WEI-TIEN DYLAN TSAI

VISIBILITY, COMPLEMENT SELECTION AND
THE CASE REQUIREMENT OF CP

Based on the observation that CPs and NPs have the same distribution in Chinese, this paper argues for an extension of Case theory to CPs, along the line of Visibility Condition (Aoun (1979), Chomsky (1981)): CP arguments, as well as NP arguments, need Case to receive thematic roles. More importantly, the same observation presents difficulties for reducing c-selection to Case theory in the vein of Pesetsky (1982), which relies crucially on the premise that CPs may or may not be Case-marked. Our defense of the generality of Visibility thus dovetails Rothstein's (1992) of the generality of Burzio's Generalization, both leading to Grimshaw's (1981) original conception: i.e., complement selection is achieved jointly by c-selection and Canonical Structural Realization. We also propose to correlate the absence of CRP effects in Chinese to its lacking Agr projections. CRP is reinterpreted as a ban against vacuous agreement under the minimalist approach (Chomsky 1992): CPs, unlike NPs, do not bear agreement features of their own in English and rely on expletives or wh-traces to fulfill feature checking on Agr projections. In contrast, feature checking never involves agreement features in Chinese. Hence the absence of CRP effects. Furthermore, the notion "Economy of employment" is introduced to accommodate the traditional Case-theoretical accounts under the new approach and to resolve the tension between the theory of government and that of Spec-head agreement from a cross-linguistic point of view.

1. INTRODUCTION

The theoretical status of CP has long been a controversial issue in Case Theory and, to some extent, the theory of complementation. While a comfortable number of arguments have been established for the Case requirement of argumental NPs, it is not entirely clear that a CP, when construed as an argument, has to be Case-marked, as required by the Visibility Condition (1) (Aoun (1979), Chomsky (1981)):

(1) \( \theta \)-roles may only be assigned to A-positions which are associated with PRO or Case.

According to (1), argument NPs are visible for \( \theta \)-marking only when they are Case-marked. The \( \theta \)-Criterion, in this particular formulation of Case Theory, serves as the driving force behind NP-movement and CHAIN formation between expletive-argument pairs (Chomsky (1986b)). Although there is some evidence suggesting that CPs may or may not be Case-marked (cf. Pesetsky (1982)), it is undesirable to discriminate between NP and CP without substantial conceptual arguments, especially in view of the
fact that, in parallel with a pairing between pleomorphic \textit{there} and NPs, as in (2a), there is a pairing between pleomorphic \textit{it} and CPs, as in (2b), both arguably contributing to the fulfillment of (1) (also cf. Stowell (1981), Gelderen (1990), Luján (1994)):

(2) a. \textit{There} is \textit{a man} in the room.

b. \textit{It} is said that \textit{a man} is in the room.

If it turns out that CP arguments are not subject to the Case requirement, the Visibility hypothesis will be considerably weakened, if not falsified. Therefore, it is the primary goal of this paper to examine the issue more closely from a cross-linguistic angle.

If Stowell's (1981) proposal is on the right track, Visibility effects on English tensed CPs are simply obscured by their efforts to escape from the Case Resistance Principle (CRP), as stated below:

(3) Case may not be assigned to a category bearing a Case-assigning feature.

It follows that in a language where the CRP is not observed, we should be able to find s-selected CPs (i.e., sentential subjects and clausal complements) in Case-marked positions. In section 2, we will argue that this is indeed the case for Chinese, which in turn lends a cross-linguistic argument to Stowell's position. In response to Pesetsky's (1982) attempt to reduce c-selection to Case Theory, section 3 will show that there are reasons to give a second thought to Grimshaw's (1981) original conception of complement selection, namely, resorting to the teamwork of Canonical Structure Realization (CSR) and c-selection (also cf. Rothstein (1992)). If the latter approach proves to be on the right track, then Case Theory need not confine itself to NPs, and the visibility hypothesis should be extended to CPs as well. Finally, section 4 will relate the lack of CRP effects in Chinese to the absence of Agr(eement) projections in Chinese sentence structures. Some interesting implications along this line will be explored under the minimalist approach (Chomsky 1992).

