

```
        XP                    e.g.        AgroP
       /  \                               /   \
     YP     X'                          DP      Agro'
     [F]   /  \                        [+ACC]   /   \
         X⁰     …                             Agro⁰    …
         [F]                                  [+ACC]
```

   (b)   HHAGR

```
        X⁰                    e.g.        Asp⁰
       /  \                               /  \
     Y⁰     X⁰                          V⁰     Asp⁰
     [F]    [F]                        [+pf]   [+pf]
```
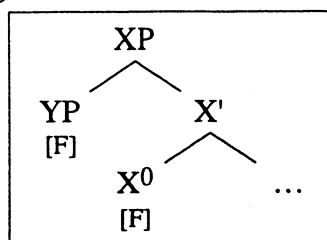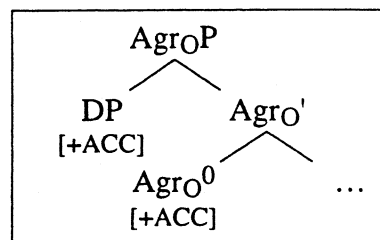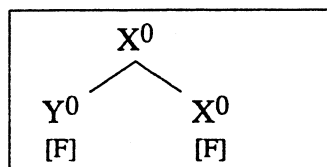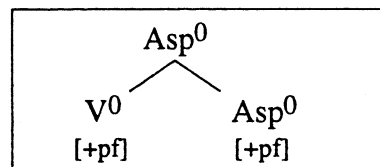
The requirement to check features is the reason why syntactic movement occurs. There is general agreement that features may be strong or weak. The standard assumption is that strong features induce overt movement whereas weak features do not allow constituents to move overtly, giving rise to covert (LF-) movement. This causes the split of syntax into a visible and an invisible part.

Checking Theory is designed to account for two disparate assumptions:

   (i)   Certain properties of syntactic constituents like, e.g., the specifications of gram-
          matical features[1] are represented in the syntax by means of abstract features F that
          are involved in an appropriate feature-checking mechanism. Cf. Junghanns
          (1995).

   (ii)   The surface form of a clause is the result of movement driven by the necessity to
          check strong features overtly. Cf. Pollock (1989), Chomsky (1992).

Assumption (i) has a conceptual motivation – grammatical features need interpreting. At the basis of assumption (ii) lie empirical observations like the movement vs. non-movement facts cited from Pollock (1989). Some strong feature requires the finite verb to move overtly in French. In English, the corresponding feature is weak. Compare (3a, b) and (3c, d).

(3)   (a)   *Jean embrasse$_i$ souvent* t$_i$ *Marie.*   (c)   *   *John kisses$_i$ often* t$_i$ *Mary.*

      (b)   *   *Jean souvent embrasse Marie.*   (d)   *John often kisses Mary.*

The strict application of Checking Theory means that the specific surface order of clausal elements exclusively depends on strong features.

However, this strong assumption turns out to be a Procrustean bed when it comes to ana-lyzing particular language facts. For example, there are attempts to explain the surface posi-tions of Russian finite verbs on the basis of strong and weak features. King (1995) claims that the Russian verb always undergoes overt movement to a functional head and that this movement is triggered by a strong feature. But King's account is inadequate. Sometimes the Russian verb moves, sometimes it does not, as demonstrated in Junghanns & Zybatow (1995) and Bailyn (1995). Compare the relative positions of verb and subject in (4a) and (4b):

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[1]   Cf., for example, tense, mood, and aspect of verbs or person, gender, and number of nouns, among others.

(4) (a) *Prislal*ᵢ *muž* [ᵥ· tᵢ *den'gi*].
        sent husband-NOM money-ACC
        'The husband sent (the) money.'

(b) *Muž srazu že* [ᵥₚ[ᵥ· *prislal den'gi*]].
        husband-NOM immediately sent ptcl money-ACC
        'The husband immediately sent (the) money.'

Therefore, it cannot be that the crucial factor for the surface position of the finite verb in Russian is checking a strong feature to satisfy Checking Theory.[2]

Checking Theory as it stands tries to reduce variation between languages to variation in morphological properties. Hence, it presupposes a conception of morphology covering both morphological features proper and features like, e.g., [FOC] that *prima facie* are of a different nature.

In the face of the various shortcomings of previous attempts to give an explicit description of how the surface of a clause is derived I will have another look at syntactic features.

3. Features in syntactic representations

The features that occur in syntactic representations comprise morphosyntactic features, on the one hand, and information-structure features, on the other hand.

I do not intend to add much to what has been said about morphosyntactic features in the literature. Verbal features like (non-) finiteness, agreement, structural case features and nominal features like agreement and case belong in the realm of morphosyntax.

For each language, consistent specifications of the morphosyntactic features must be established so that applying Checking Theory would yield correct results, i.e. grammatical sentences.

For Russian it has been suggested that the major morphosyntactic features are all weak. Hence, a constituent can stay in situ unless some non-morphological factor forces it to move, cf. Junghanns & Zybatow (1997).

I claim that the non-morphological factors driving overt movement are requirements of information structuring.

4. Information-structure features

I assume two types of information structure to be of primary linguistic relevance: (i) focus-background structure (FBS) and (ii) topic-comment structure (TCS).[3] This allows us to assume features for focus and topic. More specifically, I suggest that the following features underlie the process of information structuring:

(5)   Information-structure features:
     (i)   [FOC] – the feature assigned to a non-contrastively focused constituent;
    (ii) [FOC$_c$] – the feature assigned to a contrastively focused constituent;
   (iii) [TOP] – the topic feature.

---

[2]   Kondrashova (1996) goes so far as to postulate different specifications for the tense feature in the various tenses of Russian – strong [past] and [future] vs. weak [present] – in order to find an explanation for the distribution of the copula, which is overt in the preterite and future and covert or absent in the present. This account is a mere stipulation and descriptively inadequate. Cf. Junghanns (1997a).

[3]   For characterization of the two types see Junghanns (1996) and Junghanns & Zybatow (1997).

Notice that it is not necessary to assume a background and a comment feature in addition to the focus and topic features, since the material functioning as background and comment, respectively, can be established subtractively once the focus and the topic of the clause are given.

The information structure can be read off the distribution and phonological shape of the clausal constituents at the surface.

Russian has the option of re-ordering clausal constituents overtly; obviously in order to satisfy requirements of information structuring (cf. Junghanns (1996)). Can this kind of overt movement be subsumed under Checking Theory? I will try to find an answer to this question in the remainder of section 4.

4.1. Focus features

Drubig (1996) proposes that focus should be licensed as follows:

(6)   Focus Licensing:
        Focus can be licensed through embedding (integration into a wider focus domain) or the creation of an operator-variable structure (long dependency).
        (Drubig (1996); my translation; U.J.)

Adopting these two ways of focus licensing leads to a strange asymmetry in the formal treatment of the syntactic focus feature – a potential domain extension (focus projection) legitimates non-contrastive focus[4], while contrastive focus requires – overt or non-overt – movement of the focused XP to the specifier position of FocP, which results in a SHAGR configuration. The two possiblities are illustrated in (7):

(7)   (a)   Licensing of non-contrastive focus through a potential domain extension:
                ... [... [... $_{[FOC]}$[...] ...]...] ...
        (b)   Licensing of contrastive focus through SHAGR in FocP:
                ... [$_{FocP}$ $_{[FOC]}$$XP_i$ [$_{Foc'}$ $_{[FOC]}$$Foc^0$ [... t_i ...]]] ...

In the case of non-contrastive focus (cf. (7a)), the focus feature need not be checked. However, checking takes place, if there is contrastive focus (cf. (7b)).

But why assume a FocP in the structure of the clause at all, if it applies only to a subset of the focus phenomena?

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[4]   The focus relevant here has been given various names: new-information focus, natural focus, neutral focus, non-contrastive focus. I have chosen the last term for the purposes of the present paper.

4.1.1. Contrastive focus

Many researchers assume a FocP above IP and below C^0. Cf., e.g., Rizzi (1995) and Drubig (1996).

(8)   Clause structure:
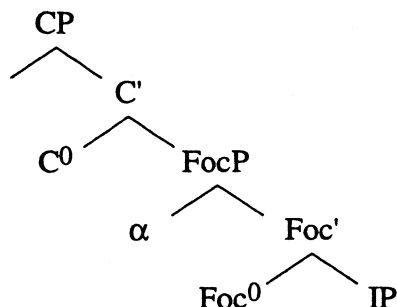
α = derived position of the focused constituent

This clause structure seems to be appropriate for languages with overt focus movement (e.g., Hungarian), where the focused constituent can or must appear in a particular structural position at the surface.

In Russian, contrastive focus has an unambiguous phonological encoding so that the focused constituent is not confined to a special position.[5] The opposite is the case – contrastive focus can affect a constituent either in situ or after movement (possibly also triggered by discourse considerations).

(9)   Realizing contrastive focus in Russian:[6]

Anton kupil knigu.
Anton-NOM bought book-ACC

   (a)   *Anton kupil* [FOCc][DP *KNIgu*].

   (b)   *Anton* [FOCc][DP *KNIgu*]ᵢ *kupil* tᵢ.

   (c)   [FOCc][DP *KNIgu*]ᵢ *Anton kupil* tᵢ.

      'It was a book that Anton bought.'

Such positional freedom can hardly be reconciled with the necessity to check a focus feature in a special phrase. The only way out would be to assume that overt checking of [Focc] is optional in Russian. But then we might just as well abandon FocP.

Since contrastive focus is unambiguously encoded in Russian, the corresponding constituent is free to appear anywhere in the sentence. It need not move to a special position.

4.1.2. Non-contrastive focus

Non-contrastive focus in Russian also has a phonological reflex that one can assume is the phonological consequence of the placement of a syntactic focus feature. The phonological reflex is a falling accent on the syllable carrying the main stress of the sentence. The non-contrastive focus accent differs from the contrastive one, the latter starting off higher so that

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[5]   King's (1995) claim that a contrastively focused constituent must move to a preverbal position is empirically wrong.

[6]   The syllable realizing the contrastive accent is marked by underlined capital letters.

its range is wider. So, it is easy to perceive a non-contrastive accent. It corresponds to a drop of the fundamental frequency (F0), as shown in diagrams (10) and (11a, b).

In a categorial sentence[7] of Russian, we find the focus exponent at the right periphery of the clause. A thetic sentence allows both a pre- and a postverbal position of the prosodically prominent subject.[8]

(10)   F0 contour of a categorical sentence/Russian:[9, 10]

   Zavxoz zavëz zaKAZ.

   manager-NOM brought order-ACC 'The manager brought the order.'
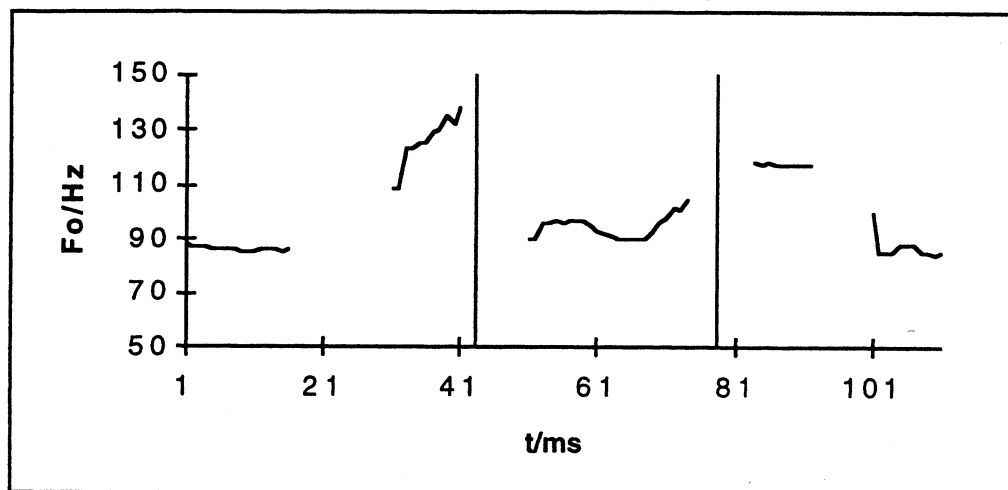
(11) F0 contours of thetic sentences/Russian:

   (a)   Postverbal subject:

   Utonula staRUxa.

   drowned old-woman-NOM 'An/the old woman drowned.'

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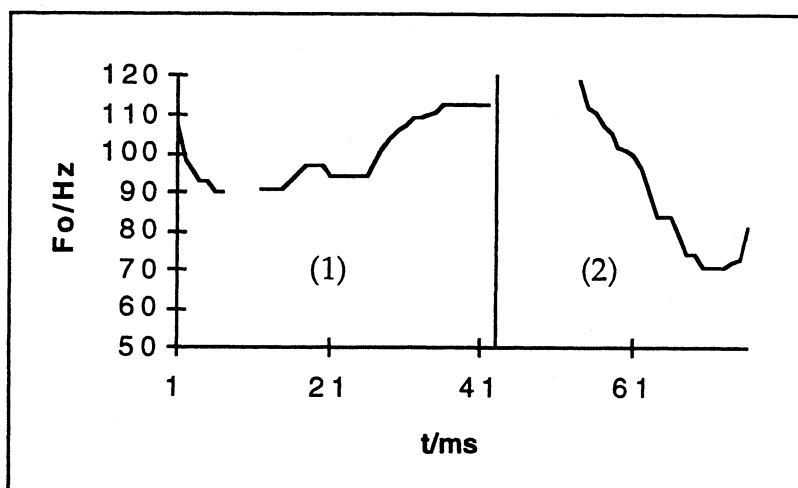
[7]   For the distinction between categorical and thetic sentences see Sasse (1987) and Junghanns (in prep.).

[8]   For the nature of this variation see Junghanns & Zybatow (1997).

[9]   I am indebted to Ljubov' Vladimirovna Zlatoustova (Moscow State Universiy Moscow) for the recordings and to Kai Alter (Research Institute for Artificial Intelligence, Vienna/Max Planck Institute of Cognitive Neuroscience, Leipzig) for the digitalization and the graphics..

[10]   The syllable realizing the non-contrastive accent is indicated by non-underlined capital letters.

(b)   Preverbal subject:

   StaRUxa utonula.

   old-woman-NOM drowned; same gloss
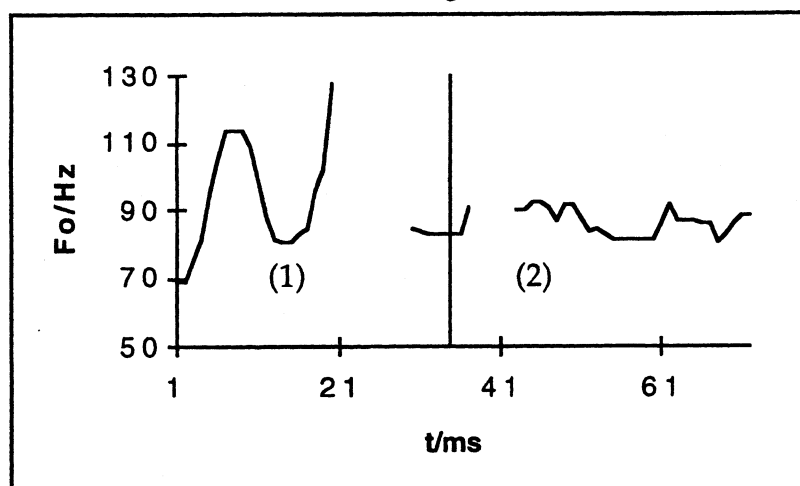
If there is a syntactic focus feature in the case of non-contrastive focus too, the question is why it should be exempt from checking (cf. (7a)). The answer is quite simple: There are cases where checking would be technically impossible.

One reading of sentences that display a potential focus ambiguity – see examples (12) (a)-(c) – corresponds to the CP's being assigned the syntactic focus feature (maximal focus). Movement of the CP to SpecFocP is trivially excluded – cf. the structure in (8).

(12)   Focus ambiguity in Russian:

   Anton pišet pis'MO. Anton-NOM writes letter-ACC 'Anton is writing a letter.'

   • minimal non-contrastive focus (non-contrastive focus on the object), as in (a);

   • intermediary non-contrastive focus (VP focus), as in (b);

   • maximal non-contrastive focus (CP focus), as in (c)

(a)   *Čto Anton pišet? — Anton pišet* [FOC][DP *pis'MO*].
   'What is Anton writing?' — 'Anton is writing a letter.'

(b)   *Čto Anton delaet? — Anton* [FOC][VP *pišet pis'MO*].
   'What is Anton doing?' — 'Anton is writing a letter.'

(c)   *V čem delo? —* [FOC][CP *Anton pišet pis'MO*].
   'What is the matter?' — 'Anton is writing a letter.'

Note that even if we abolish the necessity that every syntactic focus feature undergoes checking, problems will remain. Russian has the option of rightward movement for constituents to receive minimal non-contrastive focus.[11] If, for example, some constituent moves to the right periphery, then a domain extension as required by (7a) is not possible:

---

[11]   Rightward movement occurs if this is the most economic way of realizing non-contrastive focus. Cf. Junghanns (1996).

(13) [TOP][DP *Ženščina*]ᵢ [VP tᵢ *podarila* tⱼ *jabloko*] [FOC][DP *MAL'čiku*]ⱼ.
      woman-NOM gave apple-ACC boy-DAT
      'The woman gave the apple to a boy.'

Both ways of focus licensing meet with difficulties. Therefore, I suggest that the syntactic feature of non-contrastive focus is best treated as one that is freely assigned to the relevant constituent. This feature – similar to the contrastive-focus feature – is not subject to checking.

Sometimes it is necessary to re-order items in the Russian clause in order for non-contrastive focus to be realized in the canonical right-peripheral surface position. Either the constituent to be focused moves to the right – cf. ex. (13), or material not belonging in the focus domain undergoes leftward movement – cf. ex. (21b). However, this kind of movement is different from the one that results in checking configurations.

I conclude the discussion of the syntactic focus features by stating that there is no reason to assume a FocP in the Russian clause. It turns out that [FOC] and [FOCc] are different from the morphosyntactic features.

4.2. Topic features

A TopP and/or a [TOP] feature have been suggested for the description of quite a number of languages. Müller/Sternefeld (1993) and Müller (1993) posit a TopP in the structure of the German clause. Wilder (1995) uses a strong [TOP] feature to explain overt XP-movement in German leading to V/2-clauses.[12] Rizzi (1995) assumes that a TopP, or even TopPs, can be found in the clause structure universally. This, then, would be the prerequisite for checking the [TOP] feature.

What do we need for the description of topics in Russian?

4.2.1. The internal topic

Example (14) contains a clause-internal topic. It gets its case and theta role from the verb.

(14) [TOP][DP *Jabloko*]ᵢ [AgrSP *ženščina podarila MAL'čiku* tᵢ].
      apple-ACC woman-NOM gave boy-DAT
      'The woman gave the apple (= topic) to a boy.'

The Russian clause could contain a TopP between C^0 and IP (= AgrsP) where the [TOP] feature would be checked.

---

[12] Notice that the term "topicalization" introduced for the description of XP-preposing in a language like German differs from what I call topicaliziation. In the former case, any constituent preceding the finite verb in a German V/2-clause as a result of what is called topicalization movement is considered a topic. It should be emphasized that this is a topic in a special, technical, sense only. In the theory of information structure, not all clause-initial constituents qualify as topics. See Zybatow & Junghanns (in prep.) for more details.

(15)

```
            CP
          /    \
        C⁰      TopP
       [-wh]   /    \
            XPᵢ      Top'
           [TOP]    /    \
                 Top⁰      AgrₛP
                [TOP]     /‾‾‾\
                        ... tᵢ ...
```
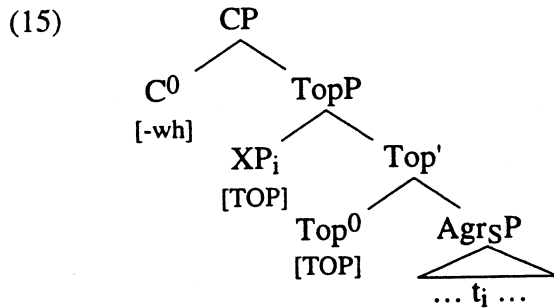
I will now argue why this is not the right approach to topic, as we have seen it isn't for focus either.

Russian realizes topics which cannot be made compatible with a TopP without recourse to artificial solutions – external topics and abstract topics.

4.2.2. The external topic

In Standard Russian, a nominative DP can appear in clause-initial position. This is an external topic if the DP and the rest of the clause are separated prosodically. Also, as a rule, the clause contains a resumptive pronoun. This coreferential element may be an argument or adjunct and has the corresponding morphosyntactic shape. The clause-initial DP has received an analysis as base-generated adjunct to CP.[13]

(16) External topic:

   Èta sobačka, my ee vzjali nedavno.   (Zemskaja (1973, 243))
   this-NOM dog-NOM, we-NOM took she-ACC recently
   'This dog, we got her recently.'

```
              CP
            /    \
      DP [TOP]    CP
      Èta sobačka /‾‾‾‾\
              my ee vzjali nedavno
```
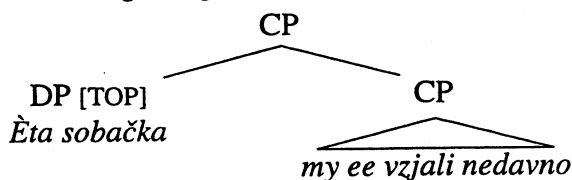
The DP cannot check its [TOP] feature in a higher phrase because there is none. If checking is impossible for an external topic it should be unnecessary for an internal topic too.

(17) illustrates the analysis for clause-internal topics that I claim is the correct one:

(17) Internal topic:

```
              CP
            /    \
        C⁰       AgrₛP
       [-wh]    /    \
            XPᵢ [TOP]  AgrₛP
              |        /‾‾‾\
           [[XP ...]ᵢ  [AgrₛP ... tᵢ ... ]]
            [TOP]
```

---
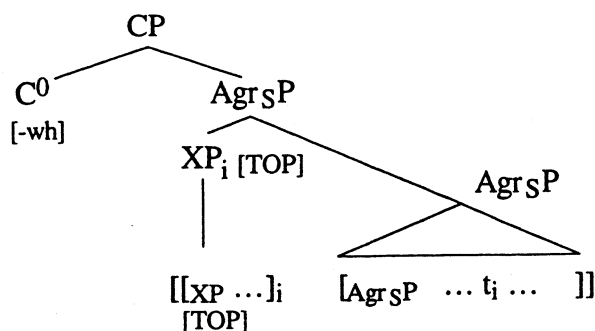
13   Cf. King (1995), Bailyn (1995), Junghanns (1997b), Zybatow & Junghanns (in prep.).

Unlike in (15), the structure does not contain a TopP. The constituent that is chosen as topic receives the syntactic [TOP] feature and must adjoin to Agr$_S$P in overt syntax.[14] Cf. Zybatow & Junghanns (in prep.).

4.2.3. Abstract topics

In Russian, the finite verb usually stays in situ (see section 3). However, one can observe a particular kind of clauses with obvious verb movement. These are maximally focused clauses used in special narrative/descriptive contexts.

In order to explain overt raising by the verb, I make the assumption that, in these cases, it is the functional head T(ense) in the verb's extended projection that receives the [TOP] feature, which results in an abstract topic, cf. Zybatow & Junghanns (in prep.). The abstract topic induces a search for a starting point of the sentence. Potential candidates include the time and place of the situation described by the verb. Overt raising of the verb to the T(ense) head marks the abstract topic.

Abstract topics occur in thetic and in categorical sentences, examples in (18) and (19), respectively.

---

[14]   The topic-comment structure (TCS) presupposed here allows only one internal topic. It serves as the starting point so that a clause having a TCS renders an aboutness relation. In this sense, a topic must be a referring expression or at least allow one to infer such an expression.

King (1995) claims that Russian has multiple internal topics:

(i)   [*Staruju lodku*] [*my*] *prodali*.   (King (1995, 107))
       old boat we sold
       'We-TOP sold the old boat-TOP.'

King describes topicalization in Russian as recursive adjunction to IP. However, only the hierarchically highest constituent can have the discourse function of topic. Movement by other constituents may be analyzed as movement to background positions below the internal topic, possibly including further adjunction to IP (= Agr$_S$P). This is just preposing, not topicalization in the sense assumed here.

(18) Abstract topic/thetic sentence/unergative verb

(a) *Zagremeli CEpi.*
started-rattling chains-NOM 'Chains started to rattle.'

(b)

```
          CP [FOC]
         /    \
       C⁰     AgrsP
      [-wh]   /   \
           Spec   Agrs'
                 /    \
             Agrs⁰    TP
              [pl]   /   \
                   T⁰ᵢ    AgroP
                  /  \    /    \
               V⁰ᵢ   T⁰ Agro⁰  AspP
                |   [+fin] [-Acc]  /  \
            zagremeli [+pret] Asp⁰  VP
                     [TOP]  [+pf]  /  \
                                 DP   tᵢ
                                 /\
                               CEpi
```
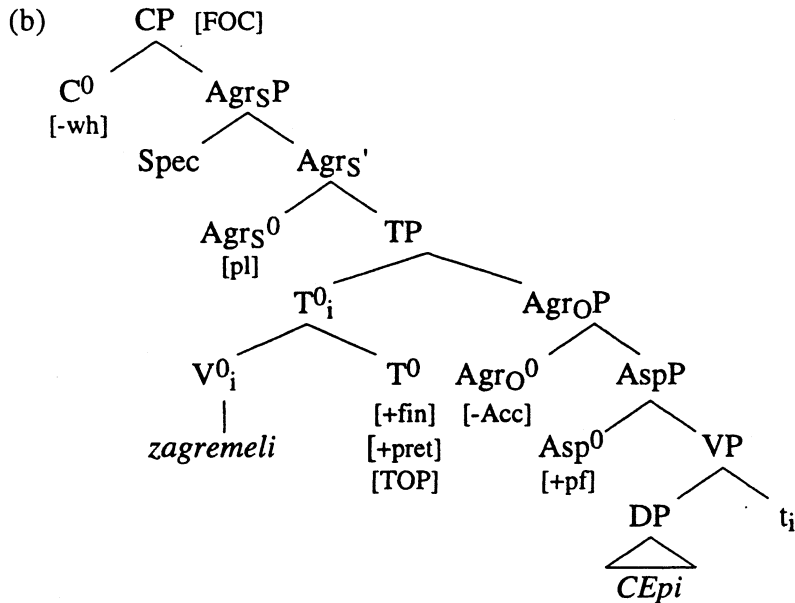
(19) Abstract topic/categorical sentence/transitive verb

(a) *Uvidela devočka VOLka.*
saw girl-NOM wolf-ACC '(And then,) the girl saw the/a wolf.'