2. DATA BASE

2.1. Clausal Complements

We will start with some solid evidence for the claim that Chinese CPs are in Case-marked positions (cf. Li (1985, 1990)). First consider predicates taking question complements. By comparing (4b) and (5b), we find that CP complements, as well as NP complements, cannot appear preverbally
without being licensed by the preposition *dui* `about`.\(^4\)\(^\) It is also clear from (4a) and (4b) that postverbal complements are directly Case-marked by *quanzin* `care`, because *dui* cannot precede either object NPs or objects CPs (see also Paris (1979)).\(^5\)

\[4\]
\[a. \text{wo} \ [\text{guanxin} (*\text{dui}) \ [\text{CP Akiu weishenme bu lai}].]
\]  
I very care about Akiu why not come
‘I do care why Akiu will not come.’

\[b. \text{wo} \ [*(\text{dui}) \ [\text{CP Akiu weishenme bu lai}]] \text{ hen guanxin.}
\]  
I about Akiu why not come very care

\[5\]
\[a. \text{wo} \ [\text{guanxin} (*\text{dui}) \ [\text{NP zhe-jian shi de qiyin}].]
\]  
I very care about this-Cl matter of cause
‘I do care about the case of this matter.’

\[b. \text{wo} \ [*(\text{dui}) \ [\text{NP zhe-jian shi de qiyin}] \text{ hen guanxin.}
\]  
I about this-Cl matter of cause very care

Exactly the same observation obtains for predicates taking proposition complements: just like NPs, proposition CPs may and must appear in Case-marked positions. First compare (6a) with (7a). We find that the main verb *zaiyi* `mind` does not allow an intervening preposition like *dui*, not only when taking an NP complement but also when taking a CP complement. In contrast, the preverbal CP complement in (6b), just like the preverbal NP complement in (7b), cannot be licensed without being Case-marked by *dui*.

\[6\]
\[a. \text{wo} \ [\text{zaiyi} (*\text{dui}) \ [\text{CP Akiu bu lai}].]
\]  
I very mind about Akiu not come
‘I do mind Akiu not coming.’

\[b. \text{wo} \ [*(\text{dui}) \ [\text{CP Akiu bu lai}]] \text{ zaiyi.}
\]  
I about Akiu not come very mind

\[7\]
\[a. \text{wo} \ [\text{zaiyi} (*\text{dui}) \ [\text{NP zhe-jian shi}].]
\]  
I very mind about this-Cl matter
‘I do mind about this matter.’

\[b. \text{wo} \ [*(\text{dui}) \ [\text{NP zhe-jian shi}] \text{ zaiyi.}
\]  
I about this-Cl matter very mind

A descriptive generalization is thus in order: proposition CPs behave in line with question CPs in Chinese, patterning with NPs with respect to the Visibility Condition. In other words, a filter like (8) (cf. Pesetsky (1982))
should be irrelevant in Chinese, which in turn casts doubt on the generality of the CRP. We will return to the issue in section 4.

(8) $*$[PP P CP_{WNH}]

Another piece of evidence comes from ba-constructions. The predicate under investigation here is a compound verb dang-zuo ‘regard-as’, which can only take one postverbal complement, i.e., the object of zuo ‘as’. The object of dang ‘regard’, on the other hand, may either topicalize or occupy a preverbal position governed by ba, a dummy Case-marker often associated with causative constructions (cf. Huang (1989a)). Therefore, an English expression like “regard XP as YP” would appear as “ba XP regard-as YP” in Chinese. As shown by (9a, b), a proposition CP, as well as a question CP, may occur in the ba-phrase, hence they are Case-marked.

(9) a. dajia [(ba) [[CP Akiu neng huo-zhe hui-lai]]
  people BA Akiu can live-Dur back-come
dang-zuo yi-xiang qiji.
  regard-as one-Cl miracle
  ‘People regard it as a miracle that Akiu can come back alive.’

b. dajia genben bu [(ba) [[CP Akiu neng-bu-neng huo-zhe hui-lai]]
  people at-all not BA Akiu can-not-can live-Dur
  dang-zuo yi-hui shi.
  back-come regard-as one-Cl matter
  ‘People don’t think it matters at all whether Akiu can come back or not.’