(b)

```
          CP [FOC]
         /    \
       C⁰     AgrsP
      [-wh]   /   \
           Spec   AgrS'
                 /    \
             Agrs⁰    TP
              [sg]   /   \
              [fem] T⁰ᵢ   AgroP
                   /  \   /    \
                V⁰ᵢ   T⁰ Agro⁰  AspP
                 |  [+fin] [+Acc] /  \
             uvidela [+pret] Asp⁰  VP
                    [TOP]  [+pf]  /  \
                               DP    V'
                               /\   /  \
                          devočka tᵢ   DP
                                       /\
                                     VOLka
```
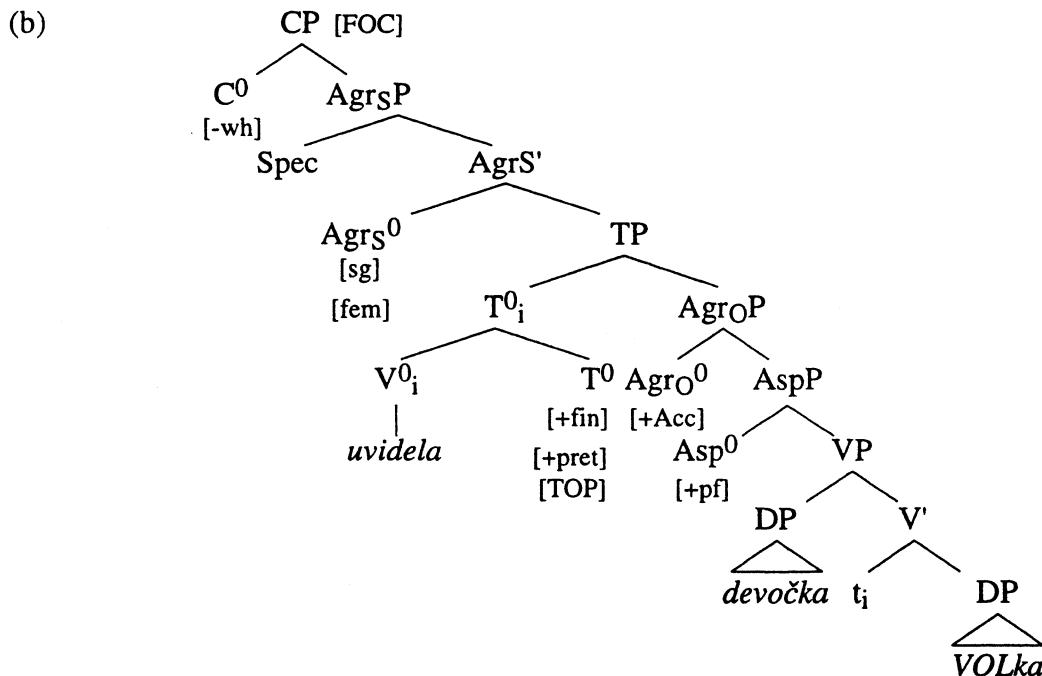
It is unclear why the complex [T₀ V⁰ T⁰] should undergo further movement to a topic head, which would have to be posited in the structure. For a correct interpretation of clauses that have a TCS, Russian requires either the appearance of a concrete topical XP in clause-initial position or overt verb raising to T marking an abstract topic, and nothing else.

The analysis of abstract topics also shows that we do not need a TopP.

5. The solution

If not all syntactic features can be checked and if the non-checkable features are of a particular kind, then the solution is obvious. We have to split up the set of syntactic features into subsets. This is what I propose.

The set of syntactic features comprises two subsets: (i) morphosyntactic features and (ii) information-structure features. The two subsets must be clearly distinguished.

Morphosyntactic features correspond to grammatical properties of the lexical items involved in the syntactic derivations. They conform to Checking Theory. A strong feature induces overt movement, a weak feature does not. Nevertheless, an item with a weak morphosyntactic feature may move overtly, for either of two reasons: (i) another strong feature of this item is checked in the same position that the weak feature is checked or a higher one; (ii) the necessity to fulfill a particular discourse function.

Information-structure features enter syntax by virtue of the communicative weight which the constituents are intended to carry. Therefore, these features are pragmatically determined. They are freely assigned to the corresponding constituents and need not be checked. Movement can, but need not, occur with information-structure features. An internal topic usually moves to the topic position – ex. (14). The external topic stays in situ – ex. (16). Focus can be realized in situ or after movement. See examples (9a-c), (12a-c), (13). Background material undergoes leftward movement so as not to interfere with canonical non-contrastive focusing at the right periphery of the clause (see example (21b)).

The assignment of information-structure features determines both the phonology (place and shape of accents) and interpretation (determining discourse functions) of the clause.

Ill-formed structures are the result of incorrect placement of information-structure features and/or the absence of the structural preconditions for the correct interpretation of topic and focus.

Notice that I do not posit an additional level of Information Structure in the model of grammar. The structuring of information uses configurations of overt syntax. Movement for purposes of feature checking and information-structure movement go hand in hand in shaping the surface form of a clause.

Checking movement and information-structure movement can override each other's requirements, which indicates that they are, in fact, distinct phenomena. Checking movement can blur the clause's information structure. Information-structure movement can force a weak morphosyntactic feature to be checked early. Both cases are illustrated below.

(20)   context: a conversation between two members of the university choir before a rehearsal
       A: *Die Chorprobe findet in Hörsaal 17 statt.*
          'The rehearsal will be in room 17.'
       B: *Wieso? Wir proben doch immer in Hörsaal 13.*
          'Why? We usually rehearse in room 13.'
       A: *Ja schon. Aber der ist heute belegt.*
          'Well, yes. But it is occupied today.'

(a)   *Wir haben eine Mitteilung bekommen, daß heute in Hörsaal 13 eine amerikanische Linguistin einen Vortrag hält.*
       'We were told that today an American linguist would give a talk in room 13.'

(b)   *Wir haben von der Raumplanung eine entsprechende Mitteilung bekommen. Heute hält in Hörsaal 13 eine amerikanische Linguistin einen Vortrag.*
       'That's what we've been told by scheduling. Today an American linguist will give a talk in room 13.'

CP
Spec   C'
C⁰   ...
VP
Adv   VP
PP   VP [FOC]
P⁰   DP   DP   V'
DP   V⁰

(a)   *daß*   heute   *in Hörsaal 13* [VP *e. a. L.*   *einen VORtrag*   *hält*]FOC

(b) *Heute*   *hält*   t   *in Hörsaal 13* [VP *e. a. L.*   *einen VORtrag*   t]FOC
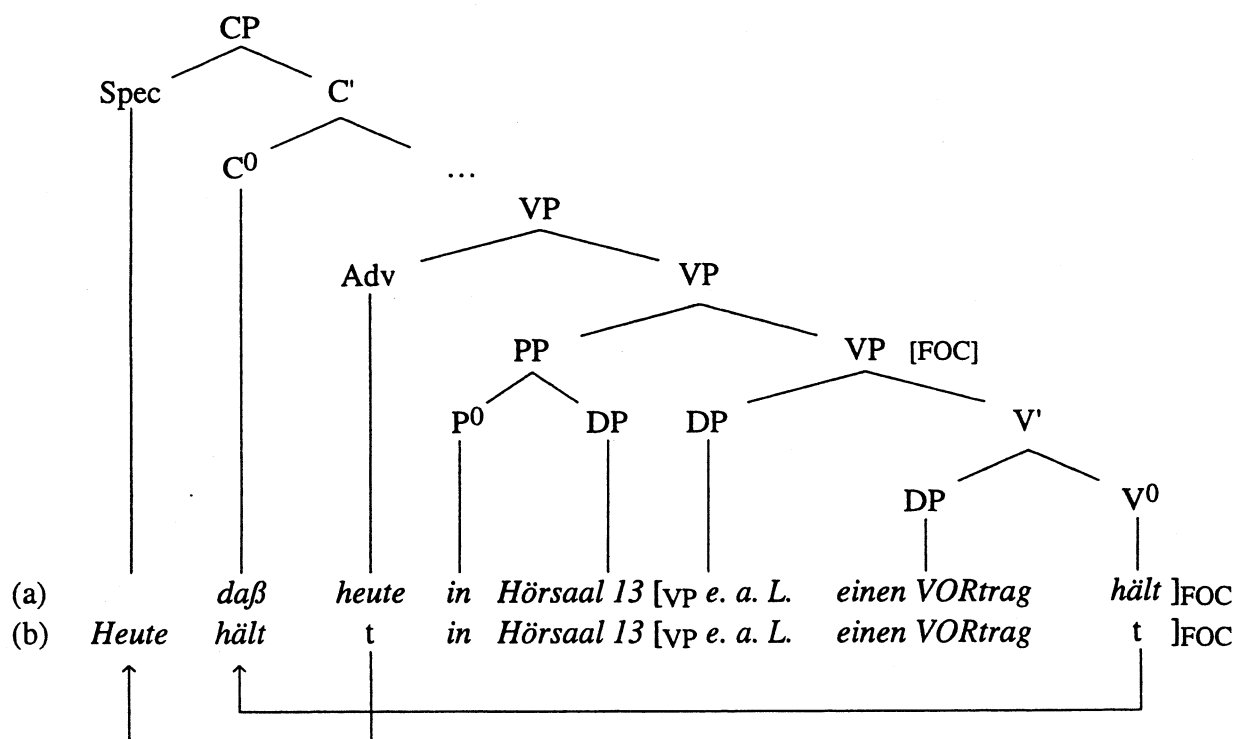
In the relevant part of the German dialogue in (20) speaker A can utter either a complex sentence containing a subordinate clause or a non-embedded sentence. The focus intended is the same in both cases, VP focus, although the finite verb is inside the focus domain only in the case of the V-final subordinate clause. If the speaker chooses to utter a main clause, the verb undergoes overt raising in order to satisfy the V/2-requirement. Thus, a purely grammatical requirement interferes with the clause's information structure. Some kind of reconstruction has to be assumed. Steube (1997) proposes to use indices that show whether a trace is focus-relevant or not. In the main-clause case, the trace of the finite verb would carry the index [+FOC], which lets the verb count for focusing just as if it had not moved.

In the Slavic languages, the direct object and the subject need not move overtly to check their morphosyntactic features. However, their discourse functions can force early checking. A direct object belonging to the background moves to its checking position overtly. The surface subject leaves its base-position and moves through its checking position if it is made the topic of the clause.

(21) (a) *Ženščina podarila mal'čiku JAbloko.*   Russian/neutral word order
woman-NOM gave boy-DAT apple-ACC
'A woman gave a boy an apple.'

(b) context:
Komu ženščina podarila jabloko? 'To whom did the woman give the apple?'

[TOP][DP *Ženščina*]i [AgrOP [DP *jabloko*]j ... ti *podarila* [FOC][DP *MAL'čiku*] tj].
woman-NOM apple-ACC gave boy-DAT
'The woman gave the apple to a boy.'

22) (a) *Včera přijeli HOsté.*   Czech/unaccusative verb/neutral word order
yesterday arrived guests-NOM
'Yesterday, guests arrived.'

(b) context:
Kdy přijeli hosté?
when arrived guests
'When did the guests arrive?'

[TOP][DP *Hosté*]ᵢ [AgrSP tᵢ' ... [VP *přijeli* tᵢ] [FOC][*VČEra*]].

guests-NOM arrived yesterday
'The guests arrived yesterday.'

6. Conclusion

In this paper I have argued that morphosyntactic and information-structure features should be strictly distinguished. The former, but not the latter, are subject to the requirements of Checking Theory. This makes it possible to do without phrases such as TopP and FocP in a language like, e.g., Russian. It may well be that other languages – especially those that are said to be topic-prominent or have overt focus movement – do have a TopP and/or FocP without movement into these phrases necessarily constituting instances that fall under Checking Theory.

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A monoclausal approach to cleft and pseudo-cleft sentences

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1. Introduction

Cleft constructions are linguistic structures which serve to encode special discourse theoretic devices. One distinguishes between (true) cleft sentences - also called it-clefts - on the one hand, and pseudo-clefts or wh-clefts on the other. In English and many other languages it-clefts have the structure ... it (expletive) + copula + focused constituent + relative clause (1). Pseudo-clefts have the form: ... (a so-called) free relative clause + copula + focused constituent (2).

(1)   It was Peter {who / that / Ø} Mary invited.
(2)   What I read was a book.

As is obvious from the structural characterizations, in both types a focused constituent is involved. It will be one aim of this paper to argue that the focused constituent occupies the same position in both cleft types. Furthermore I will propose that both types of sentences are in a certain sense monosentential, i.e. although there are two finite, tensed verbs (a full verb in the wh-clause and a copula in what seems to be the matrix clause) both cleft types are an instance of the extended projection of only one verb, namely the full verb contained within the wh-clause. The surface form of the respective cleft is achieved by overt movement operations which are triggered by the discourse theoretic status of the involved constituents (focus movement and topicalization).

2. Arguments for a monoclausal analysis

The idea that pseudo-cleft sentences with the so-called specificational reading[1] are derived from simplex sentences is by no means new. It is even the first analysis that was given to these sentences before Higgins (1973) tried to show that such sentences are copula sentences in the first place. All the wh-cleft pioneers (Peters and Bach 1968, Ross 1973), and especially Akmajian (1970), argued for approaches that derived pseudo-clefts from the corresponding simplex sentences by the prevailing transformations of their time. A reason for their analysis was the phenomenon which is called connectedness. Pseudo-cleft sentences display binding effects which cannot be explained on the basis of their surface syntax:

---

[1] Henceforth I will use the term 'wh-cleft' or 'pseudo-cleft' unambiguously, i.e. I will always refer to pseudoclefts under their specificational reading if not indicated otherwise.

(3) a. What Mary saw was a picture of herself in the mirror.
    b. What John is is important to himself.
    c. *What he$_i$ claimed was that John$_i$ is innocent.
    d. What he refused was ever talk to her again.

In 3a. and 3b. we have anaphora which are not c-commanded by an appropriate antecedent as required by principle A of the binding theory. A naive tree over 3c. cannot explain the ungrammaticality. The pronoun does not c-command the R-expression, hence the latter is free and the sentence should have the grammaticality status of an ordinary sentence containing a cataphoric pronoun. Similarly in 3d: there is no c-commanding licenser for the polarity item *ever*.

All these mysteries could be explained if the underlying structure of these pseudo-clefts are unclefted simplex sentences:

(4) a. Mary saw a picture of herself.
    b. *John is important to himself.*
    c. *He$_i$ claimed that John$_i$ was innocent.
    d. He refused to ever talk to her again.

Solely to explain these facts, it is highly desirable to propose an analysis which links wh-clefts to simplex structures at some level of representation.

Another unexplained phenomenon is the following: for a specificational interpretation to emerge, the tense of the copula and the tense of the full verb inside the wh-clause must be identical (called Tense Harmony, also Higgins (1973)).

(5)   What John read was a book about syntax.
(6)   What John read is a book about syntax.
(7)   What John$_i$ is was important to ^{ok}him$_i$ / *himself.

While (5) is ambiguous between the predicational and the specificational reading, in the case of a tense mismatch as in (6), the specificational reading is lost. This pattern is confirmed by the licensing of anaphora in (7). Thus, in specificational pseudo-clefts the tense of the embedded sentence seems to determine the temporal interpretation of the whole construction. If this were so, tense harmony would be a grammatically unexpected phenomenon. Normally relative clauses are known to be temporally independent constructions. In some sense the phenomenon of Tense Harmony must be considered as a violation of Ross' influencer constraint (1973) forbidding such a 'scope perlocation'.

Additionally, apart from temporal setting any other functional information for the interpretation of the whole complex structure comes from inside the apparent wh-clause as well. A specificational reading can only arise if the modal or emphatic information is syntactically integrated into the dependent wh-clause although its scope stretches over the whole construction. (Coreference with the pronoun indicates predicative reading, coreference with the anaphora triggers the specificational reading). Examples from Drubig (1996, p. 125/126)

(8)

What John$_i$ is $\left\{\begin{array}{l}\text{is not} \\ \text{is probably} \\ \text{may be} \\ \text{IS}\end{array}\right\}$ important to   him$_i$

    *himself$_i$

(9)

What John$_i$ $\left\{\begin{array}{l}\text{is not} \\ \text{probably is} \\ \text{may be} \\ \text{IS}\end{array}\right\}$ is important to ^{ok}himself$_i$
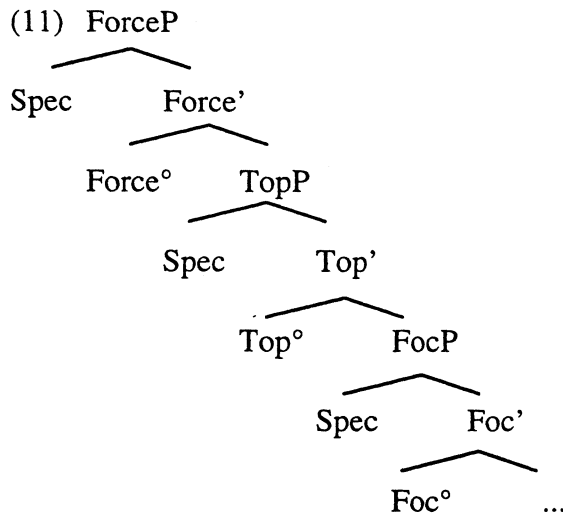

Thus we see that a specificational reading can only be obtained if the modification of the proposition takes place in the apparent subordinate clause. Once more it seems as if the base structure for the examples in (9) could be derived from the corresponding simplex structures in (10) where the respective operators have more or less their correct scope (c-commanding the predicate):

(10)   John$_i$ {is not / is probably / may be / IS} important to himself$_i$

Considering these facts I will assume - as large part of linguists do - that clefts - although apparently complex - display a lot of coherency effects, i.e. behave as if they were the extended projection of one single full verb. I am now going to present an analysis of the syntax of clefts.

3. Assumptions about the structure

In his analyses of the left periphery of the sentence Rizzi (e.g. 1995) shows that the CP layer should undergo the same fate as the two other verbal layers VP and IP, i.e. he proposes that also the CP level is actually a clause area which is more fine-grained and consists of a number of several functional projections. The CP skeleton he proposes looks as in (11)

(11) ForceP

```
        ForceP
       /\
   Spec   Force'
          /\
      Force°   TopP
              /\
          Spec   Top'
                 /\
             Top°   FocP
                    /\
                Spec   Foc'
                       /\
                   Foc°    ...
```

The reasons for Rizzi to come up with such a splitting are classical. They are based especially on word order, i.e. on the (relative) linearization of items and constituents. Less attention is spent on the semantic site. To some extent my proposal is based on Rizzi's syntactic reflections. However, in some respects I will diverge from him. What is carried over to my analysis is the [Top Top [Foc Foc ...]] part. In contrast to Rizzi I will assume that under these shells we find some traditional CP layer. I do not want to label it. What is important for me is that there we find complementizer elements like *that*.

3.1. The structure of it-clefts

As for it-clefts, the proposed derivation can be illustrated as follows. The sentence starts with the simple form.

(12)   Mary loves John$_F$.

If focus movement is overt, *John* is moved to [Spec,Foc].

(13)   John$_F$, Mary loves.

Another possibility is to derive the unambiguous it-cleft 'It is John that Mary loves'[2]. My proposal is encoded in the tree in (14).

---

[2] I am aware of the fact that despite similarities there are important (syntactic and) semantic differences between ordinary focus preposing structures as in (13) and it-clefts as in (14). For a detailed comparison see Kiss (1996).

(14)

```
                TopP
              /     \
          Spec      Top'
                   /    \
                Top°     FocP
                        /    \
                     Spec    Foc'
                            /    \
                         Foc°     CP
                                 /   \
                             Spec     C'
                                    /    \
                                  C°      IP
                                         / \
                                        /   \
                                       /     \
                                      /_____\

     It    is   John_i        that      Mary loves t_i
```
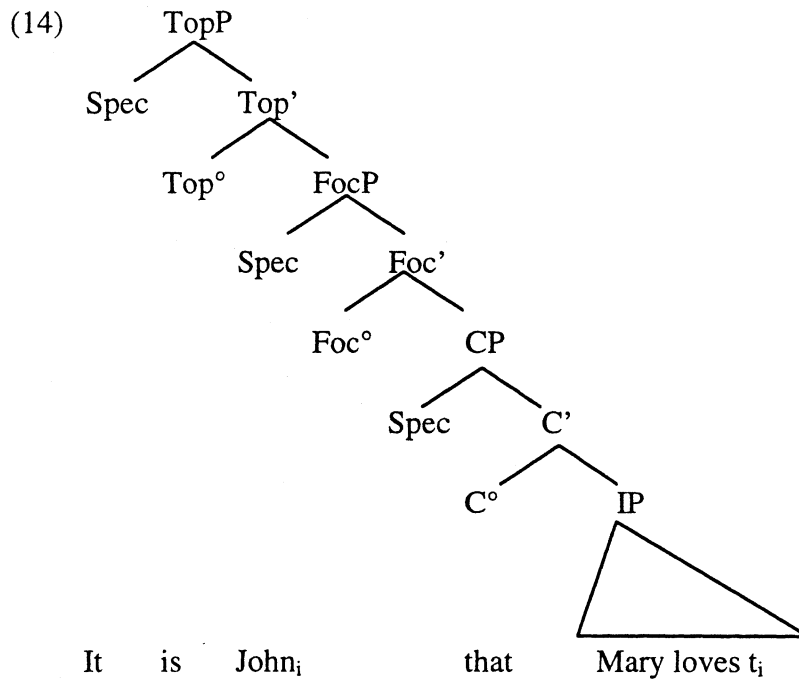
The result is very close to an LF-representation (focus criterion, see Brody 1995 drawing on earlier work). See also Kiss (1996) for a very similar proposal. Note that the tree in (14) is not bi-clausal.

The semantic site looks as follows. The movement of the focal constituents outside the domain of CP (whatever the status of CP is in this analysis) transfers the formerly closed term into an open proposition, i.e. the saturated sentence. Thus, 'Mary loves John' is transformed into an open expression containing a gap filled by a variable (trace): 'Mary loves x'. This entity then could be considered the syntactic realization of the focus semantic value of the sentence, i.e. $\| [_S$ Mary likes $[John]_F] \|^f$ (cf. Rooth 1992). The focus semantic value refers to a set of alternative propositions from which the ordinary semantic value is drawn. Thus, the meaning of the CP in (14) then is a set of propositions. According to Rooth and to work of my own (Meinunger 1995), these propositions can be thought of as forming a partial order. Other elements of the lattice would contain statements about other people Mary could possibly love. In this respect the focus semantic value is related to Hamblin's Answer-Set (Hamblin 1973). Interestingly focus structures are very similar to question-answer pairs. I propose that one can identify the focus semantic value of a focus:backgroud partition (15) with the 'meaning' of the question (16). The ordinary semantic value (or maybe only the setting of the variable) can be viewed as parallel to the meaning of the answer.

(15)   Focus semantic value of 'Mary loves JOHN.'
        $\| [_S$ Mary likes $[John]_F] \|^f = \{$**LIKE** (m,x) x $\in$ **E**$\}$ with E = domain of individuals

(16)   The question 'Who does Mary love?' is associated with:
        λ**x LIKE (m,x)**

To summarize this section, the proposal is the following: the constituent labeled CP in (14) has the semantics of an open proposition. Being so the interpretation of the CP part in the tree (14) is not different from the semantics of a question. *The interrogative character of the CP will play the key role for the further argumentation.* More evidence for this is given in section 4. Please, note that the object in focus constructions has moved out of the relevant domain. In questions, the wh-constituent may still be / is inside that CP.

3.2. Pseudo-clefts: it-cleft plus topicalization

In the present analysis pseudo-clefts are distinct from it-clefts in one more transformational step. This step consists in the movement of the lower CP into the specifier position of TopP. In a certain sense we are dealing here with a sort of overt expletive replacement. The complement of Foc° (i.e. CP) moves into the position which in it-clefts is occupied by the element *it*. The result is an ordinary wh-cleft.