Since there is no postverbal alternation in this case, we know for sure that Chinese CPs are not only comfortable in Case-marked positions, but, as a matter of fact, subject to strict Case requirements. This point becomes even clearer when we compare (9a, b) with the corresponding English translations: while English employs expletives, satisfying Case requirements either by forming an expletive-argument CHAIN (Chomsky (1986b)) or by LF adjunction (Chomsky (1992)), the same strategy is neither needed nor available in Chinese. Exactly the same thing can be said about PPs in derived nominals:

(10) a. [NP dajia [(dui) [[CP Akiu neng huo-zhe hui-lai]]
  people about Akiu can live-Dur back-come
de xinnian] hen qiang.
  PNM belief very strong
  ‘People’s belief that Akiu can come back alive is very strong.’
b. \([\text{NP} \text{ dajia} \ [^{*}(\text{dui}) [\text{CP} \text{ Akiu neng-bu-neg huo-zhe people about Akiu can-not-can live-Dur hui-lai]] \ de \ yilü] \ hen \ shen. back-come PNM worry very deep]

‘People’s worry about whether Akiu can come back or not is very deep.’

Since nominals are generally assumed to lack Case-assigning properties and since NP projections are uniformly head-final in Chinese, the only possible location for a complement is prenominal, where the presence of \(\text{dui}\) is obligatory, as in (10a, b).

It is then not surprising to see that \(\theta\)-marking prepositions like \(\text{cong} \ ‘\text{from}’ \) and \(\text{dao} \ ‘\text{to}’ \) also take CP complements, as illustrate below:\(^6\)

(11) a. \(\text{cong} [\text{CP} \text{ Akiu jinlai zheli} \text{ dao} [\text{CP} \text{ ta likai}], \text{ Lisi yi-ju from Akiu enter here to he leave Lisi one-Cl hua dou mei shuo. sentence all have-not speak}

‘From the moment Akiu entered here to the moment he left, Lisi did not say a word.’

b. \(\text{cong} [\text{CP} \text{ Akiu shenmeshihou quichuang} \text{ dao} [\text{CP} \text{ ta zainali chifan}], \text{ Lisi dou dating-de yiqingerchu where eat Lisi all investigate-De thorough}

‘From the question of when Akiu wakes up to the question of where he eats, Lisi made a thorough investigation.’

In sum, Chinese CP complements, unlike their English counterparts, are licensed via direct Case-marking, i.e., not through indirect mechanisms such as Case Transmission in Safir’s (1982) sense.

2.2. Sentential Subjects

In this section, we proceed to examine whether Chinese CPs observe the Case requirement in subject positions. First consider their English counterparts, which appear to pattern with derived nominals in A-chain formation without displaying CRP effects:

(12) a. \([\text{NP} \text{ Bill’s coming in late}], \text{ appears [e, to have upset Mary]}

b. \([\text{CP} \text{ That Bill came in late}], \text{ appears [e, to have upset Mary]}

Stowell (1981) suggests that this lack of CRP effects is only apparent. He argues that the CP in (12b) is located in a topic position rather than a subject position, based on Emonds's (1976) observation that there is a correlation between the impossibility of topicalization and the absence of sentential subjects in English appositives. This point can be illustrated by comparing (13a, b):

(13) a.*John's belief [CP [TOP the geography course], Bill took ei] is unfounded.
   b.*John's belief [CP [CP that you took the course] helped you] is unfounded.
   c. John's belief [CP that [NP your taking the course] helped you] is unfounded.

That is, sentential subjects are prohibited wherever topicalization is impossible. Derived nominals, on the other hand, have no problem in the same environment, as evidence by (13c). This correlation follows directly from the CRP in that subject CPs always topicalize to evade direct Case-marking.7 His argument is further supplemented by the distribution of CP complements in (14a, b), which behave in sharp contrast with their NP counterparts in (14c, d) with respect to Case Adjacency:

(14) a. Piglet mentioned ei quietly/to Pooh [CP that he wanted to catch a Woozle].
   b.*Piglet mentioned [CP that he wanted to catch a Woozle] quietly/ to Pooh.
   c.*Piglet mentioned ei quietly/to Pooh [NP the plan].
   d. Piglet mentioned [NP the plan] quietly/to Pooh.