(17)   (14) + it-replacement (=sentence topicalization) ⇒

[$_{TopP}$ [$_{CP}$ who(m) [$_{IP}$ Mary loves t$_j$]]]$_i$ is [$_{FocP}$[$_{Spec,Foc}$ John$_j$] t$_i$]]

(18)
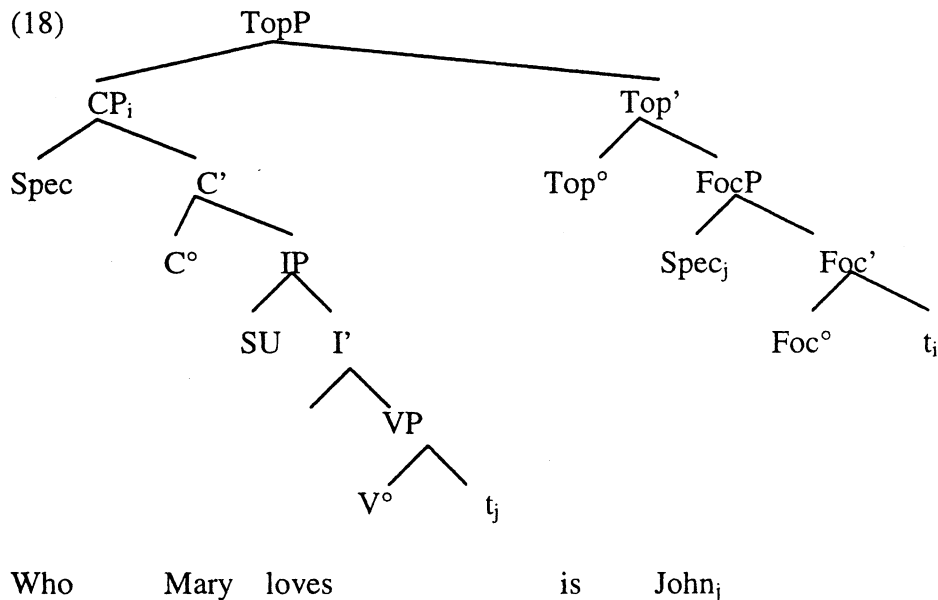
This derivation gives us the relation between it-clefts and pseudo-clefts in a very simple way. The non-focal part, which is topical (see below) moves into a syntactic position where topichood is structurally encoded.

However, although it-clefts and wh-clefts are very similar, there is more to the distinction then just the order of focus phrase : 'free relative'. In English it-clefts may come in three varieties: the 'free relative' may be introduced by the complementizer *that*, by a null complementizer(∅), by a wh-word, or sometimes even by a whole wh-constituent.

(19)	It is John	that	Mary loves.
(20)	It is John	Ø	Mary loves.
(21)	It is John	who(m)	Mary loves.

Crosslinguistically, and by definition, wh-clefts always start with a wh-word[3] (or in order to also capture pied-piping constructions with a wh-constituent). Thus, it-replacement goes together with wh-morphology of the preposed clause. Hence only (21) is a valid input for the derivation of a pseudo-cleft. The reason for this restriction is not entirely clear to me. The bare IP (20) is a bad candidate because a sentence-initial subordinate clause (topicalized or subject) sentences must start with an element from the CP layer. This might be due to reasons of parsing. Perhaps the interrogative character of the topicalized CP forces it to appear in the shape of an embedded question (21) rather than in the neutral subordinate form starting with the complementizer *that* (19). (Note that *that* is not the marker for a relative clause as many linguists tried to convince me of. It is merely an element signalizing the subordinate character of the CP, no matter what ist status is: declarative (for complement clauses), interrogative, relative...)

The strongest evidence for the proposed topicalization analysis comes from the semantics of information packaging. Uncontroversially, the position to the right of the copula is a focus position. As for the pre-copula position, Drubig (1996) has convincingly shown that this position is a topic position, and moreover that it is a derived position, i.e. in representational terms the constituent occupying it is linked to a c-commanded trace/variable. Evidence comes from the intonational pattern in English (the so-called hat contour or bridge accent which is typical for topic constructions) or from the obligatory presence of the topic particle *wa* in Japanese.

(22)   [Mado   watta no] **wa** Taro da
        window broke   wa Taro was
        'Who broke the window was Taro.'

Also, semantically we are dealing here with constructions similar to Büring's (1996) field of investigation. It seems to me that the meaning of these sentences can be computed in the way Büring proposes for (topic) constructions of the form:

(23)   All the /FEMALE pop stars were wearing dark CAFTANS\.   as
(23')   All the [female]$_T$ pop stars were wearing [dark caftans]$_F$

As a matter of fact pseudo-clefts exhibit a parallel behavior. Under flat intonation (one pitch accent only) and without topic preposing, no such interpretation arises. There is only one focus associated with alternatives.

(24)   A book about SYNTAX was what John bought

---

[3] Unless we are dealing with a language displaying wh in-situ, of course.

Pseudo-clefts have the characteristic intonational contour and trigger a complex focus-topic-value matrix.

(25')   What John /[BOUGHT$_T$]   was   a book about [SYNTAX$_F$]\ [4]

4. Pseudo-clefts as self-answering questions

4.1. A restriction on the post-copular focus position

Drubig (1996) quotes Carlson (1983) suggesting that wh-clefts are self-answering questions. My syntactic proposal takes the term and what it suggests very seriously. The correctness of the proposal, which is a syntactic implementation of Carlson's suggestion, is also corroborated by a number of facts. The range of what sort of constituent may appear in the focus position (i.e. Spec,Foc) is not unrestricted. One can find there only constituents which may as well figure as answers in a question : answer sequence. Thus, what is licensed in focus position is: existential indefinites (26), (27); proper names and definites which may get the interpretation of so-called novel definites (28), (29) (Heim 1982, in accordance with Hawkins (1978), labels them novel definites; Jäger (1996) chooses the term referential definites). Excluded are topics in the sense of Jäger (1996) or Meinunger (1996); for example, definite NPs when used as anaphoric expressions. Unstressable pronouns are completely impossible in the coda of pseudo-clefts.

(26)   What I have always wanted to see is a volcano.
(27)   Was ich schon immer mal sehen will, ist ein Vulkan.[5]
(28)   What I have always wanted to see is the Aetna.
(29)   Was ich schon immer mal sehen will, ist der/den Ätna.
(30)   ??What I have always wanted to see is the volcano.
(31)   ??Was ich schon immer mal sehen will, ist der/den Vulkan.
(32)   *What I have always wanted to see is it.
(33)   *Was ich schon immer mal sehen wollte is'es.

(30), (31) are not very felicitous. The sentences can only be uttered in a scenario where the speaker is in an area with only one volcano, which (s)he has not yet had the pleasure to visit (although) the person has been to the area several times before). Under this use, the context is restricted in such a way that 'the volcano' has the use of a referential definite. Both speaker and hearer have access to the referent without the need of introducing the volcano into the discourse frame before. As (32) and (33) show, unstressed pronouns, which are necessarily anaphoric, are clearly ungrammatical. Another possibility of making a sentence with a definite, possibly anaphoric noun phrase acceptable in a pseudo-cleft is to use it contrastively. (This is the unmarked role of narrow focus anyway.)

---

[4] Focus spreading seems to me to be possible, if not even required. Thus, the bracketing only indicates the exponent. However, spreading as such does not affect anything here. What matter is that we have two sources for alternatives.

[5] The odd-number examples are translations of the preceding English sentences, having the same status of grammaticality.

(34)   What I have always wanted to see is the volcano, and not the sea.

(35)   Was ich schon immer mal sehen will, ist der/den Vulkan und nicht das Meer.

(36)   Whom I was angry about was her, not him

(37)   Über wen ich mich geärgert habe war (über) sie, nicht er / (über) ihn

Considering these data the conclusion can be drawn that the class of forbidden constituents in pseudo-cleft post copula positions is identical to those which undergo scrambling. Since topics (in the sense of the quoted work) are old information, they can never bring new information by themselves. Hence, they cannot act as an answer and are thus excluded in wh-clefts. A theory which base generates the wh-sentence as a relative clause of the constituent which ends up in the post-copula position has no (direct) explanation for the observed fact.

4.2. Ross' evidence

Another piece of evidence is provided by Ross (1985). He shows that the pre-copular wh-construction behaves like an (embedded) question rather than a free relative in the following respects. Specificational pseudo-clefts license a *what-else*-phrase (40), which is only allowed in interrogative contexts (38) and not in canonical free relatives (39).

(38)   I know [what else she cooked].

(39)   *I ate [what else she cooked].

(40)   [What else she is going to cook] is spaghetti flambé.

The same is true for *which*-phrases:

(41)   I knew [which book he read].

(42)   *I lifted [which book he read].

(43)   [Which book he will read] will be War and Peace.

On the other hand *whatever*-phrases are licensed in non-interrogative contexts, i.e. in ordinary free relatives (45), and not in questions (44), (46):

(44)   *I know [whatever she cooked].

(45)   I ate [whatever she cooked].

(46)   [What (*ever) she cooked] might not be stuffed peas.

These data also show that there is something wh-clauses in specificational pseudo-clefts have in common with questions and they are distinct from ordinary free relatives.

Another argument is the following. A crucial difference between relative and interrogative clauses lies in the number of possible wh-constituents. A relative clause - if it contains a wh-constituent at all - may contain only one. On the other hand, the number of wh-constituents in questions is unrestricted. Basically all constituents can be questioned and hence appear as wh-constructions. Crucially, in German (and other languages) pseudo-clefts are also possible with more wh-constituents, ((49) stems from Ross (1985).

> (47)   Wer$_i$ hier wem$_j$ Rechenschaft schuldig ist, sind immernoch die
>   who$_{nom}$ here whom$_{dat}$ account   due   is, are   still   the$_{acc}$
>   Untergebenen$_i$ dem   Chef$_j$!
>   subordinates   the$_{dat}$ boss
>   'If there is someone who is answerable to someone else, then it is the
>   subordinates who are answerable to the boss.'

> (48)   Wer hier wen   verführt hat, war die Susanne den Hans...
>   Who here whom seduced has, was the Susan$_{nom}$ the John$_{acc}$ (similar pattern)

> (49)   [Who ordered what] is Tom ordered a beer and Jim - a watermelon flip

These constructions are a big challenge for all traditional theories. Any biclausal analysis in which the main clause is headed by the copula is faced with the problem of the status the two more or less independent post-copular NPs have (i.e. whether they act as subject or as predicate). The number of possible constituents is basically unrestricted. In the present theory, these NPs are just focused constituents and hence moved into the spec of recursive FocP(s).

The next data, which is related to the construction just discussed, is the best empirical proof for my proposal. Rohrbacher suggested in personal communication to Iatridou and Varlokosta (1995), that in some constructions in German the ambiguity of pseudo-clefts can be dissolved by case morphology. It is argued that in (50) accusative on the focused constituent triggers an unambiguously specificational reading, i.e. the reading we are interested in. Nominative morphology gives rise to the predicational reading (41) only[6].

> (50)   Was   Hans essen wollte,   war   einen Apfel.
>   What Hans eat   wanted, was an$_{acc}$ apple
>   'What Hans wanted to eat was an apple.'   (specificational)

> (51)   Was   Hans essen wollte,   war ein   Apfel.
>   What Hans eat   wanted, was an$_{nom}$ apple
>   'What Hans wanted to eat was an apple.'   (predicational / ambiguous)

Further clear examples for non-nominatives in post-copular position are:

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[6] For me, however, (51) is still ambiguous. A specificational reading is possible.

(52) Wem sie geholfen haben, war ihr,   nicht ihm
      Whom they helped   have, was her$_{dat}$ not him$_{dat}$
      'Whom they helped was her,   not him.'

(53) Was er gegessen hat, war die Birne, nicht den Apfel.
      What he eaten   has, was the pear$_{acc}$, not the apple$_{acc}$
      'What he eat was the pear, not the apple.'

In the current debate, where pseudo-clefts are analyzed as copular sentences, one of the central issues is whether the post-copular constituent is the subject or the predicate. This questions seems to make no sense if applied to (51) through (53). A bare DP carrying dative or accusative case can neither act as the subject of a copular sentence, nor as an independent predicate. For me this data clearly shows that specificational pseudo-clefts are not ordinary copular sentences. In no other construction is a copula able to assign accusative or dative case to its arguments. Yet, as the data shows we find such case-marked DPs in pseudo-clefts. In my theory, the given pattern is even predicted. The focused, and hence clefted constituents are case-marked in their base position. After movement into the specifier of FocP, nothing changes. The original case and theta-role are preserved as with any other A'-movement.

5. A single common focus position for both cleft types

Another advantage of the present analysis is the identification of a unique focus position for both clefts, i.e. it-clefts and pseudo-clefts [Spec,Foc]. The focal constituent does not exhibit the very same properties in pseudo-clefts and it-clefts in every respect. However, the similarities are most striking, and an analysis that treats them as independent constructions misses an obvious link. (Note that the relationship between clefts and pseudo-clefts was tried to be realized derivationally as early as 1970 by Akmajian.)

The derivation I propose explains the following curiosity. I don't know why, but languages behave differently with respect to what they allow to (overtly) move into the focus position. So it comes that in English this position is much less restricted than in German, for example. Whereas adjectives, adverbs and other non-nominal projections can pretty naturally occur in English clefts (it has wrongly been claimed that there are no restrictions at all), this is impossible in German.

(54) It was sad that he seemed.
(55) It was sadly that he left
(56) It was shave themselves that they finally did.

(57) *Es war traurig, daß / wie er schien.[7]
(58) *Es war traurig, daß / ?wie er wegging. (at least in the relevant reading)
(59) *Es war sich (??zu) rasieren, daß / was sie endlich getan haben.

---

[7] The German sentences are attempts to translate the grammatical English counterparts. So (57) corresponds to (54) and so on.

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The it-clefts are associated with grammatical or ungrammatical pseudo-clefts respectively.

(60)   How he seemed was sad.
(61)   How he left was sadly.
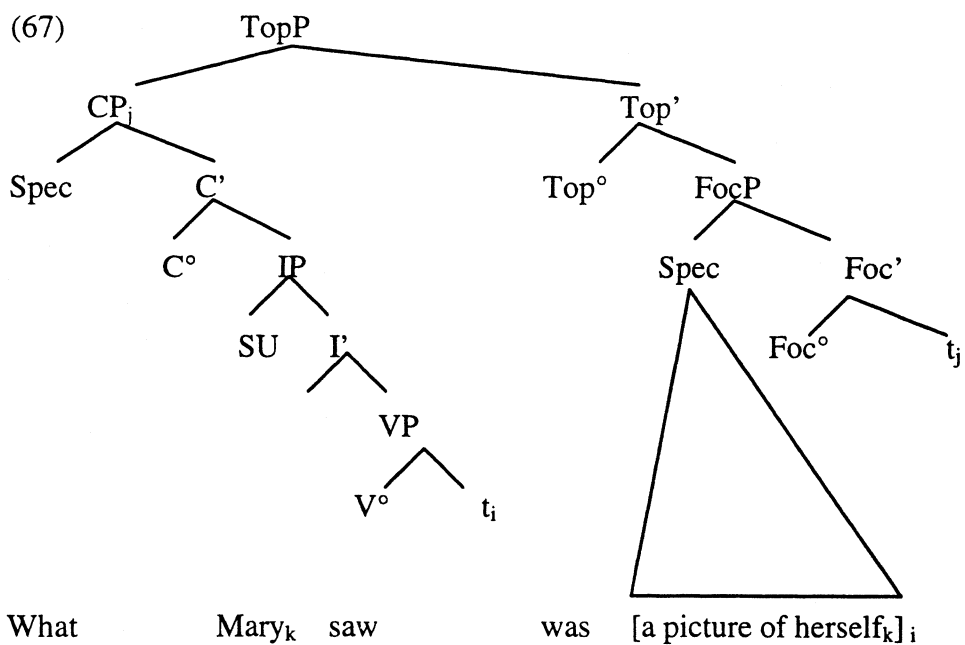(62)   What they finally did was shave themselves.

(63)   *Wie er schien war traurig
(64)   *Wie er wegging war traurig
(65)   ??/*Was sie endlich getan haben, war sich (zu) rasieren.

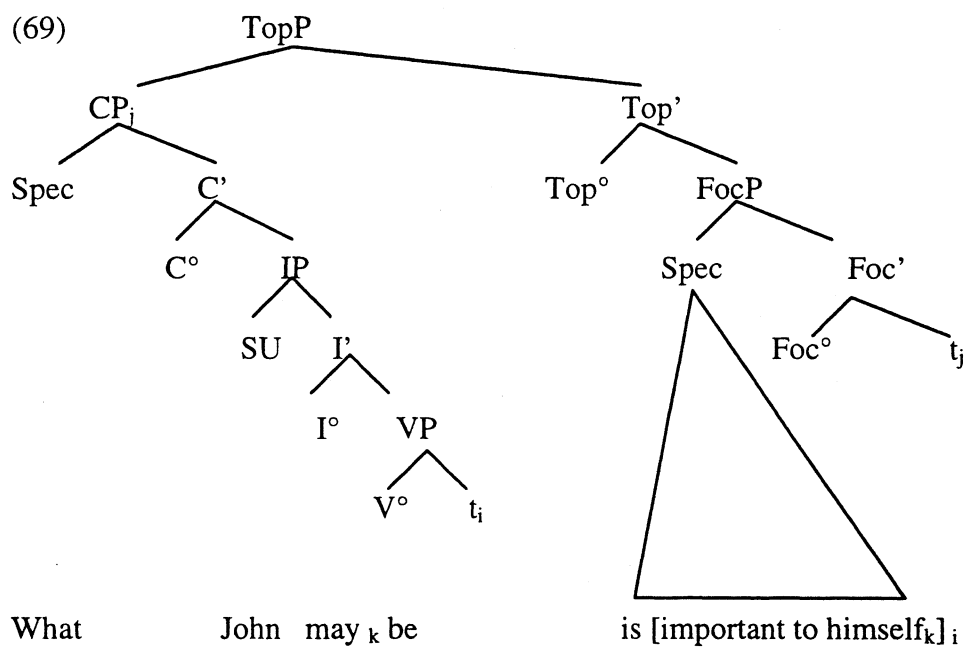Although I have no account for this very fact itself, the phenomenon seems to underline the proposal that the focus position in it-clefts and pseudo-clefts is the same.

6. Summary:

It has been shown that cleft sentences are best analyzed as monosentential constructions. It-clefts are derived from simplex sentences by extracting a focus phrase out of the projection of C° into some higher focus projection within the splitted comp area. Wh-clefts are the result of an additional movement step, namely the topicalization of the remnant into Spec,Top plus an obligatory wh-marking of the preposed constituent. Thus, wh-clefts are not simply copula sentences with a free relative in subject or topic position, but self-answering questions whose base are simplex structures with ordinary tense interpretation, binding effects, operator scope and focus projection. The following trees encoding the derivation of the surface syntax illustrate that under reconstruction all the apparently mysterious binding facts and modification pattern dissolve into ordinary noun phrase licensing. Reconstruction of all moved material ends up in configurations with all phrases correctly licensed.

(66)   What Mary$_i$ saw was a picture of herself$_i$.

(67)

TopP
├── CP_j
│   ├── Spec
│   └── C'
│   ├── C°
│   └── IP
│   ├── SU
│   └── I'
│   └── VP
│   ├── V°
│   └── t_i
└── Top'
    ├── Top°
    └── FocP
        ├── Spec
        └── Foc'
            ├── Foc°
            └── t_j

What   Mary_k   saw   was   [a picture of herself_k]_i

(68) What John may be is important to himself. (modal interpretation)

(69)

TopP
├── CP_j
│   ├── Spec
│   └── C'
│   ├── C°
│   └── IP
│   ├── SU
│   └── I'
│   ├── I°
│   └── VP
│   ├── V°
│   └── t_i
└── Top'
    ├── Top°
    └── FocP
        ├── Spec
        └── Foc'
            ├── Foc°
            └── t_j

What   John   may _k be   is [important to himself_k]_i

(70)   *What he$_k$ claimed was that John$_k$ is innocent

(71)

```
                          TopP
          ┌────────────────┴──────────────────┐
        CP_k                                 Top'
      ┌───┴───┐                        ┌──────┴──────┐
    Spec      C'                     Top°           FocP
           ┌──┴──┐                             ┌─────┴─────┐
          C°     IP                          Spec_i       Foc'
               ┌─┴─┐                          ╱│╲       ┌──┴──┐
              SU   I'                         ╱ │ ╲    Foc°   t_k
                 ┌─┴─┐                       ╱  │  ╲
                  VP                        ╱   │   ╲
                 ┌┴┐                       ╱    │    ╲
                V°  t_i                   ╱─────────────╲

    What    he_j    claimed            was   [that John_j is innocent]_i
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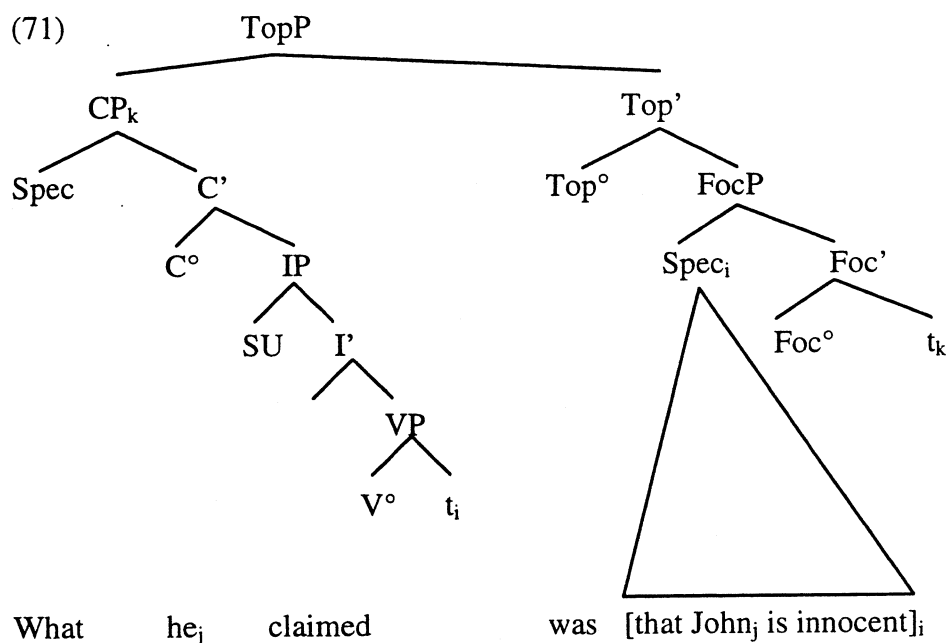
Appendix: The staus of the copula and the double appearance of the clefted phrase

Something should be said about the status of the copula within the present theory. As the reader can see from the given trees, the relevant form of BE ends up under Top°. I would claim, however, that it is not base generated there. My tentative claim is the following: in cleft constructions BE acts a Foc°, heading a focus phrase (FocP). Thus it is a functional category signalizing narrow focus. Obligatory head movement forces it to move to the next c-commanding head position which is Top°.

This proposal is based on two considerations. First, in some languages (e.g. German, Italian) the copula may or must agree with the phi-features of the focal constituent if it is a noun phrase and acts as the subject.

(72)   Wer kommen wollte, war*(en) die Meyers.
         Who come wanted *was/ were the Meyers.
         'Who wanted to come was the Meyers.'

Under general assumptions, agreement of any sort emerges between heads and their specifiers (spec-head agreement). Thus, at some point in the derivation, there must have existed a spec-head relationship between the copular and the focus phrase. Under minimal assumptions this is done within FocP. The second argument is the following. In a number of languages there is a close relation between copular forms appearing in ordinary predicational sentences on the one hand and focus markers on the other. In languages with

overt focus markers, these particles very often develop from copular forms. One example is Chinese. In this language, the element *shì* has (at least) two functions: it acts as a copular verb (73), and it may act as a focus marker (74). As such it also appears in pseudo- clefts (75), (under the given analysis, see Gasde 1996). Traditional analyses assume two homophonous, but different forms.

(73)   Ta shi laoshi.
        he shi teacher
        'He is a teacher.'

(74)   Shi Zhang San mai de zhe ben   shu.
        shi Zhang San buy part this classifier book
        'It is Zhang San who bought the book.'

(75)   Wo zai shudian   li   maidao   shi zhe ben   shu
        I   in bookshop inside purchased-part shi this classifier book
        'What I purchased in the book shop was this book.'

Thus, the Chinese data suggests that there is something common to focus and copula constructions, making a base generation of the copular(like) element under Fok° more likely than under Top°.

In their intensive typological research Heine and Reh (1982) have shown that focus particles (most likely Foc° elements) are systematically (diachrhronically) linked to copular elements from clefts. They describe the way of grammaticalization from verbal copulas to pure focus markers in many typologically different languages. This corroborates the proposal to base-generate the copular form in cleft sentences in a position hosting focus.

If I want to uphold the claim that clefts are monosentential, then there is more to be said about the double presence of the focused constituent. It appears as the focused constituent and, additionally, it may appear in the form of a relative or interrogative constituent. Thus, it seems that under my analysis there is a violation of the theta-criterion.

(76)   What I purchased in the book shop was this book.
(77)   It was this book, what/which I purchased in the book shop.

Both underlined constituents should be analyzed as objects of the verb *purchased*. In paragraphe 3 I have tried to show that only the focused constituent is the actual moved 'deep structure' object. The wh-constituent only appears to signalize that the CP is an open proposition (question). The proposal is (based on Kiss 1996) that the wh-pronoun (or constituent) in [Spec,CP] is not an independent phrase, but acts as a sort of resumptive pronoun (which agrees with ist antecedent in any morphological respect). In this sense the resumptive pronoun gets coindexed with the moved focal constituent. This gives a representation with a chain consisting of the focal constituent, a resumptive element and a variable (trace). And it is only this chain which absorbes the one involved theta-role. This way there is no violation of the theta-criterion anymore.

As a matter of fact wh-dependencies very often make use of a doubling strategy (whether by resumptive elements, expletive scope markers or partial movement and what Riemdjik calls 'regeneration', Riemsdijk (1989).

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Extraposition and Ellipsis in Coordinative Structures[1]

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0   Introduction

What this paper aims to show is that within the field of symmetric coordination there seems to be much reason to distinguish between ellipsis and extraposition. This distinction differs from the claim that all coordinative constructions containing missing elements are elliptical constructions - cf. Wilder (1994, 1995, 1996) - or that all such construtions are extrapositional constructions - cf. the "Across-The-Board" theory (ATB) theory and the ride node raising (RNR) theory by Williams (1978, 1990) et al. The evidence supporting the coexistence of ellipsis and extraposition comes from German and Chinese, the latter provided by Chen, Xuan. Provided that the coexistence between ellipsis and extraposition proves to be correct in German and in Chinese, which are languages that differ typologically to a great extend, the question arises as to whether this distinction is universal or not. Because the research on Chinese ellipsis is still in its infancy, the Chinese data presented below may give the impression of only being ornamentally attached to the German data. However, if you take this article as a first step in comparing German and Chinese with regard to their information structure and ellipsis, this impression should disappear.

To give an impression of what is meant by ellipsis and extraposition in coordination let me give you a brief outline of both concepts.

1. Ellipsis

Although ellipsis is not only found in coordination but also in many other grammatical domains, such as in comparison, so called adjacency ellipses, situation bound ellipses, etc., we will concentrate only on coordination.

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[1]   This articel is a completed version of a paper, which was held at the workshop "Informations-strukturierung II" in April 1997. The Chinese examples and the suggestions towards their grammatical properties come from Xuan Chen. He is like Horst-Dieter Gasde, André Meinunger and me involved in the project "Informationsstrukturierung: Konstituentenanhebung und Ellipse als Mittel der strukturellen Fokusbildung in typologisch unterschiedlichen Sprachen. Further, I am deeply indepted to Amy Klement for checking and revising this English version.

(1)   (i)   Hans **LOBT** und Paul **KRITISIERT** seinen alten Lehrer.[2]

              Hans **PRAISES** and Paul **CRITICIZES**   his   old teacher

              BeideLehrer haben Hans und Paul vor zehn Jahren unterrichtet.
              Both taught Hans and Paul ten years ago.

      (ii)   Zhang San zai **BIAOYANG,** Li Si zai **PIPING** ta guoqu de laoshi.

              Zhang   San just praise   Li Si just criticize   he old   de teacher

              Liang wei laoshi shi nian qian cengjing jiao-guo Zhang San he Li Si.
              Both   taught Zhang San and Li Si ten years ago.

(2)   (i)   Einen Gast hat **SIE jedem MÄDCHEN** und **ER jedem JUNGEN** vorgestellt.

              A guest, Acc has **SHE** to **every GIRL**   and **HE** to **every BOY** introduced

              Die Mädchen und Jungen haben sich mit den Gästen gut unterhalten.
              The girls and the boys had a good time with the guests

      (ii)   * Yi wei keren, LI SI xiang **mei ge**   NÜHAI, ZHANG SAN xiang **mei**

              one CL pupil   Li Si prep. every CL   girl   Zhang San   prep. every

              ge **NANHAI** zuo-le jieshao

              CL   boy   do-le introduce

An elliptical structure is commonly understood to be incomplete with respect to its complete counterparts. To preserve the sentential strucutre of elliptical structures and their syntactic parallelism to their antecedent structure, when one exists, elliptical structures are considered to contain empty categories. The empty categories may be generated by construction rules or result from phonological deletion.

(3)   [Hans **LOBT** ~~seinen alten Lehrer~~] und [Paul **KRITISIERT** seinen alten Lehrer]

          Hans praises ~~his old teacher~~   and Paul criticizes   his   old   teacher

(4)   [Einen Gast$_i$ [hat **SIE jedem MÄDCHEN** e$_i$]] und [~~einen Gast$_i$~~ ~~[hat~~ **ER jedem**

          a .   guest has she to ever girl   and ~~a guest~~   has he to every

          JUNGEN e$_i$ vorgestellt]]

          boy   introduced

---

[2] The bold-face constituents signal the focus domain and the capitals the focus exponent.

Structures containing empty categories underly several grammatical, semantic, and pragmatic conditions, which, unfortunately have to be neglected. Here, I will mention only the one which is of greatest importance to our purposes:

(c 1)   Elliptical categories must be recoverable.

This recoverability condition ensures that elliptical utterances are understood by the listener. Within the framework of information structuring theory, this recoverability condition can be easily translated into a background conditon:

(c 2)   Elliptical categories must be background.

If we symbolize focal constituents as F and background constituents as B, we are able to transform the above mentioned elliptical configurations into the following, let us say, information structural schemes:

(3')

$$\boxed{F_A \quad F_B \quad \cancel{B} \qquad \& \qquad F_{A'} \quad F_{B'} \quad B'}$$

(4')

$$\boxed{B \quad F_B \quad F_C \qquad \& \qquad \cancel{B'} \quad F_{B'} \quad F_{C'}}$$
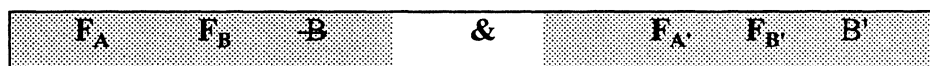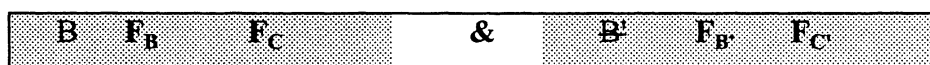
In both schemes, we see that each conjunct contains as many focal categories as the other. In other words, both conjuncts are parallel with regard to their information structure. Information structural parallelism as well as syntactic parallelism, and a certain semantic parallelism are all reflexes of the parallelism requirement of coordination - cf. Lang (1977, 1984).

To preserve information structural parallelism, it is required that each focused category of one conjunct differs from its counterpart in the other conjunct. If they do not differ they do not form a contrastive pair, which is commonly understood to be a condition of well-formed coordination.

Now, there are cases where this information structural parallelism seems to be disturbed in so far as one of the two conjuncts seems to contain an additional focused constituent.

(5)   (i)   HANS BEGRÜßT und PAUL KÜßT **seinen ehemaligen LEHRER.**

Hans WELCOMES and Paul KISSES his   former   teacher.

*Er ist ziemlich alt geworden. *Sie sind ziemlich alt geworden.*

*He has become quite old. *They have become quite old.*

(ii)   Zhang San PIPING-le, Li Si FEIBANG-le **ta guoqu de LAOSHI.**

  Zhang San criticize-le Li Si   insult-le he   old   de teacher

Zhei wei laoshi yijing tuixiu le

this   CL teacher already has retired.

This teacher already has retired.

(6)   (i)   HANS hat ANNA und FRITZ hat PAULA **einen SCHÜLER vorgestellt.**

Hans   has to Anna and Fritz has to Paula   a pupil introduced.

Der soll ein bekannter Pianist sein.

He is said to be a well known pianist.

(ii)   Zhang San wei CHUNMEI, Li Si wei QIUJU mai-le **yi ge DANGGAO**

Zhang San prep. Chunmei Li Si prep. Qiuju buy-le   1 CL cake

Zhei ge danggao shi yong guojiang zuo de.

this CL cake   be prep. jam   make de

This cake is made of jam.

(7)   (i)   **Einen LEHRER** hat jeder SCHÜLER GELOBT und hat jede SCHÜLERIN KRITISIERT.

A TEACHER, Acc has every SCHOOLBOY, Nom. PRAISED and has every SCHOOLGIRL criticized

Dieser Lehrer ist schon seit zwanzig Jahren an der Schule.

This teacher has been at this school for twenty years

(ii)   You ge **XUESHENG**, Zhang San BIAOYANG-le, Li Si PIPING-le.

You CL **PUPIL**   Zhang San PRAISE-le Li Si CRITICIZE-le

By pretending that the configurations (5) to (7) are elliptical configurations, we can consider them to have the following information structuring schemes, with Φ meaning the focused constituent which is thought to be shared by both conjuncts:

For (5) and (6):

(8)   *

F F Φ	&	F F Φ'

For (7):

(9)   *

Φ F F	&	Φ' F F
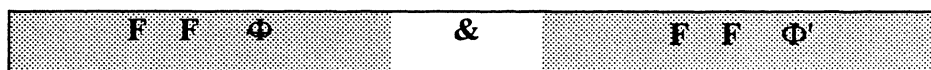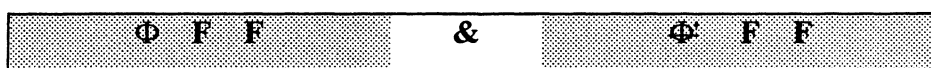
Besides the unwanted information structural disharmony in (8) and (9), there are still other objections to the respresentation of these configurations as ellipses. Before we go back to them below, let us get an overview of the alternative to the ellipsis concept - so called extraposition.

II.   Extraposition

As will be shown in the following, empirical arguments as well as theoretical ones will lead to the consideration that coordinative structures like (5), (6) and (7) have syntactic and information structuring representations in which the shared constituent Φ is somehow extracted out of the coordination.

(10)

F F ϵ_i	&	F F ϵ_i		Φ_i

(11)

Φ_i		ϵ_i F F	&	ϵ_i F F

In the next part of the paper, we will consider the syntactic and semantic arguments which are, respectively, pro or contra the ellipsis representation or pro or contra the extrapositon representation. Then, in the third part of the paper, I will discuss their syntactic representation.

2   Evidence for the coexistence of ellipsis and extraposition

At least in German, different possibilities of coordination ellipsis exist. They differ respecting the conjunct where the ellipsis takes place. Ellipsis located in the first conjunct is called *backward ellipsis* or backward deletion (*BWD*) - cf. (1), (3) and (8). Ellipsis in the second conjunct is labeled *forward ellipsis* or forward deletion (*FWD*) - cf. (2), (4), and (9). In the first conjunct, only background constituents to the right may be absent. This observation has been expressed by Wilder (1994) as the *right periphery condition*. In the right conjunct, on the other hand, background constituents to the left may be elliptical. Background constituents in the middle may also be missing, which is commonly known as gapping. Whereas the research on German elliptical constructions has already been well established during the last decades, research on Chinese ellipses is quite rare. If there is any, it is merely stated that certain kinds of elliptical constructions exist,and that they underly certain conditions. However, only little effort has been made to elaborate a consistent picture of Chinese constructions containing missing elements.

To distinguish extrapositional structures from ellipsis, let us introduce REX for 'right extraposition' and LEX for 'left extraposition'. REX is found if the shared and focused constituent is to the right of the second conjunct - cf. (5), (6), and (10), and LEX, if the shared focused constituent is to the left of the first conjunct - cf. (7) and (11).

There are four pieces of evidence in favour of the coexistence of the ellipsis and extrapositional representation. As will be shown in chapter four, two of them are subsumable and all of them are explainable with respect to information structure.

2.1   Distinct or unique reference of indefinite shared constituents

The evidence being dealt with in this chapter comes from the referential properties of indefinites and their determination by the information structure of the construction. What is of interest here is the focusing or non focusing of indefinites and the type of focus they have. For that purpose, let me give you a brief outline of focus and indefinite expressions.

In accordance with Eckardt (1996), we will distinguish between two kinds of foci - F1 and F2 . The latter means the commonly known foci, such as focus associated with

particles, corrective focus and question-answer focus. F1 is considered by Eckardt to be a judgement focus, which corresponds to the presentational focus - cf. Drubig (1994) or to the nucleus of the sentence - cf. Diesing's (1992) tripartite analysis of sentences. Both, F1 and F2 are realized by a certain accent and allow focus projection. According to Eckardt, F1 indicates the domain of existence. For indefinites in F1, their existential part as well as their predicative part are focused. Because the existential part is focused and, therefore, just introduced into the discourse, the existence of its referent is asserted. Such indefinites are commonly said to be existentials. Having just established their referents in the discourse, they are accessible to pronouns. Indefinites located outside F1 are not existentials. Being outside of F1 means that they are either within F2 or that they are not focused at all. As for indefinites in F2, their existential part is presupposed. Then, it is only the predicative part of the DP, this means the NP, that is focused. This type of indefinite is to be called a presupposed existential. If indefinites are not focused at all, neither their existential part nor their predicative part isasserted. So, both parts are presupposed. These indefinites are called generic expressions by Eckardt (1996). Similar considerations may be found in Reinhart (1995) and Diesing (1992) who assume unfocused indefinites to be quantifier phrases.

What we now have are three types of indefinites with each type dependent on its information structural status as F1, F2 or non focus. Adopting here the view that information structure is anchored in the syntactic structure, it is necessary to correlate these focus domains to syntactic structure. Considerations on how F1 and F2 are syntactically realized may be seen in Eckardt (1996:5f.). There, F1 corresponds approximately to VP, which in its turn corresponds to Diesing's (1992) nuclear part of the sentence. When we implement Eckardt's F1 in our syntactic informational structure theory, which postulates functional categories for informational structure relevant constituents, it should correspond to our Focus-2-Phrase. We will come back to this in chapter three. Eckardts F2, on the other side, corresponds to our functional category Foc1P.

Having, although in a very rough simplification, established the prerequisites, we turn now to our concern, namely to decide whether a coordinative structure has to be represented as an elliptical one or as an extrapositional one. We will start with constructions for which it may be predicted that they have to be represented as elliptical structures.

With regard to backward ellipsis, the shared indefinite constituents B and B' have a different reference, provided they are not focused. This different reference is reflected in the possibility for the referents of both of the constituents B and B' to be expressed by a plural anaphoric expression in a following expression. That this effect can be found in German as well as in Chinese backward ellipsis can be observed by regarding the following two examples (12) and (13). Recall that BWD is the label for backward and FWD the label for forward ellipsis.

BWD:

(12)   (i)   HANS hat ANNA ~~einen Pfannkuchen~~ und FRITZ hat PAULA einen

              Hans   has   **Anna**   ~~a~~   ~~doughnut~~   and   **Fritz**   has   **Paula**   a

              Pfannkuchen geschenkt.

              doughnut   given.

              Beide Pfannkuchen waren übrigens mit Pflaumenmus gefüllt.

              Both   doughnuts   were   by the way with plum jam   filled.

(ii)   ZHANG SAN song-le CHUNMEI ~~yi ge danggao~~, LI SI song-le QIUJU

       Zhang San   give-le CHUNMEI   1 CL cake   LI SI give-le   QIUJU

       yi ge danggao

       1 CL cake

       Zhei liang ge danggao dou shi yong guojiang zuo de.

       this   two   CL cake   all be prep. jam   make de

The effect of the pronoun having two referents is due to the fact that the indefinite is interpreted as a QP or ,to express it in Eckardt's terms, as a generic indefinite. This interpretation follows from the information structural status of the indefinite, which is neither F1 nor F2. Thus, its predicative part as well its existential part are presupposed by the context. That the indefinite has a distributive reading also is anchored in the discourse. Both, the coordination with its distributive force and the indefinite expression as the distributed entity are presupposed by the context. This is observable in the contrasted subjects and objects which indicate that the other parts of the constructions have to be presupposed.

As for forward ellipsis, this distributive effect is also observable.

FWD:

(13)   (i)   Einen Pfannkuchen hat HANS ANNA und ~~einen Pfannkuchen~~ hat FRITZ

                 A   doughnut   has HANS ANNA   and   a   ~~doughnut~~   has FRITZ

                 PAULA geschenkt.

                 PAULA   given.

                 Beide Pfannkuchen waren übrigens mit Pflaumenmus gefüllt

                 Both   doughnuts   were   by the way with plum jam   filled.

       (ii)   *Yi ge danggao, ZHANG SAN song-gei-le CHUNMEI, ~~yi ge danggao~~, LI SI

                 1 CL   cake   ZHANG SAN   give-gei-le   CHUNMEI, ~~1 CL cake~~   LI SI

                 song-gei-le QIUJU

                 give-gei-le   QIUJU

                 Zhei liang ge danggao dou shi yong guojiang zuo   de.

                 this   two   CL cake   all   be prep. Jam   make de

Recall that we assume that indefinites are interpreted generically if they are not contained in F1 or F2. In (13)(i), the indefinite is neither in F1 nor in F2 so that it may get a generic/quantificational interpretation. Like the presupposed existentiality, the distributivity is also presupposed. With such a reading of the indefinite, the construction is well-formed and can be represented as an elliptical configuration. By the way, because the indefinite expression has been moved out of F1, it cannot be interpreted as an existential.

The failure of the Chinese example can be accounted for by the inability of the 'indefinite' expression *yi ge danggao* to be topicalized.

In turning to expressions where the shared indefinite expression is focused, we will observe that Φ has a unique reference, unlike the unfocused indefinite in the previous examples. This is witnessed by the possible use of a singular pronoun, which refers to Φ and, thus, indicates that Φ is unique, and, additionally, by the inability to use a plural pronoun.

For convenience, the label REX has been introduced for extraposition at the right of the coordinative construction, and LEX given as the label for constructions with an extraposed constituent at the left side.

(14)   (i)   HANS hat ANNA   und FRITZ hat PAULA   **einen SCHÜLER vorgestellt**.
           Hans   has to Anna and Fritz has to Paula   a pupil introduced.
           Der soll ein bekannter Pianist sein.

           He is said to be a well known pianist.

           *Sie (die Schüler) sollen gute Pianisten sein.
           They (the pupils) are said to be good pianists.

  (ii)   Zhang San gei Xiao Li, Li Si gei Xiao Wang jieshao-le **yi ge nü peng**

           you.

           Zhang San   to Xiao Li,   Li Si   to   Xiao Wang introduce -Asp1   CL female
friend

The indefinite in this example may either be in F1 and, so, an existential, or in F2 and interpreted as an answer to a question or as a correction. If it is an existential, the construction cannot be considered an elliptical one. The objection to the representation of (14) as ellipsis is based on the referential properties of this existential. Here, it is asserted that a person exists whose cardinality is one, who is a pupil and who has been introduced to two people by two people. Because the existential introduces a new discourse entity, there cannot be a deleted indefinite in the first conjunct as there would be if we considered a coordinative structure like (14) to be an elliptical construction. Hence, if the indefinite in (14) serves as an existential, the only way for the existential to join the coordination that contains a position for it in each conjunct, is to be situated outside the coordination.

    The objection to the ellipsis representation may be treated from another, semantic representational view. If we assume the first conjuncts in (14) to contain an elliptical existential indefinite, where the deleted material is considered to be a copy of its antecedent in the second conjunct, we have, in the ellipsis site, an indefinite expression having the same interpretation as the one located in the non elliptical conjunct. If we further represent indefinite expressions as expressions containing a variable which is bound by the existential operator $\exists$, we yield a semantic representation like the following one:

(15) $\exists x : \text{PUPIL} x [\dots x \dots]$ & $\exists x : \text{PUPIL} x [\dots x \dots]$

This representation does not prevent the variable x in the second conjunct, which is bound by the second ∃-operator, from being instantiated by a contextual entity differing from the one which is the instantiation of the x bound by the first ∃-operator. Therefore, (15) does not conform to the interpretation of the focused indefinite expression as introducing a new discourse entity. To anchor the necessary non different instantiation of x in both conjuncts, it seems to be appropriate for the indefinite expression to be out of the coordination, as is illustrated by the schemes (10) and (11). In this way, we yield the appropriate semantic respresentation, like the following one:

(16)   ∃x : PUPILx [[... x ...] & [... x ...]]

It is not so easy to decide whether a shared focused indefinite, which is an existential in constructions like (14), may have a distributive meaning in addition to its unique reading. Provided the distributive reading of (14) is possible, two pupils will have been introduced by the boys to the girls. Even if this reading, which involves more than one referent of the indefinite, occurs, (14) can not be continued by a sentence containing a plural pronoun like *They (the boys) are very handsome*. Pronouns like anaphors, clitics and 0-pronouns are markers for textual entities being highly accessible. The use of definite descriptions, on the other hand, signals the very low accessibility of their antecedents - cf. Reinhart (1995:102) and Ariel (1990). Hence, an existential, which introduceds a new discourse entity into the discourse by its expression, can always be referred to by a pronoun in the following sentence. The distributivity interpretation of the indefinite in (14), on the other hand, has not been introduced explicitly by the previous context. Therefore, the different antecedents are hardly accessible. Thus, they can only be refered to by a definite description like *die beiden Schüler*.

In addition to the existential interpretation, the focused indefinite in (14) can have an interpretation where the existence of a person is presupposed, which is characterized by the predicate SCHÜLER. This occurs, for example, when a construction like (14) is preceded by a question like *Who did Hans to Anna and Fritz to Paula introduce?* Because this question, which is now the context for (14), does not exclude distributivity, for the focused presupposed indefinite in (14), the distributive reading is obtainable in addition to the unique one. In the unique interpretation, the underlying syntactic structure cannot be elliptical. Whether (14) has an elliptical structure with regard to its

distributive interpretation will be discussed in chapter 2.5. Having a presupposed existential reading, indefinites cannot be referred to by a following pronoun because their referents are in the background and therefore hardly accessible.

Similar observations can be made as to the unique reference if the indefinite is to the left of the coordination. Imagine that the indefinite in the following example is contained in the presentational focus domain so that it has to be an existential:

(17)   (i)   Ein **SCHÜLER** hat PETER erst **GELOBT** und hat dann FRITZ **KRITISIERT**.

              A **PUPIL**   has PETER first   PRAISED and has then   FRITZ criticized

              Er ist schon seit zwei Jahren an der Schule.

              He has been at this school for two years

      (ii)   You ge **XUESHENG**, Zhang San **BIAOYANG**-le, Li Si **PIPING**-le.

              You CL   **PUPIL**   Zhang San PRAISE-le   Li Si CRITICIZE-le

Note that, with regard to the Chinese example, there is a particular expression, the you-Phrase, which introduces, by its lexical meaning, a new discourse entitity.

Because the gap in the second conjunct cannot be represented as a deleted existential, the sentence cannot be represented as an elliptical configuration and the following sentence cannot contain a plural definite description.

Whereas in (17) the Chinese you-Phrases allows only an existential reading, the German indefinite may have a generic in addition to the existential reading. If the indefinite expression at the left carries the main accent, it belongs to F2 so that it is a presupposed existential.

(17')   Ein **SCHÜLER** hat PETER erst GELOBT und hat dann FRITZ KRITISIERT

TheF2-meaning of the indefinite in (17') may occur if the whole expression serves as an answer of a question like *Who has first praised Peter and then criticized Fritz?*, which would have introduced the existential part of the indefinite in the answer.

In German, the distributive reading of the existential, located at the left of the construction is not possible, unlike the optional distributive reading of an existential shared indefinite at the right is. Remember that, with regard to the latter, the foregoing

coordination can function as a kind of distributor. Not having such a context, existentials at the left of the sentence cannot be interpreted as being distributed. The same holds true if the indefinite like in (17') is the subject and if it has a presupposed existential meaning. When, on the other side, the focused presupposed existential is an object, it may get a distributive reading.

(17")   **Irgendeinen SCHÜLER**$_i$ [[hat ER einem MÄDCHEN e$_i$] und [hat SIE einem

        JUNGEN   e$_i$ vorgestellt]]

        some pupil, acc   has he to a girl   and   has she to a boy introduced

Why (17") unlike (17') does allows a distributive reading, seems to be connected with the consideration that objects seem to be better accessible to a distributive reading than subjects are. Indefinites being presupposed existentials at the left cannot have deleted equivalents in the second conjunct. As we will see in chapter 2.5., they are F2-foci and therefore, they need a focused counterpart in the second conjunct.

To summarize our observations with regard to German shared indefinites: If an indefinite is in the domain of presentational focus, this means in F1, it has an existential interpretation - cf. LEX and REX in (14) and (17). Because existentials introduce a new discourse entity, they cannot be deleted, this means, ellipsis of an existential is excluded. When not in F1 but in F2, the 'contrastive' focus domain, the indefinite has a presupposed existential reading. Then, its existential part is presupposed and its predicative part is focused At the right of the coordination, existentials as well as focused presupposed existentials may have a unique or distributive reading - cf. (14). The latter is possible because of the distributive force of the foregoing coordination. In the opposite, left located existentials, which only can be subjects, and presupposed indefinite subjects have only a unique reading. The reason is that they are not preceeded by the coordination cf. (17'). Because the trace of a shifted object, being a focused presupposed existential, is preceeded by the coordinative phrase, the shifted focused object may get a distributive reading - cf. (17"). If focused indefinites refer uniquely, their deletion is excluded. That their deletion is also excluded with regard to their focused distributive reading, will be shown in chapter 2.5. When the indefinite is neither in the presentational nor in the contrastive focus domain, it gets a generic interpretation - cf. (12) and (13)(i). Then, the existential as well the predicative part of the indefinite is

presupposed. This occurs, for example,when the construction including the distributive indefinite, contains constituents contrasting with each other like *Anna* and *Paula* or *Hans* and *Fritz* in (12)(i) and *Zhang San* and *Li Si* or *Chun Mei* and *Qiu Ju* in (12)(ii). Because not only the total meaning of the generic indefinite but also its distributive reading is presupposed, constructions containing totally presupposed indefinites may be represented as ellipses. Thus, we have the following, admittedly unfinished picture: on the one hand, there are coordinative structures with shared indefinites located in F1 or in F2, which have to be represented as extrapositional structures. On the other hand, we have coordinative structures with shared indefinites located neither in F1 nor in F2, which have to be represented as elliptical constructions.

2.2   Distinct or unique referents of shared possessive constituents

The next two examples mirror the difference between the distributive and unique reading of shared constituents in an additional way. When the shared constituent B is a possessive expression and is unfocused, coreference between the possessive pronoun and the respective DP is possible. In other words, such configurations allow sloppy identity.

BWD:

(18)   (i)   HANS$_i$ **LOBT** ~~seinen$_i$ alten Lehrer~~ und PAUL$_j$ **KRITISIERT** seinen$_j$ alten

Hans   praises ~~his$_i$~~   ~~old~~   ~~teacher~~ and Paul$_j$ criticizes   his$_j$ old

Lehrer

teacher

Beide Lehrer haben Hans und Paul vor zehn Jahren unterrichtet.

Both   teachers have   Hans   and Paul   ten years ago   taught.

(ii)   ZHANG SAN$_i$ zai **BIAOYANG** ~~ta$_i$ guoqu de laoshi~~, LI SI$_j$ zai **PIPING** ta$_j$

guoqu de laoshi

Zhang San   just praises   ~~he old de~~   Li Si just criticizes he old

.de teacher