If our observation about clausal complements is on the right track, we should be able to find sentential subjects in constructions where topicalization is not allowed. In the following discussion, we will show that this is indeed the case in Chinese. First it should be pointed out that sentences like (15a) are ambiguous, as shown by (15b, c):

(15) a. Akiu xihuan de ren mei lai.
   Akiu like PNM people have-not come
     'People who Akiu likes did not come.'
   c. Akiu, ei xihuan ei de reni mei lai.
     'People who like Akiu did not come.'

We may call (15b) the subject reading and (15c) the object reading according
to the two distinct interpretations of Akiu. Here only the object reading concerns us, since it undoubtedly involves topicalization.

Now concentrate upon (15c). Note that we have not yet decided the location of Akiu, which could be either a matrix topic or an embedded topic. The strategy employed here is to add a higher specifier in the projection of complex NPs. As shown by (16a) and (17a), the object reading of Akiu is blocked when it appears lower than the determiners henduo 'many' and mouxie ‘some’, most likely in the sentence-initial position of relative clauses:

(16) a. *[\[NP henduo [CP Akiu, ei xihuan e_i] de ren_i] mei] many Akiu like PNM people have-not lai. come

‘Many people who like Akiu did not come.’

b. Akiu, [NP henduo [CP e_i xihuan e_i] de ren_i] mei Akiu many like PNM people have-not lai. come

(17) a. *[\[NP mouxie [CP Akiu, ei xihuan e_i] de ren_i] mei] some (pl.) Akiu like PNM people have-not lai. come

‘Some people who like Akiu did not come.’

b. Akiu, [NP mouxie [CP e_i xihuan e_i] de ren_i] mei Akiu some (pl.) like PNM people have-not lai. come

In contrast, the object reading is valid with Akiu in a position higher than henduo and mouxie, as shown by (16a) and (17b) respectively. Akiu therefore cannot be the topic of the relative clause.

As a reviewer points out, it is still possible for Akiu to adjoin to the NP node in (16b) and (17b). Now the idea is that if Akiu is actually a part (i.e., an adjunct) of the NP node, the whole complex NP should be able to appear in object positions, as well as in subject positions. The prediction, however, is not borne out, as evidenced by contrast between (18a, b):
(18) a.  wo jian-guo \[np, henduo [cp, e, xihuan Akiuj] de ren,].
   people
   ‘I met many people who like Akiu.’

b.*wo jian-guo [np, Akiuj [np, henduo [cp, e, xihuan e,] de ren,]].
   people

Consequently, Akiu has to be a matrix topic in presence of the object reading,
as in (16b) and (17b). We thus pin down the location of Akiu in (15c) and
conclude that local topicalization is not allowed in Chinese relative clauses.\(^8\)

The next step is to determine whether Chinese CPs may stay in subject
positions, or more specifically, whether sentential subjects may appear in
relative clauses. The answer proves to be positive, as evidenced by the
following examples:

(19) a. [henduo [[cp, Akiu neng huo-zhe hui-lai] shi tamen, many Akiu can live-Dur back-come make them jingia] de ren,] dou mei lai
   PNM people all have-not come
   ‘[Many people to whom it is surprising [that Akiu can come back alive]] did not come.’

b. [henduo [[cp, Akiu neng-bu-neng huo-zhe hui-lai] gen many Akiu can-not-can live-Dur back-come to tamen, wuguan] de ren,] dou mei lai
   PNM people all have-not come
   ‘[Many people to whom it is irrelevant [whether Akiu can come back alive or not]] did not come.’

The CPs in question, proposition and question alike, must be in the
embedded subject positions since, as we have demonstrated above, local
topicalization is impossible in relative clauses. Just as our theory predicts,
both (19a) and (19b) are as good as sentences containing Case-marked
CP complements.

As noted by James Huang (p.c.), one may come up with the objection
that (16a) and (17a) are out not because topicalization is prohibited but
because when topicalization applies in a relative clause, the resumptive
pronoun strategy somehow has to be employed, and hence the well-formedness of (19a, b). This objection, however, cannot stand in view of the following data:

(20) a. \[henduo [Lisi \ [ba \ [tade, lunwen]] \ ji-gei Akiu]] \ de many Lisi BA his thesis mail-to Akiu PNM
xuesheng,] \ dou zhaodao-le gongzuo.
student all find-Prf job
‘Many students whose theses Lisi mailed to Akiu have found jobs.’

b.*\[henduo [Akiuj, Lisi \ [ba \ [tade\ lunwen]] \ ji-gei ej]]\]
many Akiu Lisi BA his thesis mail-to
de xuesheng,] \ dou zhaodao-le gongzuo.
PNM student all find-Prf job

As shown by (20b), even when the resumptive pronoun strategy is employed, topicalization still results in strong deviance.