Liang wei laoshi shi nian qian cengjing jiao-guo Zhang San he LI Si.
Two   CL teacher   ten year ago cengjing   teach-guo Zhang San and Li Si

The sloppy identity results from the possessive phrase being neither in F1 nor in F2. Hence, there may be, in the first conjunct, a copy of the possessive phrase situated in the second conjunct. What is copied is not the coreferentiality between the possessive pronoun and the subject in the second conjunct but the coreferentiality between the possessive pronoun and a binding DP in the respective sentence - for a more detailed analysis cf. Tancredi (1992).

Besides the reading given in (18), where the possessive pronouns are coreferential with the subject of their conjunct, one further reading is possible. The possessive in the elliptical topicalized constituent may be coreferent with a third person who is not in the coordination construction but in the broader context.

Regarding forward ellipsis like (19), sloppy identity is not possible in Chinese, whereas it may occur in German.

FWD:

(19) (i) Seinen$_i$ Vater hat FRITZ$_i$ **einem FREUND** und ~~seinen$_j$ Vater~~ hat PAUL$_j$

His$_i$ father has Fritz$_i$ to a friend   and his$_j$ father has Paul$_j$

einer FREUNDIN vorgestellt

to a girl friend   introduced.

Die Väter wurden herzlich aufgenommen.

The fathers were   warmly   recieved.

(ii) *Ta$_i$ de laoshi, ZHANG SAN$_i$ **BIAOYANG**-le, ~~ta$_j$ de laoshi~~, LI SI$_j$ **PIPING**-le

he de teacher Zhang San **PRAISE**-le   he de teacher   Li Si **CRITICIZE**-le

Liang wei laoshi shi nian qian cengjing jiao-guo Zhang San he LI Si.

Two CL   teacher ten year ago cengjing teach-guo   Zhang San and Li Si

What happens if the shared possessive expression belongs to F1 or F2? Before trying to answer this question, let me give you some brief prerequisites related to the inner structure of possessive phrases, and to the coreference of the possessive 'pronoun' and its antecedent. The possessive expression is considered here to be similar to an operator phrase which indicates that the referent e_1 of the variable y, which is in the scope of this operator and therefore bound by it, is correlated to a contextually given person e_2, which

in its turn is the referent of a variable x. To give an image of how a possessive phrase like *seinen lehrer* might be represented, I propose the following provisional representation: $\exists_y$ [yRx $\wedge$ MALE PERSONx $\wedge$ LEHRERy]. Whereas the referents of x and R are always presuppositional, y and LEHRER may be either focused or presupposed. Because the existence of e_2, as well as the relation between e_1 and e_2, is always presupposed in this operator phrase, the existence of e_1 must also be somehow presupposed. Despite the referent of y being somehow lexically presupposed by the relation R, it need not be mentioned in the previous context.[3] It may therefore in F1 be introduced into the discourse. As to the coreferentiality between x and a constituent in the respective text or sentence, coreferentiality within a sentence is only possible if the constituent serving as the antecedent of x c-commands either the possessive phrase itself or a trace of it.

Let us start with an example containing a possessive located in F1:

(20) (i) HANS$_i$ LOBT und PAUL$_j$ KRITISIERT seinen$_{k/*j, *i}$ alten LEHRER

HANS$_i$ PRAISES and PAUL$_j$ CRITICIZES his$_{k/*j, *i}$ old TEACHER

Er hat die beiden vor zehn Jahren unterrichtet.

He has the both ten years ago taught.

* *Beide Lehrer haben Hans und Paul vor zehn Jahren unterrichtet.*

Both teachers have Hans and Paul ten years ago taught.

(ii) Zhang San$_i$ zai PIPING, Li Si$_j$ zai FEIBANG ta$_{k/*j, *i}$ guoqu de LAOSHI.

Zhang San just criticize Li Si just insult he old de teacher

Keshi zhei wei laoshi ba tamen ding huiqu le
but this CL teacher ba they reprimand le

In the case of the possessive expression located in F1, imagine a preceding question like *What are Hans and Paul doing?* Since the possessive expression is in F1, only one referent of y has just been introduced into the discourse. This means that there are not other referents being characterized like y, as it would be if the coordinative structure and

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[3] Cf. Reinhart (1995:100) who claims for definite descriptions that "...they are frequently found also with no previous discourse mention." Because possessive expressions seem to be quite similar to definite descriptions, we may adopt this consideration for them. Whereas the referents of definite descriptions have to be familiar, at least by world knowledge, the referent of possessive expressions becomes familiar by the presupposed relation between the possessive expression and a presupposed entity.

the existence of y were presupposed. Because there has only one referent e_1 been introduced into the context, this e_1 can only be related to one contextually given entity e_2. Since the coordination offers two e_2-referents and both cannot serve as antecedents of one expression at the same time, sloppy identity is not obtainable. Therefore, the possessive pronoun refers to a person not expressed in the coordinative structure but in the closer context. To say it in other words, possessive pronouns, like all pronouns, may only refer to the most familiar entities in the discourse. If a possessive expression has just been introduced into the discourse so that only one entity has been introduced, the possessive pronoun has better access to one antecedent than to two, as it is be in (20). Because sloppy identity is excluded with regard to coordinative constructions that contain possessive expressions , which are in F1 at the right of the construction, such constructions cannot be represented as elliptical structures.

On the other hand, if the possessive is in F2, sloppy identity may occur and an ellipsis representation is not impossible.

(20')   (i)   HANS$_i$ LOBT und PAUL$_j$ KRITISIERT   **seinen$_{k/j,i}$ alten** LEHRER

HANS$_i$ PRAISES and PAUL$_j$ CRITICIZES   his$_{k/j,i}$ old   TEACHER

(ii)   Zhang San$_i$ zai PIPING, Li Si$_j$ zai FEIBANG **ta$_{k/j,i}$ guoqu de** LAOSHI.

Zhang   San just criticize   Li Si just insult   he   old de teacher

Containing a F2-focus, the whole expression may serve as a corrective or as a question answer focus. What is contrasted here is the predication LEHRER. The distributivity of the possessive expression is, for such cases, presupposed by the context. This enables the coreference between the possessive pronoun with a DP in each conjunct. Although these constructions allow sloppy identity, their syntactic representation cannot be elliptical. The reason is that focused constituents cannot be deleted.

We move now on to shared focused possessives at the left of the construction:

(21)   (i)   **Seinen$_k$ Vater**   hat FRITZ$_i$ einem FREUND und hat PAUL$_j$ einer FREUNDIN **vorgestellt**

His$_k$ FATHER   has Fritz$_i$ to a friend   and has Paul   to a girl friend introduced

Die Väter wurden/ er wurde herzlich aufgenommen.
The fathers were / he was warmly recieved.

(ii)   **Ta$_k$ de wuli LAOSHI,** Zhang San BIAOYAN-le, Li Si PIPING-le

he de physic teacher   Zhang San PRAISE-le   Li Si CRITICIZE-le

Here, the possessive phrase at the left of the coordinative structure cannot be in F1 because it is not in the F1-domain. If the possessive expression were a subject, it could be in F1. Then, however, it could not be coreferential with a DP of the sentence because it would not be c-commanded by this DP.

Being in F2, the construction is an answer or a correction of a foregoing sentence. Because the distributivity of the possessive expression may then be introduced into the context, sloppy identity is possible. However, sloppy identity does not coincide with the ellipsis representation, as has been shown regarding (18) and (19). Because the possessive phrase in (21) is focused, unlike the possessive phrases in (18) and (19), it cannot be deleted. Therefore, an ellipsis representation should be excluded even for the distributive interpretation of shared focused constituents at the left of the coordination.

To put our considerations on focused and unfocused possessive phrases in a nutshell: Focused possessive expressions in F1 do not allow distributive reference or, in other words, sloppy identity. On the other hand, possessive phrases in F2 allow sloppy identity. Whereas distributive reference of the possessive DP or, in other words, sloppy identity, can be represented in an elliptical configuration with one expressed and one deleted possessive phrase, unique reference or the impossibility of sloppy identity should be represented as an extrapositional configuration having the possessive phrase outside the coordinative phrase. The same holds true for possessive expressions located in F2 and allowing sloppy identity because the deletion of focused constituents is not allowed cf. chapter 2.5..

2.3 Scope peculiarities

In this chapter, we are going to investigate the behaviour of indefinite DPs towards strong quantifiers in order to gather further evidence for the coexistence between ellipsis and extraposition in coordination.

Having considered that indefinites should be interpreted as existentials if they are in F1, we may make the prediction that indefinites do not allow so called scope reordering if they are in F1 and not in the scope of strong quantifiers like *every*. Non focused indefinites, indefinites in F2 and indefinites in F1 and in the scope of $\forall$P, on the other hand, allow scope reordering. Because scope reordering, which yields an individual reading, coincides with the ellipsis representation, and non scope reordering, which results in a unique reading, can only be represented as an extraposition configuration, existential indefinites may again deliver strong arguments in favour of the distinction between ellipsis and extraposition.

Without going into great detail, I will give a brief outline of what is meant by scope reordering.

If an indefinite expression preceeds a strong quantifier in a sentence, the scope order of the surface structure need not be the intended one. Therefore, the intended scope order has to be reconstructed - cf. for scope ambiguities Frey (1989), Diesing (1992), Krifka (1995), Reinhart (1995) and Lechner (1997).

To be in the scope of a strong quantifier like $\forall$P, $\exists$P itself - cf. (22)(i) - or a trace of $\exists$P - cf. (22)(ii) - has to be c-commanded by $\forall$P.

(22)   (i)   Jedes Mädchen hat einen Gast vorgestellt.

             Every girl   has a   guest introduced

       (ii)   Einen Gast$_i$ hat er jedem Mädchen e$_i$ vorgestellt.

             A guest   has   he to every girl   introduced

(22)(i) and (ii) are ambigious with regard to the different scope orders. The intended scope order depends on the information structural status of the indefinite phrase and on the context.

Recall that we distinguish between two kinds of foci - F1 and F2 . The latter icludes the common known foci like focus associated with particles, corrective focus and

question-answer focus. Because F1 indicates the domain of existence, an indefinite expression being in F1 is to be interpreted as an existential. Indefinites being outside F1 are not existentials, they are interpreted either as generic expressions cf. Eckardt (1996) or as 'presupposed existentials' (F2).

Because not being in F1 the indefinite in (22)(ii) can either be interpreted as generic or as a presupposed existential (F2). Being F2, it carries the main accent. If the indefinite expression is a generic expression, its distributivity is presupposed and the ∀P has scope over it. If, on the other hand, the indefinite is F2, it may either have a distributive reading and so be in the scope of ∀P or it may have a unique reading and thus not be ind the scope of ∀P. Whether it is in the scope of ∀P depends on the respective context.

In the opposite to (22)(ii), the indefinite in (22)(i) can be interpreted as an existential. The distributive reading results from the strong QP *every pupil*, which has the existential in its scope.

Whereas (22)(ii) is ambigous in the distributive and non distributive F2-reading of the object, (23) shows ambiguity between an existential and a non existential reading of the subject.

(23)   Ein Schüler stellte jedem neuen Mitschüler einen Lehrer vor.

       A pupil   introduced to every new pupil   a teacher.

If the indefinite subject is not in F1, it is interpreted as a generic expression and refers to a known object.

(i)   Ein Schüler [$_{F1}$ stellte jedem neuen Mitschüler einen Lehrer vor]

If the indefinite is in F1 (ii), or if it has been moved out of F1 (iii), according to Eckardt's focus restriction R4 (1996:6), it is an existential. Being an existential and not in the scope of the strong QP, it cannot get a distributive reading.

(ii)   [$_{F1}$ Ein Schüler stellte jedem neuen Mitschüler **einen LEHRER** vor]

(iii)   [$_{F1}$Ein Schüler] stellte jedem neuen Mitschüler einen Lehrer vor.

If the indefinite in (23) carries the main accent, it is F2. In that case, the existence of its referent is presupposed and only its predicational part is focused.

(iv)   [$_{F2}$ **Ein SCHÜLER**]$_i$ stellte [jeden neuen Mitschüler]$_j$ [einen Lehrer]$_k$ [e_i e_j e_k ...
        vor]

Because the $\forall$P is in the background and therefore not in the F1-domain, it has scope over a trace of the indefinite expression *ein Schüler*. Now, it depends on the context whether the F2-indefinite may get a distributive reading or not.

To summarize the necessary prerequisites for the distinction between ellipsis and extraposition regarding indefinite expressions and strong QPs: To simplify matters, the indefinite article is represented as the existential operator $\exists$ - cf. the differing and more differentiated representations of Diesing (1992), Reinhart (1995) and Eckardt (1996). If the $\exists$P is in F1, the existence of the referent of $\exists$P is asserted, at least in declarative sentences. If $\exists$P is not in F1, the existence of its referent is presupposed. The $\exists$P is not in F1 if it is F2 or if it is scrambled out of F1. The latter case is interpreted generically. For indefinite expressions located in F2, their predicational part is focused and contrasted to a previously mentioned predication on the presupposed referent.

The existential gets a unique interpretation ($\exists\forall$) if it is not in the scope of a strong QP, and it gets a distributive reading ($\forall\exists$) if it is in the scope of such a strong QP. The distributive or unique reading of $\exists$Ps in F2 depends on the respective presupposed context. If $\exists$P is F2 and the article is focused, the unique reading is obtained. Whether it is correct to say that $\exists$Ps that have a generic interpretation may also have a distributive reading cannot be considered here. Because they never take scope over strong QPs, they are here , for matters of simplicity, considered to be distributive ($\forall\exists$).

To return to our predictions: (i) Indefinites do not allow so called scope reordering if they are in F1 and not in the scope of strong quanitifiers like *every*. Having therefore a unique reading, they cannot be represented as a deleted indefinite in an elliptical coordinative configuration. (ii) Indefinites that are not in F1 allow scope reordering, which, conversely, can be represented as an elliptical coordinative configuration. Let us now have a look at an example for forward ellipsis and then at an example for backward ellipsis.

FWD:

(24) (i)   Irgendeinen Gast hat ER **jedem MÄDCHEN** und ~~irgendeinen Gast~~ hat SIE

Some   guest, Acc has HE **to every GIRL**   and some   pupil has SHE

jedem JUNGEN vorgestellt.

to every BOY   introduced.

Die Gäste waren von den Mädchen und Jungen sehr beeindruckt.
The guests were   by   the girls   and boys   very impressed.
∀x : GIRLx [∃y : PUPILy [he INTRODUCE y to x]] & ∀x : BOYx [∃y : PUPILy [she INTRODUCE y to x]]

(ii)   * Mou yi wei keren, LI SI **xiang mei ge** NÜHAI, ZHANG SAN **xiang**

some 1 CL   pupil Li Si prep. every CL   girl   Zhang San   prep.

mei ge NANHAI zuo-le jieshao

Because in Chinese, yi-phrases are not allowed to be preposed, scope ambiguity like in the German example is not possible. Thus, such examples do not suitably count as arguments for FWD in Chinese.

As for the German example, the indefinite is neither in F1 nor in F2 and, consequently, gets a generic interpretation and so a 'distributive' reading. Or, in other words, it is in the scope of the strong QPs in each conjunct. To have scope over the ∃P, the ∀P has to c-command ∃P or a trace of ∃P. The trace of ∃P, in its turn, must be bound by its antecedent in the conjunct. Hence, with regard to (24), repeated here as (25), the ∀P in the first conjuncts has a trace of the ∃P in its scope, whose antecedent is in the conjunct.

(25)   Irgendeinen Gast_i hat ER **jedem MÄDCHEN** e_i ~~vorgestellt~~ und ~~irgendeinen~~

Some   guest, Acc has HE **to every GIRL**   and ~~some~~

~~Gast_j~~ hat SIE **jedem JUNGEN** e_j vorgestellt.
~~pupil~~ has SHE **to every BOY**   introduced.

For the ∀P in the second conjunct to have a trace of the ∃P in its scope, ∃P must be present as the antecedent of the trace. Being deleted and so somehow expressed, the ∃P in the second conjunct serves as this antecedent. The ellipsis representation accordingly mirrors the necessary distributive reading. The distributive reading thus allows a plural anaphoric expression in a following sentence to have access to both of the represented indefinite expressions - cf. the context given under (24). As for the semantic inter-

pretation of (25), two alternatives should be discussed. The first one presupposes syntactic reconstruction with the ∃P being copied into its trace. The second one reconstructs the variable bound by the ∃P as a type shifted variable - cf. Lechner (1997).

Another example supporting the syntactic ellipsis structure is the following BWD, where a strong QP in the first conjunct is thought to be elliptical.

BWD

(26) (i) [$_{F1}$ **Ein MATHELEHRER** HAßTE ~~jeden Schüler~~]und [$_{F1}$ **ein MUSIKLEHRER** LIEBTE jeden Schüler]
        A   **MATHTEACHER** Akk. HATES and a MUSICTEACHER Acc. loves every pupil Nom..
        Wer sind die beiden?

        Who are   the   both?

∃x : MATHTEACHERx [∀y : PUPILx [x HATE y]] & ∃x : MUSICTEACHER [∀y : PUPILx [x LOVEy]]

In Chinese again, such an example is not construable. The reason may be that indefinite expressions cannot be topicalized.

In the German example, scope reordering is not possible because the indefinite DPs are in F1 and, so, not in the scope of the ∀Ps. For the ∃P to have scope over the ∀P in the first conjunct, the ∀P has to somehow be present there. If it is represented as a deleted constituent having syntactic and semantic but no phonological content, this condition is fullfilled. The same applies in the following example:

(27)   **Jeder MATHELEHRER** haßt ~~einen Schüler~~ und **jeder MUSIKLEHRER** liebt einen Schüler.

    Every math teacher   hates ~~a pupil~~   and   ervery music teacher   loves a pupil.

Here, the ∀P needs the ∃P in its scope to receive the distributive reading. This is only possible if the indefinite is present either with or without its phonological form.

In opposition to the examples (24) or (25), respectively, scope order reconstruction is not possible if the shared indefinite is in F1.

LEX:

(28) (i) [F1 Ein Schüler stellte jedem Lehrer einen Schüler und jedemProfessor einen Studenten vor]

A pupil   introduced to every teacher a pupil   and to every prfessor a

student

   (ii) You ge XUESHENG, ZHANG SAN gei yi ge NÜHAI jieshao le, LI SI gei yi

you CL   pupil   Zhang San to   1 CL girl   introduced le   Li Si   to   1

ge NANHAI jieshao le

CL boy   introduced   le

To explain this example, let us first concentrate only on the first conjunct and pretend that the indefinite expression is there included. Furthermore, we must suppose that the indefinite is an existential located in F1. That it is an existential is particularly supported by the Chinese you-phrase, which expresses the existentiality lexically. In German, the existential is not in the scope of ∀P and therefore the distributive reading is not obtainable, or, in other words, scope reordering is excluded. Turning now to the second conjunct, we observe that there is not any indefinite which might serve as an existential. By pretending that the existential is contained in the first conjunct, the gap in the initial part of the second conjunct cannot be considered to be a deleted existential. The reason is, that existentials, as already stated for independent reasons, cannot be deleted. If the indefinite in the second conjunct is considered to be a deleted generic expression, scope reordering can take place in the second conjunct.

(28') [F1 Ein Schüler stellte jedem Lehrer einen Schüler ...]und [~~ein Schüler stellte~~ jedemProfessor einen Studenten vor]

A pupil introduced to every teacher a student   and to every professor a

student

Scope reordering is now possible because the deleted constituent belongs then to the background. Therefore, it is out of F1 and has thus left a trace. The latter is in the scope of ∀P. But, this yields different scope orders and different information structures in both conjuncts. This contradicts the syntactic and semantic parallelism requirement which applies to coordinative structures - cf. Lang (1984). More importantly, this syntactic representation cannot be mapped into a appropriate semantic represention. In order to

get this, the existential cannot be in the first conjunct, but must be *structurally anchored* outside the coordination.

Whereas (28) is an example of an extraposed existential at the left of the coordination, let us now turn to an example where the existential is at the right of the coordination.

REX

(29) Jeder Schüler [$_{F1}$ haßt ...] und jede Schülerin [$_{F1}$ liebt einen **MATHELEHRER**]
       Every schollbay   hates   and every schoolgirl   loves a math teacher

Here, the indefinite is an existential because it is in F1, but, in contrast to (28), it is ambigious with regard to its distributive and non distributive reading. To ensure the unique reading, the indefinite article can carry a special accent so as to avoid the distributivity induced by the $\forall$P. This accent then expresses F2. In this way, the existence of the referent of the indefinite is presupposed and its cardinality is focused.

(30) Jeder Schüler haßt und jede Schülerin liebt [[$_{F2}$ **EINEN**]Mathelehrer]
       Every schoolboy hates and every schoolgirl loves   a mathteacher

Focusing the uniqueness results in scope reordering. How this works will become clearer when we have elaborated the syntactic and semantic representation of such constructions.

When we regard the gap in the first conjunct as a deleted constituent and, thus, as a copy of the indefinite in the second conjunct, we cannot see whether the article is stressed or not. We can, hence, not exclude a distributive reading. This does not fit the parallelism requirement and the appropriate semantic interpretation.

To return to (29), the existential there, is ambigious with regard to its unique or distributive meaning. For both interpretations, the representation of the coordinative structure as an elliptical one is possible in neither case because it then contains a deleted existential which cannot be deleted. As an alternative to the inappropriate ellipsis representation, which does not achieve the existential reading of the indefinite, we offer the extraposition representation.

In the next REX-example, scope reordering is induced by the indefinite having quitted the F1-domain. In doing so, the indefinite has left a trace which, in its turn, is in the scope of the ∀P. Now, the condition for ∀P to have scope over ∃P is fulfilled.

(31)   *Nun, da wir gerade über Mathe- und Musiklehrer sprechen:*

   Now, speaking about math and music teachers:

   [Einen MATHELEHRER HAßT ~~jeder Schüler~~] und [einen MUSIKLEHRER LIEBT **jeder SCHÜLER**].

   A MATHTEACHER, Acc. HATES   and a MUSICTEACHER, Acc. LOVES **every** PUPIL Nom..

   Die Mathematiklehrer sind nämlich immer so streng und die Musiklehrer sind eher lockerer.

   Namely, the math teachers are always very rigid and the music teachers are rather easygoing.

   * Der Mathelehrer ist nämlich so streng, der Musiklehrer hingegen ist lockerer.

   * Namely, the math teacher is very rigid, the music teacher however, is more   easygoing.

Here, if we suppose the gap in the first conjunct to be a deleted constituent, we yield the appropriate distributive interpretation because the deleted ∀P, as well as the non deleted one, have the traces of the scarmbled indefinite in its scope. . But then, there is a deleted focused constituent, which, as already was mentioned and, as we will see in chapter 2.5, must not be deleted.

To conclude this chapter: in addition to the evidence enumerated with connection to the unique or distributive reading of indefinite and possessive expressions, the evidence that existentials may have a unique reading and resist scope reordering if they are not in the scope of ∀P further favours the coexistence between ellipsis and extraposition.

2.4   Agreement Peculiarities

Another observation which, at least in German, leads to the conclusion that it is necessary to distinguish between ellipsis and extraposition with regard to missing elements in coordination, is connected with agreement.

Within BWD the morphosyntactic form of the finite verb must be the same in both conjuncts, provided that the finite verb is not focused. Thus, example (32) is well-formed because it includes both a deleted and a non deleted finite verb, whose morphological forms are identical.

(32) *Bist du sicher, daß Hans BIER und Fritz WEIN gekauft hat?*

　　　Are you sure　that Hans Beer and Fritz　Wine bought has?

　　　Na, ich glaube eher, daß HANS SAFT ~~gekauft hat~~ und FRITZ MILCH gekauft hat.

　　　　I　believe rather that HANS JUICE ~~bought~~　~~has~~ and FRITZ　MILK　bought has.

Example (33), on the other hand, where the morphological forms of the finite verbs differ, is not acceptable.

(33) *Bist du sicher, daß die Kinder BIER gekauft haben und Fritz WEIN?*

　　　Are you sure　　that the CHILDREN BEER bought　have and Fritz WINE?

　　　*Na, ich glaube eher, daß die Kinder SAFT ~~gekauft haben~~ und Fritz MILCH gekauft hat.

　　　　I　believe rather that the children JUICE ~~bought have~~　　und Fritz MILK bought has

That this observation is relevant to our purposes, is easily seen if we compare (32) with (34). Here, we realize that the finite verb is plural whereas the subject in each conjunct is singular. In this case, the verb must be focused.

(34) *Bist du sicher, daß HANS den SAFT und FRITZ den WEIN GESTOHLEN haben?*

　　　Are you sure　　that HANS　the JUICE and FRITZ　the WINE STOLEN　　have?

　　　Na, ich glaube eher , daß HANS den SAFT und FRITZ den WEIN GEKAUFT **haben.**

　　　　I　believe　　that HANS　the JUICE and FRITZ the WINE BOUGHT　have.

When the finite verb is focused, it has the plural form, even if the subject in each conjunct is singular. This apparent number mismatch dissolves if the focused finite verb is somehow extracted out of the coordination. Under these circumstances, it is possible to explain the plural of the verb as agreement between the verb plural and the plural triggered by the sum of the subjects in the coordination structure. In the latter case, it

seems plausible that it is determined semantically. Exactly how this works is a question still to be answered.

2.5　Focus and Coordinative parallelism

In this chapter, we will first reconsider the possibility of the focused shared constituent being represented as a phonological empty pro-element. This consideration will then be rejected by stating binding and information structural parallelity grounds.

Recall that focused shared constituents cannot be represented as deleted entities. But, what prevents them from being represented as pro elements? Without going into great detail, pro elements are here supposed to be phonologically empty elements with underspecified syntactic and semantic properties. Thus, with regard to e.g. (14) and (17) we yield the following representations:

(35)　HANS hat ANNA [VP pro ~~vorgestellt~~][und FRITZ hat PAULA [VP **einen SCHÜLER**
　　　vorgestellt]]

Here, the pro is not bound, and so, this representation is ruled out. If the pro is in the second conjunct it may be bound by its antecedent.

(36)　[DP**Ein SCHÜLER**] hat PETER erst GELOBT [und pro hat dann FRITZ KRITISIERT]

Because the pro is coreferent with its antecedent, it refers to the same entity the expressed focused constituent does. This fits the semantic interpretation and the construction has an appropriate syntactic representation. However, we consider the parallism requirement valid for symmetric coordinative constructions. The requirement demands, among others, that a coordinative structure is also parallel with regard to its information structure. Two conjuncts of a coordinative structure are parallel with regard to their information structure if both have the same amount of focused constituents. Regarding constructions like (35) and (36), as well as configurations like (21) and (28) and as containing an empty pro element in either conjunct does not meet this above-mentioned requirement. Hence, this parallelism requirement　serves as a very strong

evidence to separate the focused shared constituent from the coordinated conjuncts. In addition, such separation is not always possible. If the shared constituent is at the right of the first conjunct or it is at the left of the second conjunct, it cannot be extracted out of the coordination. As will be shown in chapter three, only constituents that are either at the left or at the right of the whole construction may be 'extracted'. In German, nevertheless, it is possible to have the shared focused constituent at the right of the first conjunct.

(37)   Hans hat Anna [$_{F1}$ einen Schüler vorgestellt] und Fritz Paula [$_{F1}$ AUCH]

Here, the German conjunction *auch* is focused and, thus, indicates the focus of the second conjunct. Information structural parallelism is, thus, maintained within this construction. The focused *auch* actually allows an elliptical VP in the second conjunct. This is supported by the fact that the deleted indefinite in the second conjunct is a copy of its antecedent, referring, like its antecedent, to its own referent. The Chinese language does not have an equivalent to this stressable German AUCH.

Whereas shared constituents that are focused must be outside the coordination, constituents not being focused need not be extracted. The reason is that there is not any information structure anchored motivation for their extraction. Because both conjuncts must be parallel in their information structure, they must have the same number of focused constituents. This is the case with the examples considered so far as ellipses - cf. (12), (13), (18), (19), (24) to (27) and (32). In these examples, there is no need to extract a non focused constituent to preserve information structural parallelism.

A focused constituent must always be licensed by its alternative, to F1, or its contrast partner, to F2. In a coordination structure, the contrast or alternative partner of a focused constituent has to be in the other conjunct. When the focused constituent is outside the coordination, it must be licensed by an alternative or contrast partner, either in the grammatical or the situational context - cf. (38) and (39).

(38)   [[HANS hat ANNA] und [FRITZ hat PAULA]] [einen PFANNKUCHEN] geschenkt]
        und nicht ein SANDWICH.
        [HANS has ANNA and FRITZ has PAULA] a DOUGHNUT given and not a SANDWICH

(39) [Einen PFANNKUCHEN [[hat HANS ANNA] und [hat FRITZ PAULA geschenkt]]]

und nicht ein SANDWICH.

A DOUGHNUT [has HANS ANNA and has FRITZ PAULA given] and not a SANDWICH

To formulate a summary of chapter two, coordination constructions containing missing elements can either be elliptical or non elliptical. In the elliptical case, the missing element is overt in one conjunct and somehow covert in the other one. In the non elliptical construction type, the so called shared constituent is somehow extracted.

Both coordination types appear not only in German but also in Chinese. This may lead to the conclusion that both types are universal. That German and Chinese differ with respect to certain ellipsis and extraction types is determined by certain characteristics of their grammars.

In the next part, we will discuss the syntactic representation of the so called extraposition type. This does not mean that all questions concerning the syntactic as well as the semantic representation of the ellipsis type are answered. Delaying representational problems of the ellipsis type to a later time, let us touch the syntactic structure of the extraction type.

# 3 Considerations on the Syntactic Representation of the Extraction Type

Before starting with the syntactic representation of the extraposition within coordination, there are two remarks regarding the adopted sentence structure and the coordination format. As to the sentence structure, we depart from the structures proposed by Rizzi (1995), Gasde (1997) and Meinunger (1997)

(40) CP > TopP > Foc2P > IP > Foc1P > VP

Here, Foc1P covers the domain of presentational focus, or to express it in Eckardt's terms, the F1-domain. The Foc2P, on the other hand, is the place for F2-foci. Note that in Gasde's and Meinunger's sentence structure, Foc1P is our F2 and Foc2P is our F1. In order to illustrate the idea of how to represent syntactically the extrapositional structure,

let us neglect the details of German innersentential focus structure and leave the structural scheme (40) as is.

The here applied coordination format has been developed by A.Munn (1996).

(41)
```
            XP
          /    \
       XP       BP
              /    \
            B        YP
```
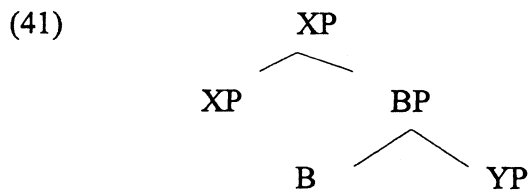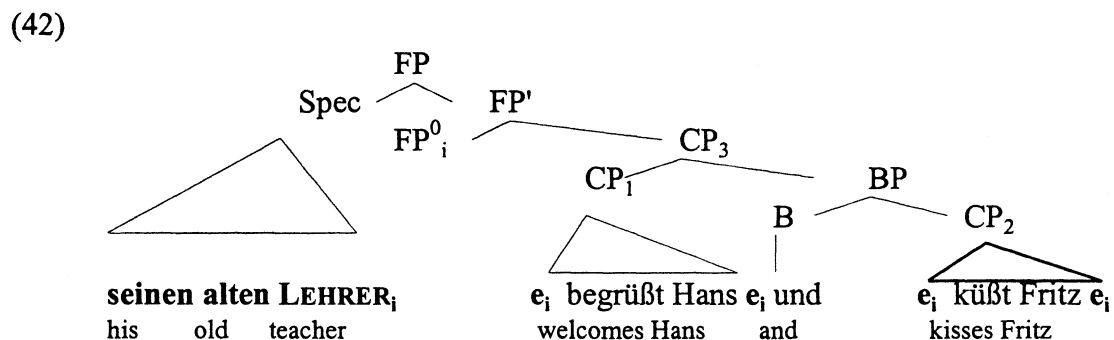
He suggests coordination to be a Boolean Phrase BP with a conjunction as head, the first conjunct an adjunct to this BP, and the second conjunct the complement of the conjunction. Because the particular structure of coordination does not have great influence on our present considerations on extraposition, we will neglect further details.

With regard to extraposition, remember that there exist two extraposition types: LEX, with the focused expression at the left edge of the coordination, and REX, with the focused expression somewhere in the right of the second conjunct. Let us start with LEX:

3.1 Syntactic Representation of the 'Left-extraction' type

It has turned out to be appropriate that a focused constituent which is shared in both conjuncts must be outside the coordination structure. If we take the sentence scheme represented within (40) and Munn's coordination format, the focused shared constituent should be adjoined to the coordinate phrase CP, which, in its turn, consists of two coordinated CPs.

(42)

```
                        FP
                      /    \
              Spec         FP'
                    FP^0_i    /      \
                                     CP_3
                            CP_1  /        \
                                /        BP
                             B      /    \
                             |         CP_2
```

seinen alten LEHRER$_i$	e$_i$ begrüßt Hans e$_i$ und	e$_i$ küßt Fritz e$_i$
his old teacher	welcomes Hans and	kisses Fritz

The adjoined FP may either be F1 or F2. Whether it is F1 or F2 depends on the status of the extracted Φ. As to the example (42), it is considered to be F2. The extraposed constituent has the same index as its traces e in each conjunct. Within this extraction approach, this will be achieved by the condition that the movement of two constituents into one landing site will be only possible if this two constituents are identical. That the shared focused constituent Φ and its traces have the same index ensures that the traces are copies of Φ. The traces are identical copies of Φ if they agree with Φ in all semantic properties. Such a identity enables the unique reading of extraposed focused indefinite and possessive expressions in coordinative configurations - cf. (44) and (43)(ii). Under identity the possessive pronoun cannot be coreferential with the subject in neither conjunct because the subjects differ from each other -cf (43)(iii).

(43) (i)   *Wen küßt Hans und begrüßt Fritz?.*

         Who kisses Hans and welcomes Fritz?

      (ii) **Seinen$_k$ alten LEHRER** [[e$_k$ küßt Hans] [und [e$_k$ begrüßt Fritz]]]

            His   old   TEACHER kisses HANS and welcomes FRITZ.

      (iii) *****Seinen$_k$ alten LEHRER** [[e$_i$ küßt Hans$_i$] [und[e$_j$ begrüßt Fritz$_j$]]]
            His   old   teacher   kisses Hans and welcomes Fritz.

And, under identity, only one referent can be denoted by the indefinite expression as we may notice with respect to (17'') or (44) and (45).

(44) **Irgendeinen SCHÜLER$_i$** [[e$_i$ hat ER einem MÄDCHEN e$_i$] [und [e$_i$ hat SIE einem

      JUNGEN   e$_i$ vorgestellt]]]

      Some   PUPIL   has HE to a GIRL   and has SHE to   a
      BOY introduced

∃x : PUPILx [∃y : GIRL Y [he INTRODUCE   x to y] & ∃z : BOYz [she INTRODUCE x to z]]

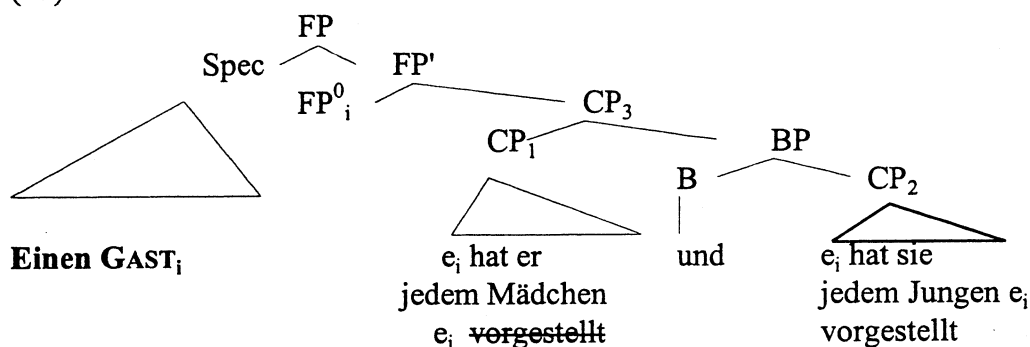Provided that the traces of the extraposed focused expression are variables they are bound by the ∃-operator which being the semantic interpretation of the indefinite article is located in the extraposition and has so scope over both variables.

A problem arises if the shared F2-constituents in (43), (44) and (45) have a distributive reading.

(45)　**Einen GAST** hat er jedem Mädchen und hat sie jedem Jungen e_i vorgestellt.

　　　A guest　　　　　has he to every girl　　　and has she to every boy introduced.

(45)