A similar conclusion can be drawn from sentential subjects in derived nominals:

(21) a. \[NP \ [\text{CP} Akiu neng huo-zhe hui-lai]] \ [dui women] Akiu can live-Dur back-come about us
de yichu] \ hen da
PNM benefit very big
‘The benefit to us of Akiu’s coming back alive is tremendous.’

b. \[NP \ [\text{CP} Akiu neng-bu-neng huo-zhe hui-lai]] \ [gen Akiu can-not-can live-Dur back-come with
women] \ de guanxi] \ hen da.
us PNM concern very big.
‘Our concern (lit. the concern to us) about whether Akiu can come back alive is tremendous to us.’

Since topicalization is out of the question within NP projections, the CPs in (21a, b) can only be in the Spec of NP, presumably genitive-Case-marked.

2.3. **Infinitival Complements**

As Stowell (1981) observes, English infinitives display CRP effects just like their tensed counterparts, as illustrated by the following (a) and (b) clauses respectively:
(22) a. John’s belief [_{CP} that [_{CP} (for you) to take the course] helped you] is unfounded.
   b. John’s belief [_{CP} [_{CP} that you took the course] helped you] is unfounded.
   c. John’s belief [_{CP} that [_{NP} your taking the course] helped you] is unfounded.

(23) a. Eeyore blamed it on [_{CP} (for Roo) to have been too showy].
   b. Eeyore blamed it on [_{CP} that Roo is too showy].
   c. Eeyore blamed it on [_{NP} Roo’s being too showy].

It is therefore worthwhile to examine the distribution of Chinese infinitives and to see whether the Visibility Condition is still at work. The result seems to confirm our position taken in the previous two sections.

Above all, it is widely observed that Chinese does not have morphological constructs which warrant the notion “Tense”. Nonetheless, it does sport a wide range of aspect markers, which may be taken as the indication of finiteness. Control complements, for one, allow neither aspect markers nor lexical subjects (except, of course, in ECM constructions):

(24) a. \( \text{wo}_k \text{jihua} [_{CP} \text{PRO}_k/*\text{Akiu} \text{mai yi-bu che}] \).
    I plan Akiu buy one-C1 car
    ‘I plan to buy a car.’

   b. \( \text{wo}_k \text{jihua} [_{CP} \text{PRO}_k \text{zai-/mai -guo/-le/-zhe yi-bu che}] \).
    I plan Prg-buy-Exp/-Prf/-Dur one-C1 car

Unlike English infinitives of (25), which extrapose freely, Chinese control complements must keep adjacent to their heads, as shown by the contrast between (26a, b):

(25) a. Piglet plans [_{CP} \text{PRO} to catch a Woozle] very carefully.
   b. Piglet plans e_i very carefully [_{CP} \text{PRO} to catch Woozle].

(26) a. \( \text{wo} \text{jihua} [_{CP} \text{PRO} \text{mai yi-bu che}] \text{hen jiu le}. \)
    I plan buy one-C1 car very long Inc
    ‘I plan to buy a car for a long time.’

   b. \( \text{wo} \text{jihua} e_i \text{hen jiu} [_{CP} \text{PRO} \text{mai yi-bu che}] \text{(le)}. \)
    I plan very long buy one-C1 car Inc

Chinese infinitives thus not only obey the adjacency condition on Case assignment, as in (26b) but also disobey the CRP, as in (26a). This is exactly the way their NP counterparts behave in (27a, b):
We may then draw the conclusion that Chinese control complements are Case-marked in situ.