```
                    FP
            Spec  ⌢    FP'
                FP⁰ᵢ  ⌢      CP₃
                      CP₁ ⌢         BP
                                B ⌢    CP₂
        Einen GASTᵢ      eᵢ hat er    und    eᵢ hat sie
                         jedem Mädchen       jedem Jungen eᵢ
                         eᵢ vorgestellt      vorgestellt
```

Recall that a shared constituent being F2 may have a distributive and a unique reading - cf. (21) and (17"). Having a unique reading, the traces of Φ are identical copies of Φ. Remember that an indefinite expression as well a possessive expression consists of an existential and a predicative part. To be an identical copy y of a constituent z, y must be identical with regard to its existential as well with regard to its predicational part. This means that the copy and its antecedent refer to the same entity and that they have the same predicational part.

Now, with regard to the existential part, it may happen, that the traces of Φ refer to different entities. Then, they only share the predicative part and are thus only partially identical. Referring to different entities and having a shared predicative part results in a distributive reading. For Φ, this means that it hosts only the predicative part and that it has left the existential part in its traces. Leaving the existential parts in the coordination and not having them in F2 coincides with the presupposition of these existential parts.One implementation of this idea into an appropriate semantic representation could be to represent the traces of Φ as variables of the type $<<e,t>t>$. This corresponds to semantic reconstruction - cf. Lechner (1997).

3.2　Right Extraposition Representation

Having just outlined some considerations on the syntactic representation of focused shared constituents being adjoined to the left of the coordination, we turn now to con-

structions where the shared focused constituent is at the right of the coordination - cf. (14), (20), (29), and (31).

The REX representation differs from the LEX representation - cf. (43), (44) and (45) - in one additional derivational step. Thus, the coordinative phrase, which is background because it does not belong to any focus domain, has to be moved into the TopP. Like the Foc2P, the TopP is adjoined to the left of the coordination.

(46)   HANS hat ANNA und FRITZ hat PAULA **einen PFANNKUCHEN geschenkt**.
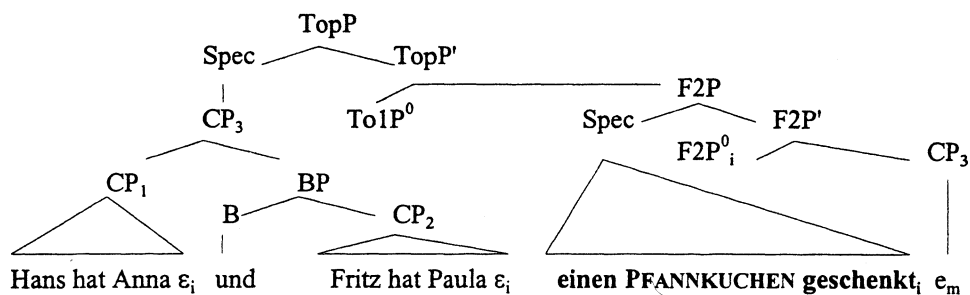
To conclude the considerations on the syntactic representation of extraposed constituents, let me name only a few of unsolved problems. First, what is if Φ contains also non focused material like in (47) and (48).

(47)   Ich bin sicher, daß HANS ANNA und FRITZ PAULA [$_{F2}$ **einen STUDENTEN**] vorgestellt hat.

I'm shure   that Hans to Anna   and Fritz to Paula   a   student introduced has.

(48)   HANS hat ANNA und FRITZ hat PAULA [$_{F2}$ **einen PFANNKUCHEN**] geschenkt.

HANS has ANNA and FRITZ has PAULA   a   DOUGHNUT   given.

Second, problems arise if the whole coordinate phrase belongs to the F1 domain - cf. (17). Then, it is hard to find any motivation for the coordinate phrase to move to the TopP. Recall that the CP$_3$ in (46) has moved to TopP because it did not belong to a focus domain. And third, what prevents REX-constructions from being represented as constructions whith Φ being adjoined to the right of the construction?

Regardless of these problems, there are interesting similarities between extrapositional and cleft constructions.

3.3 Cleft and Extraposition

As to the syntactic representation of extraposed constituents within coordination the focused shared constituent is thought to be located in FocP, which is adjoined to the left of the coordination. Let us assume that this FocP is similar to the Foc2P in (40), which is adjoined to IP and has been justified for independent reasons by Gasde (1997) and Meinunger (1997). They adopt this position to represent Chinese and German it-cleft- and pseudo cleft sentences. In considering these cleft sentences to be monoclausal, they need the sentence inititial Foc2P for the focal part of their it- cleft- and pseudocleft sentences. And in addition, they need the sentence initial TopP for the topical part of their pseudocleft-sentences. Because it-cleft- and pseudocleft-sentences also allow coordination, they may give further support for the extraposition representation in coordinative structures.

If we will compare the LEX-construction (49)(i) being structured like (45) with its it-cleft paraphrase (49)(ii), we may see that they may be represented in a similar way:
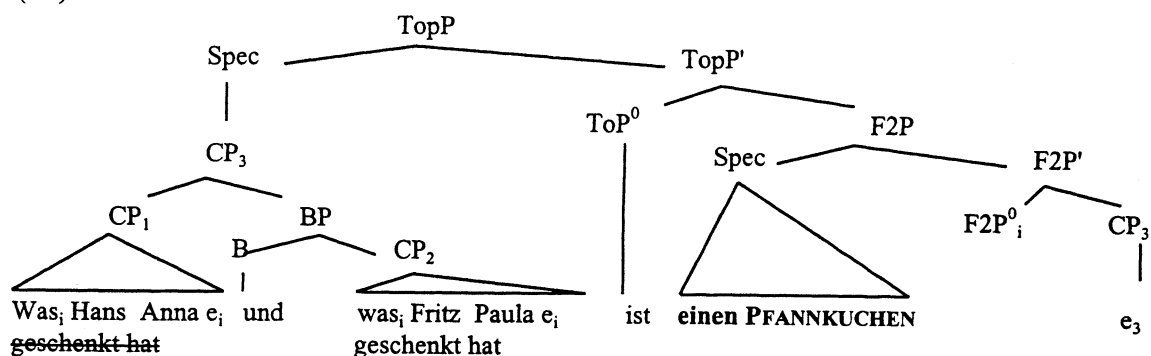
(49)   (i)   **Einen PFANNKUCHEN** hat Hans Anna und hat Fritz Paula geschenkt.

        (ii)   Es ist **einen PFANNKUCHEN**, den HANS ANNA und FRITZ PAULA
                geschenkt hat.

(50)
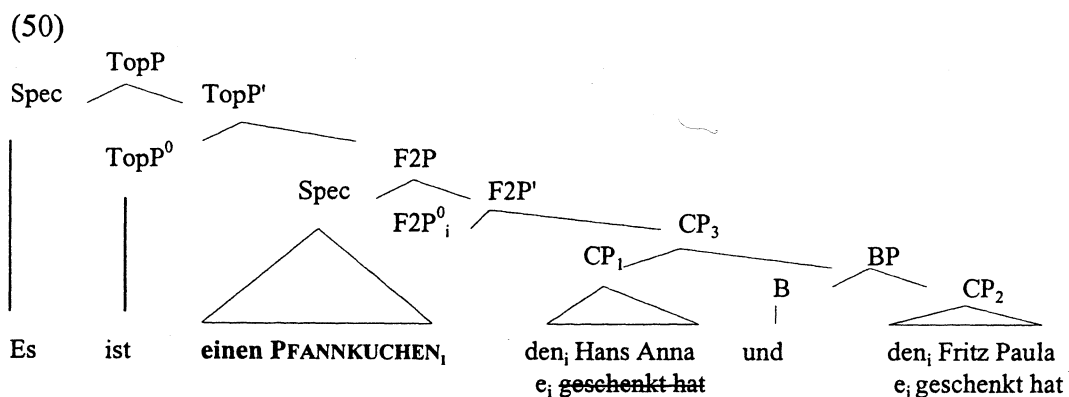
The same holds true for REX-constructions and their pseudocleft paraphrases:

(51)   (i)   HANS schenkt ANNA und FRITZ schenkt PAULA **einen PFANNKUCHEN.**
        (ii)   Was HANS ANNA und FRITZ PAULA schenkt, ist **einen PFANNKUCHEN.**

(51)

TopP
Spec — TopP'
CP₃ ToP⁰ — F2P
CP₁ BP Spec — F2P'
B' CP₂ F2P⁰ᵢ CP₃

Was$_i$ Hans Anna e$_i$ und ~~geschenkt hat~~   was$_i$ Fritz Paula e$_i$ geschenkt hat   ist   einen PFANNKUCHEN   e₃

Besides several structural similarities between extraposition coordination and their cleft-paraphrases, there are some differences. To name only a few: Extrapositional coordinations contain focal 'gaps' whereas cleft sentences contain traces being bound either by a 'relative pronoun' (it-cleft-sentences) or by a wh-phrase (pseudocleft-sentences). Both, the 'relative pronoun' as well as the wh-phrase are connected with the focused constituent. Thus, they function to a certain extend as focus markers whereas the extraposed constituents are only focus marked by the FocP they are contained in.

4   Concluding Remarks

I have to confess that the just outlined syntactic representation of extraposition is far from being well thought out. So, there arise many open questions with respect to the syntax of extrapostion and to its semantic interpretation. What I have tried to justify, has been the coexistence of elliptical coordinations and coordinations with extraposed expressions.

The argumentation is founded on four pieces of evidence: (i) unique and distributive interpretation of indefinites, (ii) allowed or not allowed sloppy identity of possessive expressions, (iii) allowed or not allowed scope reordering, and (iv) no number agreement between focused finite verbs and singular subjects in each conjunct. It has turned out that the first three pieces of evidence can be attributed to referential properties of indefinites and possessive expressions on the one hand and to the information structural status of such expressions on the other hand.

The indefinite and possessive expression have in common that they have an existential and predicative part. Both, the existential and the predicative part may be presupposed and/or focused. If the possessive or indefinite expression is in the presentational focus domain, hence in F1, the existential as well as the predicative part is introduced into the context. Then, the existence of the referent of the indefinite expression is asserted. The existence of the referent of the possessive DP is, however, not asserted. It is merely introduced into the discourse. This is due to the meaning of the possessive pronoun, which establishes a relation between the referent of the possessive phrase and a contextually given entity. If a (singular) indefinite or possessive expression is in F1 and not in the scope of a strong QP like *every NP*, only one referent is introduced or asserted, respectively. This means that the F1 status of an indefinite and a possessive DP coincides with its uniqueness interpretation. With regard to coordinative configurations, this uniqueness interpretation prohibits the distinct reference reading of indefinites, sloppy identity of possessive pronouns and scope reconstruction from $\exists \forall$ to $\forall \exists$. This uniqueness interpretation cannot be mapped into an ellipsis representation because deleted constituents are identical copies of their antecedents. Being identical copies of their antecedents deleted constituents have their own referent, which would not go with the appropriate semantic interpretation. Thus, the uniqueness serves as a strong evidence in favour of the coexistence of the ellipsis and the extraposition representation.

If the indefinite or the possessive expression is not in F1 and thus either in F2 or not focused at all, their existential part is presupposed. Being presupposed and in an appropriate context, the possessive or indefinite expression may get a distributive reading. Despite the distributive interpretation may coincide with the ellipsis representation, the ellipsis structure is only possible if the indefinite or possessive DP is not focused at all. If they are in F2 and have thus a focused predicational part, they cannot have a deleted focused counterpart in the other conjunct. This is not allowed because of the parallelism requirement, which requires syntactic, semantic and information structural parallelism for conjuncts in coordinative constructions. Every focused constituent in one conjunct demands an alternative in the other conjunct. If there is not any alternative, the focused constituent has to be located outside of the coordination. Hence, we have, in addition to the uniqueness argument, an argument, which in its turn is attributed to information structural considerations.

Because, for Chinese, similar pieces of evidences are observable like in German, it does not seem to be implausible to ask the question whether the coexistence between ellipsis and extraposition is universal or not. However, to answer this question presupposes thourough knowledge of Chinese possessive, 'indefinite', quantificational expressions, of Chinese coordinative and elliptical structures, and, last but not least, of Chinese information structure.

The third part of this article has outlined the syntactic representation of the German extrapositional configurations. What is so special about it is that the left and right extrapositional configurations have a very similar syntactic representation. Thus, they use the same focus position - F2 - for their focused constituent.

Finally, the right and left extraposition configurations were compared to respective cleft constructions. Because these cleft constructions have, for independent reasons, a similar syntactic and informational structure like the extrapositional ones, they give further support for the distinction between expraposition and ellipsis.

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Verb Gapping in Chinese[*]
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0. Introduction

The Verb Gapping Construction, illustrated in (1), is a well-known phenomenon in which a verb is missing under 'identity' with a like verb elsewhere in the context.

(1)   ta chi-le   san   wan miantiao, wo ~~chi-le~~   liang wan mifan.
        he eat-ASP three bowl noodle   I   eat-ASP two   bowl rice
        'He ate three bowls of noodle, while I ate two bowls of rice.'

This research investigates the syntactic properties of the Verb Gapping Construction in Mandarin Chinese. Four claims are made. First, object raising occurs in the Verb Gapping Construction. Second, as in English (Johnson 1996), there is an Across-the-Board head movement of the Verb, rather than a PF deletion of the Verb, in the Verb Gapping Construction. Third, the optionality of Verb Gappinng reflects the variations between coordinate conjunctions at vP-level and a higher level. Fourth, the differences in specificity with respect to object raising between Chinese and German are the result of the different interaction patterns between two kinds of economy principles, governing the syntactically motivated movement, which is to check uninterpretable features, and the semantically motivated movement, which ensures a proper LF representation (Diesing 1997).

Section 1 of this paper introduces three background assumptions: Chinese has IP and NegP, and V-t-$\underline{v}$ movment is covert in Chinese. Sections 2.1 to 2.4 list evidence for object raising, and sections 2.5 to 2.7 presents evidence for the verb movment, in the Verb Gapping Construction. Section 3 argues against PF deletion hypothesis, while section 4 proposes an Across-the-Board movement hypothesis. In section 5, the optionality of Verb Gapping is discussed. In section 6, I explore the issue of specificity with respect to object raising in German and Chinese. The paper is closed in section 7 with reflection on the general implications of proposals made here for syntactic variations across languages.

1. Background Assumptions: Chinese IP, Neg, and Verb Movement

This research relies on a number of background assumptions. First, sentence negation words heads a funcitonal projection NegP rather than adjoining to other projections. Second, V-to-$\underline{v}$ movement in Chinese is covert. Finally, Chinese has Infl and the sentence-final aspect particle *le* is base-generated in I. These three assumptions will be introduced in this section one by one.

1.1 The Projection of NegP and Its Position

There are two negation markers in Chinese: *bu* and *mei(you)*. When they are used as sentence negation markers, they differ in eventuality type. Unbounded eventualities consist of permanent states and activities such as habitual actions, while bounded eventualities cover various processes and states which have at least one temporal boundary. The latter has a starting and/or endpoint which constitutes the goal or outcome of the event. In contrast, the

former has arbitrarily a starting and/or endpoint and can start and stop at any time. Bounded eventualities use *mei(you)*, while unbounded eventualities use *bu*.

(2)   a.   ta **bu** bao-zhe   zhentou shuijiao
                 he not hold-ASP pillow   sleep
                 'He does not sleep by holding a pillow.'
        b.   ta zuotian   **mei** bao-zhe zhentou shuijiao
                 he yesterday not hold-ASP pillow   sleep
                 'He did not sleep by holding a pillow yesterday.'

That Chinese sentence negation words head an independent functional projection is supported by the fact that they can license VP ellipsis. Postdam (1997) gives the following condition on VP ellipsis:

(3)   VP-Ellipsis Licensing Condition
        An elided VP must be the complement of a morphologically realized head.

This condition can be illustrated by the following Chinese data, where an adverb like *ye* 'also' cannot license VP ellipsis, while a control verb *xiang* 'want', a deontic modal like *neng* 'can', and an epistemic model like *yinggai* 'might' can.

(4)   a.   *Wang Ding chouyan, Li Ying ye.
                 Wang Ding smoke   Li Ying also
        b.   Wang Ding xiang chouyan, Li Ying ye xiang.
                 Wang Ding want smoke   Li Ying also want
                 'Wang Ding wants to smoke, so does Li Ying.'
        c.   Wang Ding neng shuo Deyu,   Li Ying ye neng
                 Wang Ding can   speak German Li Ying also can
                 'Wang Ding can speak German, so can Li Ying.'
        d.   Chen Xuan yinggai qu-guo Taiwan, Zhang Ning ye yinggai.
                 Chen Xuan might   go-ASP Taiwan   Zhang Ning also might
                 'Chen Xuan might have been to Taiwan, so might Zhang Ning.'

Unlike adverbs, sentence negation words can license VP ellipsis:

(5)   a.   Wang Ding bu chouyan, Li Ying ye bu.
                 Wang Ding not smoke   Li Ying also not
                 'Wang Ding does not smoke, nor does Li Ying.'
        b.   Chen Xuan mei dasao bangongshi, Zhang Ning ye mei.
                 Chen Xuan not clean office   Zhang Ning also not
                 'Chen Xuan has not cleaned his office, nor has Zhang Ning.'

Thus, if Postdam's VP-Ellipsis Licensing Condition is true, Chinese sentence negation words should head a NegP, rather than adjoining to other projections.

Another argument supporting this claim can be found in the fact that a Chinese negation word can block the covert checking of the uninterpretable [Q] in yes-no C, if a question word (an A-not-A word or the word *shi-bu-shi*), which contains the interpretable [Q], is merged lower than the negation word.

(6) a. *ta bu shi-bu-shi chang jing-ju?   (Neg-[Q])
         he not be-not-be sing Beijing-Opera
     b. ta shi-bu-shi bu chang jing-ju?   ([Q]-Neg)
         he be-not-be not sing Beijing-Opera
         'Does he not sing Beijing-Opera?'

In this case, the Minimality Principle plays a role in head movement. This is discussed in detail in Zhang (1997).

If NegP is projected in Chinese, what is its relative position to other projections such as VP and vP? Let us look at its relation to object shift. A shifted object always occurs to the left of the negation word in a negative sentence.

(7) a. ta mei kan-guo zheiben shu.
         he not read-ASP this   book
         'He has not read this book.'
     b. ta zheiben shu   mei kan-guo.
         he this   book not read-ASP
         'He has not read THIS BOOK.'
     c. *ta mei zheiben shu kan-guo.
         he not this   book read-ASP

Similarly, in German, a shifted object must occur to the left of a sentential negation word (Hauptmann 1994, Santelmann 1994):

(8)   weil   Johann das Buch nicht kaufte
         because Johann the book not   bought
         ''because Johann did not buy the book.'

In Romanian, a preverbal focused object must also occur to the left of a negation word. The following example is from Motapanyane (1997: 18).

(9) Nimeni [nimic] nu ti-ar   face fara pile.
     nobody nothing not to-you would do without connections
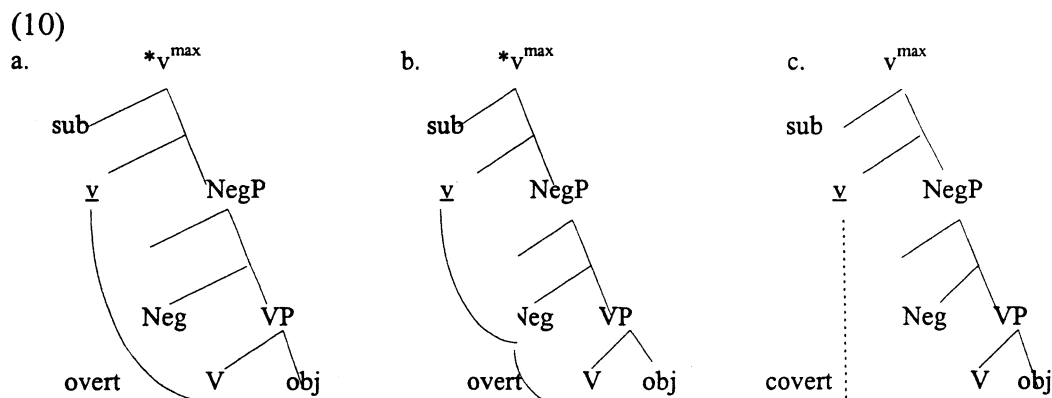   'There's nothing anyone would do for you if you do not have connections.'

Motapanyane (1997) claims that in this sentence, *nimic* 'nothing' is in a focus position, which is to the left of the negation word *nu* 'not'. In West Flemish, a shifted object also occurs to the left of a negation word (Haegeman 1995).

Following Santelmann (1994), Hauptmann (1994) and Haegeman (1995), who claim that NegP is situated between AgrOP and VP, I assume that NegP in Chinese is beneath v^{max} and above VP, since in the present version of the Minimalist Program (Chomsky 1995) v^{max} takes all the functions of AgrOP of the previous version of the Minimalist Program, as well as hosts the subject. The above data suggest that the strong feature checking by object shift is carried out in v^{max}, which is to the left of NegP.

1.2 V-to-v Movement in Chinese

According to Chomsky (1995), V has to adjoin overtly to v to assign a theta role to the subject, which is merged at Spec of v. If NegP is between v^{max} and VP, and if the V-to-v adjunction is overt in Chinese, we predict that either V adjoins to v directly or V adjoins to a

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negation word first and then [Neg-V] adjoins to v. In the former case, a negation word is to the right of a verb, as shown in (10a); while in the latter case, a negation word and a verb will be adjacent all the time, as shown in (10b). The data in (11) and (12) prove both of these predictions to be wrong:

(10)

a. *v^{max}

sub
v   NegP
Neg   VP
overt   V   obj

b. *v^{max}

sub
v   NegP
Neg   VP
overt   V   obj

c. v^{max}

sub
v   NegP
Neg   VP
covert   V   obj

(11) a.   ta **mei** zuo wan-fan.
            he not make evening-meal
            'He did not make his supper.'

      b.   *ta zuo   **mei** wan-fan.
            he make not evening-meal

(12) a.   ta **mei** [pp gei wo] zuo   wan-fan.
            he not   for I   make evening-meal
            'He did not make a supper for me.'

      b.   *ta **mei** zuo [pp gei wo] wan-fan.
            he not make   for I evening-meal

      c.   *ta [pp gei wo] **mei** zuo   wan-fan.
            he   for I   not make evening-meal

To avoid these wrong predictions, I assume that V-to-v movement in Chinese is covert, as shown in (10c). Thus a sentence negation word always occurs to the left of a verb, and it can be separated from the verb by a phrase. Boskovic and Takahashi (1995) claim that theta features are strong in English. Presumably, theta features are weak in Chinese.

1.3 Sentence-final *le* and Chinese Infl

Zhang (1997) presents evidence showing that Chinese has Infl. The head of Chinese IP is not related to a postverbal aspect marker. However, the sentence-final aspect particle *le* is base-generated in I. It can license a subject pro and show the finiteness of a clause. It differs from other aspect markers in that it has the feature [deictic]. It always anchors at the moment of speech, signaling a currently relevant state. Thus Chinese I is not always null, as Ernst (1994) claims. It is also argued that Chinese C has aspect features. When C is specified with [deictic], it attracts the particle *le* from I. Thus I to C raising occurs. Since Chinese is a C-final language, *le* appears at the end of a sentence.

My research on the Verb Gapping Construction is based on these three background assumptions introduced in this section: a negation word heads a NegP, V-to-v movement is covert, and IP is projected in Chinese.

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2. Properties of the Chinese Verb Gapping Construction

In this section, I present seven syntactic properties of the Verb Gapping Construction in Chinese. The first four, i.e., the absence of A-not-A, the absence of SOV order, the impossibility of AP extraposition from NP, and the clause-bound constraint, support my assumption that object raising occurs in the Verb Gapping Construction. The other three properties, i.e., the absolute identity between the Gap and its antecedent, the immediate and adjacent conjunction constraints, and the absence of negation, support my assumption that an Across-the-Board head movement occurs in this construction.

2.1 The Absence of A-not-A

One property of the Verb Gapping Construction is that no A-not-A is allowed. A-not-A is a word formation of yes-no question words. A-not-A questions are formed by reduplication of either the first syllable or the complete form of the questioned element, and the negative *bu* or *mei* is infixed between the reduplicant and the base. A-*bu*-A occurs with unbounded eventualities while A-*mei*-A occurs with bounded eventualities. (13) denotes an unbounded eventuality, while (14) denotes a bounded eventuality. A-not-A forms are shown in (13b) and (14b). Thus *bu* is used in (13b) and *mei* is used in (14b).

(13)   a.   ta xihuan neiben shu **ma?**
                 he like   that   book Q
                 'Does he like that book?'
        b.   ta **xi(huan)-bu-xihuan** neiben shu?
                 'Does he like that book?'

(14)   a.   ta kanjian neiben shu le **ma?**
                 he see   that   book ASP Q
                 'Did he see that book?'
        b.   ta **kan(jian)-mei-kanjian** neiben shu?
                 'Did he see that book?'

The impossibility of A-not-A in a Verb Gapping sentence is shown below:

(15)   a.   Lao Li mai-le san bao   binggan,
                 Lao Li buy-ASP three package biscuits
                 Xiao Wang mai-le si bao   qiaokeli.
                 Xiao Wang buy-ASP four package chocolate
                 'Xiao Li bought 3 packages of biscuits,
                 Xiao Wang bought 4 package of chocolate.'
        b.   Lao Li mai-le san bao   binggan,
                 Lao Li buy-ASP three package biscuits
                 Xiao Wang ~~mai-le~~ si bao   qiaokeli.
                 Xiao Wang buy-ASP four package chocolate
                 'Xiao Li bought 3 packages of biscuits,
                 Xiao Wang bought 4 package of chocolate.'
        c.   *Lao Li mai-mei-mai san bao   binggan,
                  Lao Li buy-not-buy three package biscuits
                 Xiao Wang si   bao qiaokeli?
                 Xiao Wang four package chocolate

This property is also shared by the object raising sentences:

(16) a. Lao Li mai-le   nei ben shu.
          Lao Li buy-ASP that CL book
          'Lao Li has bought that book.'
      b. Lao Li nei ben shu   mai-le.
          Lao Li that CL book buy-ASP
          'Lao Li has bought that book.'
      c. *Lao Li nei ben shu mai-mei-mai?
          Lao Li that CL book buy-not-buy

In Zhang (1995) I argue that A-not-A and object raising both express the contrastive focalization. They cannot co-occur, because two operations of contrastive focalizing can never be applied simultaneously. The fact that Verb Gapping does not allow A-not-A suggests that in the computation system, Verb-Gapping is a contrastive focalization operation. In this construciton, the remaining subjects and the objects are both contrastively focused, according to the intuition of a native speaker of Chinese. This is also true of English Gapping, as pointed out by Johnson (1996: 2). In Zhang (1997), I show that object raising can be triggered by a focus feature on the object.[1] Obviously, the object of the Gapping Construction does contain this triggering feature. I thus conclude that the Verb Gapping Construction has the condition for object raising and it is possible that object raising occurs in the construction.

2.2 The Absence of SOV Order

One immediate support for my hypothesis that object raisng occurs in the Verb Gapping Construction is that no SOV order is allowed in this construction. In the following, (a) is in the SVO order, while (b) is in the SOV order, where object raising occurs. (c) is a Gapping sentence, where a clause in the form of (a) is conjoined with another clause. (d) is an unacceptable Verb Gapping sentence with the SOV order. Part of the conjunct in (d) can be an independent sentence, as shown in (b). (c) shows that comparing to (d), the correspondent Gapping form in SVO order is possible.[2]

(17) a. ta kan-guo nei ben xiaoshuo.
          he read-ASP that CL novel
          'He has read that novel.'
      b. ta nei ben xiaoshuo kan-guo.
          he that CL novel   read-ASP
          'He has read that novel.'
      c. zai huoche shang ta kan-guo nei ben xiaoshuo, wo zhei ben zazhi.
          at train   on   he read-ASP that CL novel   I   this CL magazine
          'On the train, he read that novel, while I read this magazine.'
      d. *zai huoche shang ta nei ben xiaoshuo kan-guo, wo zhei ben zazhi
          at train   on   he that CL novel read-ASP   I   this CL magazine

Why is the SOV order impossible in the Gapping construction? In section 2.1 we observed that the Verb Gapping Construction has the condition for object raising. A plausible

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[1] This is also pointed out by Gasde (1997).
[2] I will not discuss the possibility of SOV order in a non-gapping conjunction, as in (i).
    (i)   ?zai huoche shang ta nei ben xiaoshuo kan-guo, wo zhei ben zazhi kan-guo.
The acceptability of this sentence varies. An analysis of sentences such as (i) will not affect the analysis of the Gapping construction made in this paper.

assumption is that object raising does occur in the Verb Gapping Construction and that is why not only A-not-A is excluded, but also any further object raising becomes unmotivated.

2.3 The Impossibility of AP Extraposition from NP

Another property shared by object raising and Verb Gapping is that neither allows AP extraposition from NP, which can be seen below:

(18) a.   ta he-le   [NP yi wan [AP rerede] cha]].
           he drink-ASP   one bowl   hot   tea
           'He drank a bowl of hot tea.'

        b.   ta [AP rerede] he-le [NP yi   wan cha].
           he   hot   drink-ASP one bowl tea
           'He drank a bowl of hot tea.'

The above are paraphrases. The bracketed AP *rerede* 'hot' is the modifier of the noun *cha* 'tea'. I assume that the base position of the AP is as in (a) and that the AP in (b) has been moved out of the NP and is adjoined to the right of VP or vP.

Neither object shift nor Verb Gapping allow this kind of AP extraposition from NP:

(19) a.   ta he-le   [NP nei wan [AP rerede] cha]].
           he drink-ASP   that bowl   hot   tea
           'He drank that bowl of hot tea.'

        b.   *ta [AP rerede] [NP nei wan   cha] he-le.
            he   hot   that bowl tea   drink-ASP

        c.   *ta [NP nei wan   cha] [AP rerede] he-le.
            he   that bowl tea   hot   drink-ASP

(20) a.   ta [AP rerede] he-le [NP yi   wan cha],
           he   hot   drink-ASP one bowl tea
           wo [AP rerede] he-le   [NP yi bei kafei].
           I   hot   drink-ASP   one cup coffee
           'He drank a bowl of hot tea, while I drank a cup of hot coffee.'

        b.   *ta [AP rerede] he-le [NP yi wan cha],
            he   hot   drink-ASP one bowl tea
           wo (rerede) ~~he-le~~   [NP yi bei kafei].
           I   hot   drink-ASP   one cup coffee

      Thus, the Verb Gapping Construction and the object raising construciton have the similar constraint regarding to the possibility of extraposition.

2.4 Clause-Bound Constraint

One more property shared by object raising and Verb Gapping is that both are subject to the clause bound locality condition; however, in both cases Restructuring Effect occurs. The object raising in (21b) and the Gapping in (22b) show the clause-bound constraint, while the object raising in (21c) and the Gapping in (22c) show the Restructuring Effect.

(21) a.   LaoWu renwei [CP LaoLi <u>neiben shu</u>ᵢ hen xihuan tᵢ]
           LaoWu think   LaoLi that   book very like
           'LaoWu thinks that LaoLi likes that book very much.'

b. *LaoWu neiben shu$_i$ renwei [$_{CP}$ LaoLi hen xihuan t$_i$]
   LaoWu that book think   LaoLi very like

c. LaoLi pengtiao de shu$_i$ dasuan [PRO fanyi t$_i$]
   LaoLi cook   DE book plan   translate
   'LaoLi plans to translate COOKBOOKS.'

(22) a. Fang Mei zhidao [Chen Xuan mai-le san ping jiu],
        [Li Ying ~~mai-le~~ liang bao huasheng].

     b. *Fang Mei zhidao [Chen Xuan mai-le san ping jiu],
        Li Ying ~~zhidao [Chen Xuan mai-le~~ liang bao huasheng].

     c. Fang Mei dasuan [PRO mai liang shuang wazi],
        Li Ying ~~dasuan [PRO mai~~ san fu shoutao].

The main feature of the restructuring phenomenon is that processes and dependencies that are normally limited to a single clause can, where the higher predicate is of a particular type, take place across clause boundaries. The predicates that license clause union are of a semantically fairly well defined type, being typically modal or aspectual. An idea that has often been proposed (Mendicoetxea 1992, Manzini 1983, among others) is that restructuring involves incorporation of the lower verb into the higher verb. The formation of a single complex verb naturally entails the formation of a single predicate and thus can plausibly be thought of as deriving the effect of clause union.

This clause-bound constraint does not work on a topicalization sentence:

(23)   neiben shu$_i$ LaoWu renwei [$_{CP}$ LaoLi hen xihuan t$_i$]
         that   book LaoWu think   LaoLi very like
         'That book, LaoWu thinks that LaoLi likes very much.'

Assuming with Chomsky (1995), Accusative Case features need to be checked by either overt object raising or covert feature attraction between object and v. This checking is obligatory across languages. The choice between overt and covert checkings depends on the strength of the Case feature in the language. Let us return to the Chinese Verb Gapping Construction. If the Accusative Case checking is covert, as in a regular SVO sentence, the above observations cannot be accounted for: A regular SVO sentence may have A-not-A form, allow an SOV alternation, allow AP extraposition from NP, and be constrained by the clause-bound constraint, while a Verb Gapping sentence can have none. Since all of these properties are also found in an overt object raising sentence, my claim is that an overt object raising occurs in the Gapping Construction.

If object raising occurs in the Verb Gapping Construction and no SOV order is allowed in the construction, judging from the SVO and SO orders of the conjuncts in the construction, one simple assumption is that V moves overtly to a position higher than v^{max} in the former, while it is deleted in the latter. Before we try to explain the construction in a different way, let us examine more properties of the Gapping Construction.

2.5 Absolute Identity Between the Gap and Its Antecedent
Unlike VP ellipsis, the Verb Gapping Construciton requires absolute morphological identity between the gapped verb and its antecedent.

(24) a. ta ci-le   zhi, yinwei ta de   nu-pengyou quan-guo ta [$_{VP}$ □].
        he resign-ASP job, because he MOD girl-friend   advise-ASP he
        'He resigned, because his girl-friend advised him to do so.'

$[_{VP} \square]$ = ci zhi 'resign job' $*[_{VP} \square]$ = ci-le zhi 'resign-ASP job'

b.   ta de nu-pengyou quan-guo   ta ci   (*-le) zhi.
      he MOD girl-friend advise-ASP he resign (-ASP) job
      'He is girl-friend advised him to resign.'

(25) a.   Lao Wang zhu siheyuan,   Lao Li z̶h̶u̶ gongyu-dalou.
           Lao Wang live quadrangle-building, Lao Li live apartment
           While Lao Wang lives in a quadrangle-building,
           Lao Li lives in an apartment.'

     b.   *Lao Wang zhu-guo siheyuan,   Lao Li z̶h̶u̶ gongyu-dalou
           Lao Wang live-ASP quadrangle-building, Lao Li live apartment

In (24a), the verb form in the antecedent of the elided VP has an aspect marker -*le*, while the elided verb must not have this marker, because two postverbal aspect markers cannot co-occur with both a control verb and the infinitive verb in the complement clause, as shown in (24b). Thus VP ellipsis does not require the morphological identity between the elided and its antecedent. (25b) shows that when the gapped verb and its antecedent are different morphologically, Gapping is impossible.

2.6 The Immediate and Adjacent Conjunction Constraints

The Verb Gapping Construction requires that the clause where the gapped verb is and the clause where the antecedent is are not only in a coordinate conjunction relation, but also in an immediate and adjacent conjunction relation. Thus there are three related constraints: coordinate conjunction, immediate conjunction, and adjacent conjunction. These three constraints will be presented in the three subsections below.

2.6.1 Coordinate Conjunction Constraint

Unlike VP ellipsis, the gapped verb and its antecedent must be in two clauses which have a conjunction relation.

(26) a.   ni jiao   san pian lunwen, ruguo ni neng $[_{VP} \square]$ de-hua.
           you hand-in three CL paper if   you can   if
           'You hand in three papers, if you can.'

     b.   *ni jiao   san pian lunwen, ruguo ta j̶i̶a̶o̶   liang pian.
            you hand-in three CL paper if   he hand-in two   CL

(27) a.   ta bu qiang-you-guo, yinwei tade fangdong fandui $[_{VP} \square]$.
           he not fry-oil-pan   because his landlord oppose
           'he does not fry, because his landland opposes.'

     b.   *keren zhi chi-le yi pian mianbao,
            guest only eat-ASP one slice bread
            yinwei ruren z̶h̶i̶ ̶c̶h̶i̶-̶l̶e̶ ban wan xizou.
            because host only eat-asp half bowl porridge

In (26), the second clause is a conditional adverbial clause. VP ellipsis is possible, as in (26a), while Verb Gapping is not, as in (26b). Similarly, in (27), the second clause is a reason adverbial clause; and while VP ellipsis is possible, Verb Gapping is not.

2.6.2 Immediate Conjunct Constraint

Unlike VP ellipsis, the antecedent of the gapped verb in the Verb Gapping Construction must be in the immediate conjunct, not in the embedded clause of the immediate conjunct.

(28)   a.   ni   keyi canjia zhei ge hui,   dan wo renwei ni bu bi [_{VP} □].
            you may attend this CL meeting, but I   think you not need
            'You may attend this meeting, but I think you do not have to.'
       b.   *Li Ying canjia-le   liang ge hui,   dan wo renwei
            Li Ying attend-ASP two   CL meeting, but I   think
            Chen Xuan ~~canjia-le~~ san ge hui.
            Chen Xuan attend-ASP three CL meeting
(29)   a.   wo piping-guo   ta, dan wo wang-le   wei shenme [_{IP} □].
            I criticize-ASP he, but I   forget-ASP for what
            'I criticized him, but I forget why.'
       b.   *zhei xingxi wo ting-le   san ge baogao, dan wo tingshuo
            this week   I listen-ASP three CL lecture, but I   hear
            Lao Li ~~ting-le~~   si   chang yinyuehui.
            Lao Li listen-ASP four CL   concert

Although all of the above data contain a conjunction construction at a certain level, the clause where the gapped or elided VP stays is not in a coordinate conjunction relation with the clause where the antecedent stays. In such cases, Verb Gapping, shown in the (b) sentences, are not acceptable, while VP ellipsis, shown in the (a) sentences, are. VP ellipsis and Verb Gapping are illustrated between the first conjunct and the complement clause of the second conjunct in the above data ((29a) might be a Sluicing case, or ellipsis of an LF IP, since Chinese does not have overt WH-movement).

(30) and (31) further show that if the Gapped clause and the antecedent clause are not in an immediate conjunction relation, the sentences are not acceptable.

(30)   a.   Fang Mei zhidao [[Chen Xuan <u>mai-le</u>   san ping pijiu],
            Fang Mei know   Chen Xuan buy-ASP three bottle beer
            [Li Ying ~~mai-le~~   liang bao   huasheng]].
            Li Ying buy-ASP two   package peanuts
            'Fang Mei knew that Chen Xuan had bought three bottles of beer,
            and Li Ying bought two packages of peanuts.'
       b.   *Fang Mei zhidao [Chen Xuan <u>mai-le</u> san ping pijiu],
            Fang Mei know   Chen Xuan buy-ASP three bottle beer
            ye zhidao [Li Ying ~~mai-le~~   liang bao huasheng].
            also know Li Ying buy-ASP two   package peanuts
(31)   a.   Wang Xiansheng <u>qing-le</u> liang ge baomu,
            Wang Mr.   hire-ASP two   CL housekeeper
            Li Taitai ~~qing-le~~   san ge siji.
            Li Mrs.   hire-ASP three CL driver
            'Mr. Wang has hired two house-keepers, while Mrs. Li hired three drivers.'
       b.   *Lao Wang [<u>weile qing</u> liang ge baomu]   deng-le bushao guanggao,
            Lao Wang for   hire two   CL housekeeper post-ASP mnay ads
            Lao Li [~~weile qing~~ san   ge siji]   deng-le bushao guanggao.
            Lao Li for   hire three CL dirver post-ASP mnay ads

In the (a) sentences above, the gapped clause and the antecedent clause are in a conjunction relation, regardless of whether they both are embedded (30a) or matrix (31a), and thus the

sentences are acceptable. In contrast, in the (b) sentences above, the gapped clause and the antecedent clause are not in a conjunction relation, although their dominant clauses are in a conjunction relation, and thus the sentences are not acceptable.

2.6.3 Adjacent Conjunct Constraint

In the Verb Gapping Construction, the gap's antecedent must be in the adjacent conjunct, while in VP ellipsis, the clause where ellipsis occurs and the clause where the antecedent is do not require to be adjacent.

(32) a. youxie Zhonguo-ren neng chi nailao,
          some   Chinese-person can eat cheese,
          youxie ren neng he leng niunai,
          some person can drink cold milk
          dan youxie ren   bu   neng [$_{VP}$ □].
          but some   person not can
          'Some Chinese can eat cheese, some can drink cold milk,
          but some can't.'
          □ = chi nailao 'eat cheese'   □ = he leng niunai 'drink cold milk'
          □ = chi nailao huo he leng niunai 'eat cheese or drink cold milk'
      b. Lao Wang chao-le yi pan xiaren,
          Lao Wang fry-ASP one dish shimp
          Lao Li zheng-le liang tiao huangyu,
          Lao Li steam-asp two CL   yellow-croaker
          Lao Zhao □ san ge jidan.
          Lao Zhao   three CL egg
          'Lao Wang fried a dish of shrimp, Lao Li steamed two yellow croakers,
          while Lao Zhao three eggs.'
          □ = zheng 'steam'   *□ = chao 'fry'

I thus conclude that Gapping is different from XP ellipsis syntactically, and the properties of the Gapping construction needs a syntactic explanation.

2.7 The Absence of Negation

As noticed by Chen (1996), Gapping in Chinese does not have a negative form:

(33) a. Li Ying mai-le   liang ben xiaoshuo,
          Li Ying buy-ASP two   CL novel
          Chen Xuan ~~mai-le~~ san ben zazhi.
          Chen Xuan buy-ASP three CL magazine
          'Li Ying bought two novels, and Chen Xuan bought three magazines.'
      b. *Li Ying mei mai liang ben xiaoshuo,
           Li Ying not buy two   CL novel
          Chen Xuan (mei) ~~mai~~ san ben zazhi.
          Chen Xuan not buy three CL magazine

This property of the Verb Gapping Construction is in contrast to NP ellipsis, which does allow negation:

(34) a.   Li Ying xihuan zhei ben shu,   Chen Xuan bu xihuan ~~zhei ben shu~~.
               Li Ying like   this CL book Chen Xuan not like   this CL book
   'Li Ying likes this book, while Chen Xuan does not.'

      b.   Li Ying bu xihuan zhei ben shu,   Chen Xuan xihuan ~~zhei ben shu~~.
               Li Ying not like   this CL book Chen Xuan like   this CL book
               'Li Ying does not like this book, while Chen Xuan does.'

My assumption based on this fact is that a head movement is involved, if negation word heads a projection in Chinese, as argued in section 1.1. I will say more about this assumption in section 4.

3. The Difficulties of PF Deletion Hypothesis

In this section I will argue against a PF deletion hypothesis. Recall that at the end of section 2.4 I mentioned that one might assume that the empty V in the second adjunct of the Verb Gapping Construction is deleted at PF. We can find a PF deleltion hypothesis in Lasnik (1995a, 1997) for the English pseudo-gapping construction and Sluicing. Let us see an example of the pseudo-gapping construction:

(35)   You might not believe me but you will ~~believe~~ Bob.

Assuming with Johnson (1991), Lasnik claims that NP-raising to Spec of Agr_O ('Object Shift') is always overt in English, thus *Bob* in the second conjunct of the above sentence is raised to Agr_OP. After this raising, the VP containing the verb *believe* and the trace of the object is deleted at PF. This is shown below (Lasnik 1997 ex. (20)):

(36)
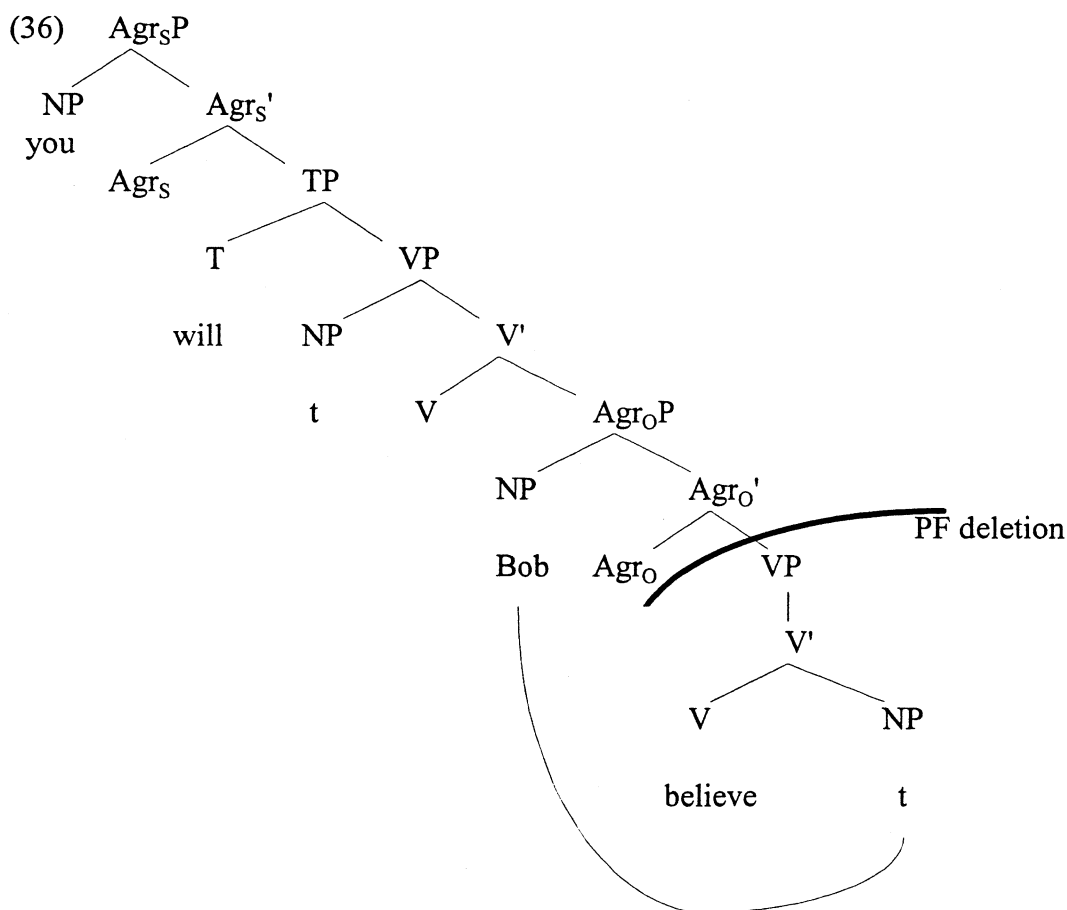
Putting aside the differences between the English pseudo-gapping construction and the Chinese Verb Gapping Construction, if Lasnik's PF deletion hypothesis works well with the former, theoretically, it might also work well with the latter, although no one has made such an extension. Thus the following argumentation does not intend to make any comments on the analysis of the English pseudo-gapping construction. The goal of this discussion is to see whether this kind of PF deletion hypothesis is correct for the Chinese Verb Gapping Construction.

Lasnik asks a theoretical question why pseudo-gapping is possible syntactically? Lasnik's answer is that a strong feature can be either in the moved element or in the deleted element. Thus either overt movement or deletion at PF can eliminate a strong feature and avoid a PF crash. Here the prerequisite is that English V has a strong feature.[3]

Lasnik (1995b) argues that both Greed and Attract are neccesary. Thus the substantive category V can have strong features. This is different from Chomsky (1995: 232), who claims that only nonsubstantive categories (functional categories) can have strong features. However, both Chomsky and Lasnik assume that in English Verb movement to v or to Agr_O is overt. Collins (1997), following Chomsky (1995 lecture notes), claims that this overt Verb movment is universal. However, as I argued in section 1, in Chinese, V-to-v movement is covert. In other words, neither V nor v in Chinese has strong features. Thus the PF deletion of a strong feature cannot be the motivation of Chinese Verb Gapping. This is the theoretical difficulty of the PF deletion assumption in accounting for the Chinese Verb Gapping Construction, if one extends the application of Lasnik's hypothesis to the Chinese facts.

A PF deletion assumption also meets empirical difficulties. If the Verb in the Verb Gapping Construction is simply deleted at PF, we will not be able to explain why negation is impossible, and why there are so many syntactic constraints on the construction as presented in section 2. My conclusion is that a strong feature in V and the deletion of V cannot be responsible for the Verb Gapping Construction in Chinese.

4. Overt Verb Movement Hypothesis

In stead of PF deletion, an Across-the-Board (ATB) movement of Verb will be shown to be adequate to account for the properties of the Verb Gapping Construction in Chinese. Based on English data, Johnson (1996) assumes that there is an ATB movement in English Gapping sentences. Some of the properties of a Chinese Gapping sentence introduced in section 2, such as the absolute identity between the Gap and its antecedent, and the immediate and adjacent conjunction constraints, are also present in English. As pointed out by Johnson (1996: 21), we look for a mechanism from the computation system that is restricted to coordination, respects constituency, and enforces absolute syntactic identity between the Gap and its antecedent. Further, the mechanism is subject to a locality condition that forces the Gap's antecedent to be in the adjacent conjunct. Movement, or copying followed by merging in Collins' (1997: 2)

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[3] A more general question asked by Lasnik (1997) is how to choose among the three Minimalist Approaches to strong features:

    A. A strong feature that is not checked in overt syntax causes a derivation to crash at PF. (Chomsky 1993)

    B. A strong feature that is not checked (and eliminated) in overt syntax causes a derivation to crash at LF. (Chomsky 1994)

    C. A strong feature must be eliminated (almost) immediately upon its introduction into the phrase marker. (Chomsky 1995, ch.4)

His research on English pseudo-gapping aims to prove the availability of the choice A, along with the other choices. Since if PF deletion can eliminate a strong feature, the strong feature can be PF-related.

    Both choice A and choice B above are obviously in a global approach, rather than in a local one. For a discussion on the local vs. global approaches, see Collins (1997).

term, is a mechanism that has these features. It is a process of sentence grammar that respects constituency and, like Gapping, the moved term or the copy is understood as absolutely identical to its trace or the original. The species of movement or copying restricted to coordinations is the so-called Across-the-Board (ATB) type, illustrated by cases such as the the following:

(37)   Who$_i$ did you say that Carrie likes t$_i$ and Sarah hates t$_i$?

Johnson claims that there is an ATB movement of the Verb to I involved in the English Gapping Construction. Following the same argumentation, I will assume that ATB movement of Verb to I also occurs in a Chinese Verb Gapping sentence. Thus the derivation of the following (a) is shown in (b):

(38)   a.   ta chi-le   san wan miantiao, wo ~~chi-le~~   liang wan mifan.
            he eat-ASP three bowl noodle   I   eat-ASP two   bowl rice
            'He ate three bowls of noodle, while I ate two bowls of rice.'

   b.
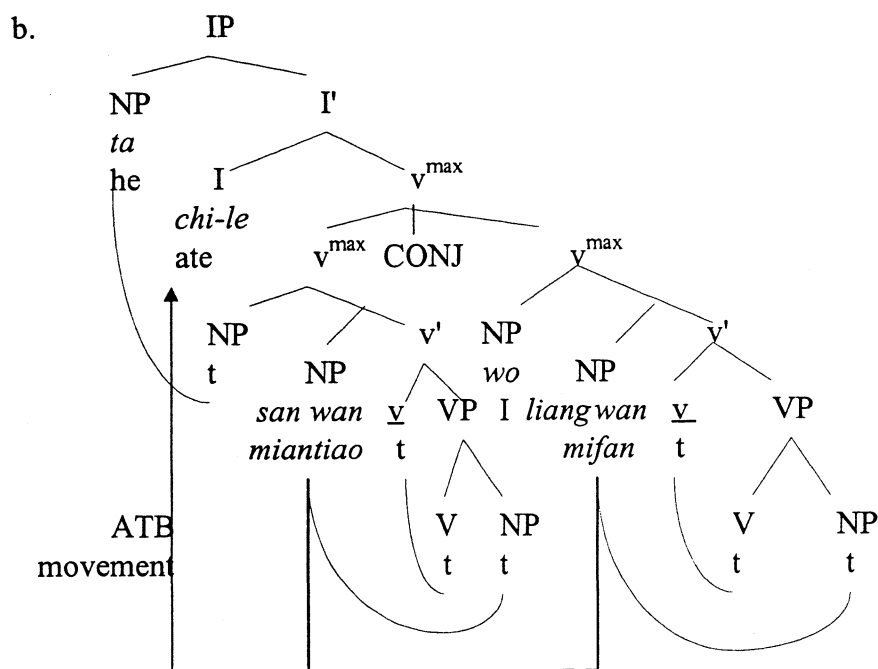
In this tree, there is only one matrix IP. The strong [D] in I responsible for EPP is checked by the movement of the subject in the first conjunct, *ta* 'he'. The subject of the second conjunct, *wo* 'I', has no motivation to move overtly and thus stays in situ. In both conjuncts, object raising lands at the inner Spec of v^{max}, adopting Chomsky (1995: 358). The Verbs in the two conjuncts move from V to $\underline{v}$ separately, and then undergo an ATB movement, landing at I.

This derivation accounts for the properties of Verb Gapping introduced in section 2. In other words, objects are raised and an ATB movement is carried out. The property that no negation is allowed in the Verb Gapping Construction (section 2.7) shows that the head movement of V to $\underline{v}$ obeys the Minimality constraint, or Travis's (1984) Head Movement Constraint. We have seen in section 1.1 that Neg is a head between V and $\underline{v}$. If V moves to $\underline{v}$, in either conjunct, a filled Neg can block this head movement. That is why negation in the Verb Gapping Construction is not allowed. If object raising is the only overt movement and there is no overt head movement from V to $\underline{v}$ involved, Neg is not able to interact due to

Relativized Minimality, and thus a negative object raising sentence should be acceptable. This is borne out:

(39)   a.   ta zhei ben shu   mei mai.
                   he this CL   book not buy
                   'He did not buy this book.'
         b.   ta jingju   bu xihuan.
                   he Peking-opera not like
                   'He does not like Peking Operas.'

Summarizing, I have proposed a double overt movement hypothesis to account for the syntactic properties of the Chinese Verb Gapping Construciton: one is an XP movement of object raising and the other is head movement, where V first moves to $\underline{v}$ and then an Across-the-Board movement of V-v to I occurs.

5. The Optionality of Verb Gapping

Gapping in natural languages is not an obligatory operation. A gapping sentence can always have a non-gapped counterpart.

(40)   a.   ta chi-le   san   wan   miantiao, wo chi-le   liang wan mifan.
                   he eat-ASP three bowl noodle   I   eat-ASP two   bowl rice
                   'He has eaten 3 bowls of noodle, (while) I have eaten 2 bowls of rice.'
         b.   ta chi-le   san   wan   miantiao, wo ~~chi-le~~   liang wan mifan.
                   he eat-ASP three bowl noodle   I   eat-ASP two   bowl rice
                   'He has eaten three bowls of noodle, (while) I two bowls of rice.'

I have argued that Verb Gapping in Chinese involves Across-the-Board Verb raising to I. From the tree (38) we can see that there is only one matrix IP in the Verb Gapping Construction. EPP is checked by the first subject and there is no motivation for the second subject to raise overtly. The Case feature of the second subject, which is weak in Chinese, can be checked covertly after Spell-Out. Thus the Verb Gapping construction differs from the non-gapped construction syntactically in that the coordinate conjunction of the former is at vP level, while that of the latter is at higher level, probably at IP. Both are convergent forms.

Coordinate conjunctions at different categorial levels provide optionality between two expressions with similar semantic interpretation. This can also be found in the pair of word level and phrase level conjunctions:

(41)   a.   luotuo de   mao he   yang de   mao
                   camel   MOD hair and sheep MOD hair
                   'camel hair and sheep hair'
         b.   tuo-mao   he yang-mao
                   camel-hair and sheep-hair
                   'camel hair and sheep hair'

(a) is a phrase-level conjunction; each of the conjuncts contains a modification word *de*. (b) is a word-level conjunction, the morpheme *tuo* 'camel' is a bound root and *tuo-mao* 'camel-hair' is a compound word. The optionality in these nominal expressions corresponds to that in the Verb Gapping sentences in that conjunctions at different categorial levels can express similar meaning and are licensed syntactically.

6. The Specificity of Object Raising and the Interactions of Two Economy Principles

In this section I will explain the definiteness of the object in the Chinese Verb Gapping Construction from the viewpoint of the interactions between different economy principles.

The typical nominals which can occur as objects in a simple object raising construction (no gapping) are definite nominals (preceded by a demonstrative, as in (42a), or a bare noun, as (42b)), and generic nominals, as in (42c), and no Numeral-CL-N objects are allowed (Tsao 1990, Qu 1994, among others), as in (43).[4]

(42)   a.   ta nei ben shu kan-le.
            he that CL book read-ASP
            'He has read that book.'

         b.   ta baozhi   kan-le.
            he newspaper read-ASP
            'He has read the newspaper.'

         c.   ta xiongmao jian-guo.
            he panda   see-ASP
            'He has seen pandas.'

(43)   a.   ta chi-le   san wan fan.
            he eat-ASP three bowl rice
            'He ate three bowls of rice.'

         b.   *ta san   wan fan chi-le.
            he three bowl rice eat-ASP

Assuming with Cheng & Sybesma (1997: 8), I take Numeral-CL-N nominals to be indefinite nominals. So (43) shows that indefinite nominals cannot undergo pure object raising.

In contrast to the pure object raising construction, the typical nominals which can occur as objects in the Verb Gapping Construction are Numeral-CL-N nominals, including those temporal expressions denoting duration and frequency. According to Ernest (1996), these two kinds of temporal expression have similar Case feature as that of a regular object. The following examples are from Paul (1996):

(44)   a.   ta lai-guo   wu ci,   wo yi ci.
            he come-ASP five time, I   one time
            'He has been here five times, and I once.'

         b.   ta xue-le   yi nian, wo san nian.
            he learn-ASP one year, I   three year
            'He studies for one yeatr, and I for three years.'

         c.   ta deng-le   yi ge xiaoshi, wo lian ge xiaoshi.
            he wait-asp one cl hour,   I   two cl hour
            'He waited for one hour, I for two hours.'

I argued in section 2 that object raising occurs in the Verb Gapping Construction. If the typical objects involved are indefinite nominals, we have to admit that Chinese allows indefinite object to raise, a fact different from many languages such as Hindi, Persian, Turkish, Korean, Hungarian, and German, as often mentioned in the literature (e.g. Karimi

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[4] Cheng & Sybesma (1997) shows that a bare noun is interpreted as either indefinite or definite in Mandarin Chinese, while indefinite only in Cantonese Chinese.

1995). In fact, not only in the Verb Gapping construction, but in an additive focus sentence, indefinite object can also be raised (Zhang 1997):

(45)　a.　*ta shenzhi baocun-zhe yixie jiu xinfeng*.
　　　　　he even　keep-ASP　some old envelope
　　　　　'He even keeps SOME OLD ENVELOPES.'
　　　b.　*ta lian　yixie jiu xin-feng dou baocun-zhe*.
　　　　　he even some old envelope all　keep-ASP
　　　　　'He even keeps SOME OLD ENVELOPES.'

In the negative form of an additive focus sentence, another form of indefinite nominals, Cl-N form, can also undergo object raising.[5]

(46)　a.　ta shenzhi xie-le　　feng xin.
　　　　　he even　write-ASP CL letter
　　　　　'He even wrote a letter.'
　　　b.　ta lian　feng xin　dou mei xie.
　　　　　he even CL　letter all　not write
　　　　　'He even did not write a letter.'

Thus it is possible to raise an indefinite object in Chinese. This fact is in contrast to some other languages.

　　It is interesting to notice that this contrast is accompanied with another contrast in the specificity of object raising. As pointed out by Diesing (1997: 378), definite objects are quite awkward in VP-internal positions in German. Supported by Weerman's (1989) examples from Dutch and Buring (1993), she claims that German sentences such as the following (a), compared to (b), where the position of the sentential adverb *selten* 'seldom' indicates that the object is raised out of VP, are marked in the sense that some contrastive context is required for felicity. In other words, there is pressure for definite NP objects to raise in neutral (noncontrastive) contexts.

(47)　a.　... weil ich selten **die Katze** streichle.
　　　　　　since I　seldom the cat　　pet
　　　b.　.. weil　ich **die Katze** selten　streichle.
　　　　　　since I　the cat　　seldom pet
　　　　　'since I seldom pet the cat.'

Diesing's explanation is that these definite NPs receive a referential interpretation which is incompatible with existential binding, which is assumed to be within VP. However, in situ definite objects in Chinese have a neutral or noncontrastive reading while raised ones must have a contrastive focus reading. The fact that a raised object requires a contrastive focus reading is also mentioned by Ernst and Wang (1995). In the following data, (b) is marked, compared to (a).

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[5] Cheng & Sybesma's (1997) research shows that a CL-N is interpreted as indefinite in Mandarin Chinese, while either indefinite or definite in Cantonese Chinese.

(48) a. ta du-guo   zhei ben shu.
     he read-ASP this CL   book
     'He has read this book.'
  b. ta zhei ben shu du-guo.
     he this CL   book read-ASP
     'He has read this book.'

To give a unified account for these two contrasts, I firstly adopt Diesing's (1997: 370) assumption that movement can be either syntactically driven by checking of uninterpretable features such as Case (Chomsky 1993, 1995), or semantically driven in the sense that movement is necessary as a result of the interpretive requirements of certain types of noun phrases.[6] Thus, on the one hand, objects of transitive verbs in all languages must be raised universally, either overtly or covertly, to check the Case feature, according to Chomsky (1995). This is the syntactic motivation of object raising. On the other hand, definite objects must be raised out of VP, while indefinite objects need not, since they can be bound by the existential closure by default. To avoid the incompatibility between the existential binding and definite NPs is the semantic motivation of object raising. Like Case checking, semantically driven object raising is also universal by LF and parametric in the overt syntax (Diesing & Jelinek 1995).

Based on this distinction, I then distinguish two kinds of economy requirements. The syntactic economy requires that a movement should be delayed if possible (Procrastinate, Chomsky 1993), while the semantic economy requires that indefinite object need not be raised. Let us assume that Case feature in both German and Chinese is weak, since in situ objects are allowed in both languages.

Furthermore, I assume that the two kinds of economy consideration can interact with each other differently across languages. Generally speaking, raising an object of any type overtly always violates syntactic economy, while raising an indefinite object will violate semantic economy. There are four patterns. First, raising of an indefinite object violates both the syntactic and semantic economy. In German, this raising is impossible, while in Chinese it must be enforced by certain kind of focalization. Specifically, raising of Numeral-CL-N nominals can occur in the Verb Gapping Construction, which contains focus features in both the subject and the object, while raising of CL-N nominals can occur in the addititive type of focusing. Second, raising of a definite object violates the syntactic economy but not the semantic economy. In German, this raising is a default situation, while in Chinese it must be triggered by the focus feature on the object. Third, leaving a definite object in situ satisfies the syntactic economy requirement but violates the general semantic constraint that presses a definite NP to move out of VP. In German, this in situ situation needs an external force of contrastive focusing, while in Chinese, it is the default situation. Finally, leaving an indefinite object in situ meets both the syntactic and semantic economy requirements. In both German and Chinese, this is a default case in the sense that no external force is required. The above are summarized in the following chart ('-syn eco' and '+syn eco' read as violating syntactic economy and satisfying syntactic economy respectively. '-sem eco' and '+sem eco' read as violating semantic economy and satisfying (or not violating) semantic economy respectively. '-sem' reads as violating semantic requirements):

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[6] Barbiers (1995) also proposes that movement can be interpretationally driven. See Costa (1997) for a treatment to sentence-final adverbs in Barbiers' approach.

(49)

| | raising indef. obj | raising def. obj | not raising def. obj | not raising indef. obj |
	-syn eco, -sem eco	-syn eco, +sem eco	+syn eco, -sem	+syn eco, +sem eco
German	banned	default	triggered by focus	default
Chinese	triggered by focus	triggered by focus	default	default

This section shows that the differences in specificity with respect to object raising between Chinese and German are the result of the different interaction patterns between two kinds of economy principles, governing the syntactically motivated movement, and the semantically motivated movement respectively.

7. Implications

Investigating the Chinese Verb Gapping Construction brings us such theoretical issues as to why argument movement exhibits different specificity effects across languages, to what extend different languages have the same operation for a certain construction such as Gapping, whether there is Verb movement in a language which does not have rich verbal inflections, and how the optionality of a construction such as Gapping is licensed syntactically. The conclusions made in this paper, that the differences in specificity with respect to object raising between Chinese and German are the result of the different interaction patterns between two kinds of economy principles, governing the syntactically motivated movement, and the semantically motivated movement respectively, that as in English (Johnson 1996), there is an Across-the-Board head movement of the Verb, rather than a PF deletion of the Verb, in the Chinese Verb Gapping Construction, and that the optionality of Verb Gapping reflects the variations between conjunctions at vP-level and a higher level, I hope, provide both an empirical contribution and a theoretical step forward in the ongoing investigation of the issues mentioned above.

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