Purpose infinitives, when construed as complements, display similar traits. For example, \textit{pai} 'assign' has an obligatory GOAL role to discharge, as evidenced by the following contrast:

\begin{itemize}
  \item[(28)]
  \begin{enumerate}
    \item a. \textit{tamen pai} Akiui (lai/qu) [\textit{PROi kan men}].
      \text{they assign Akiu come/go watch door}
      \text{‘They assigned Akiu to watch door (here/there).’}
    \item b. \textit{tamen pai} Akiui.
      \text{they assign Akiu}
  \end{enumerate}

\end{itemize}

\textit{Lai} and \textit{qu} can then be assimilated to its preverbal counterparts, i.e., \textit{ba} and \textit{dui}, in that they serve as licensers of arguments, presumably through Case-making.\textsuperscript{10} Now the curious thing about (28a) is that \textit{lai} and \textit{qu} are optional. It is tempting to dismiss the problem by adopting Stowell’s (1981) claim that infinitives are intrinsically Case-marked, and hence the optionality of (28). This solution, however, seems less plausible in cases where topicalization, passivization, and \textit{ba}-constructions are involved, as illustrated by (29a–c) respectively:

\begin{itemize}
  \item[(29)]
  \begin{enumerate}
    \item a. Akiui, \textit{tamen pai} *(lai/qu) [\textit{PROi kan men}].
      \text{Akiu they assign come/go watch door}
      \text{‘Akiu, they assigned (him) to watch door (here/there).’}
    \item b. Akiui, \textit{bei tamen pai} *(lai/qu) [\textit{PROi kan men}].
      \text{Akiu by they assign come/go watch door}
      \text{‘Akiu was assigned to watch door by them (here/there).’}
    \item c. \textit{tamen ba} Akiui, \textit{pai} *(lai/qu) [\textit{PROi kan men}].
      \text{they BA Akiu assign come/go watch door}
      \text{‘They assigned Akiu to watch door (here/there).’}
  \end{enumerate}

\end{itemize}

By comparing (29a–c), we find that \textit{lai} and \textit{qu} are optional only when they are not adjacent to the verb head \textit{pai} ‘assign’. In addition, the distri-
bution of optionality observed here is exactly the opposite in double object constructions:

(30) a. wo song-le na-ben shu *(gei) Akiu.
   I send-Prf that-Cl book to Akiu
   'I sent that book to Akiu.'

   b. na-ben shu, wo song-le (gei) Akiu.
   that-Cl book I send-Prf to Akiu
   'That book, I sent (it) to Akiu.'

   c. na-ben shu bei wo song-le (gei) Akiu.
   that-Cl book by I send-Prf to Akiu
   'That book was sent to Akiu by me.'

   d. wo ba na-ben shu song-le (gei) Akiu.
   I BA that-Cl book send-Prf to Akiu

As shown above, gei 'to' is optional in presence of topicalization, passivization, and ba-constructions, where it is adjacent to the verb head song 'send'. Note that the asymmetry in question constitutes an empirical challenge to our theory developed so far. That is, if the purpose infinitives in (28a) and (29a–c) are subject to Case-marking, we expect them to pattern with indirect objects in regard to the optionality of Case-markers, which is not borne out. On the other hand, the obligatory presence of qu in (29a–c) does suggests that the infinitival complements in question need some sort of licensing fro qu. We thus have a dilemma at hand.

Before going any further, we would like to clarify a few things. First, purpose infinitives should not be confused with serial-verb constructions: It is possible to tease them apart with some scrutiny:

(31)a. Akiu chuan-le tuoxie shang(-le) ke.
   Akiu wear-Prf slippers attend(-Prf) class
   'Akiu wore slippers, and then went to school.'

   b. Akiu chuan-le tuoxie qu shang(*-le) ke.
   Akiu wear-Prf slippers go attend(-Prf) class
   'Akiu wore slippers in order to go to school.'

Note that the perfective marker -le may appear on the second verb in (31a) with a slight difference (emphasizing that the class has been attended). The same option is blocked in (31b), indicating that the purpose clause in
question is nonfinite. In terms of semantics, (31a) consists of two consecutive events and can be represented as two predicates linked by a topic chain, as illustrated below:

(32)  
\[
\begin{array}{c}
\text{Top} \\
\text{Top} \\
Akiu_i \quad \text{Op}_i \\
\end{array}
\]

The presence of \textit{qu}, a so-called “nullified verb” or “grammaticalized verb”, introduces a purpose reading in (31b): the purpose/goal of slipper-wearing is to attend class. Because of the unorthodox combination of slippers and class-attending, (31b) may also imply that \textit{Akiu} intends to demonstrate his rebellious attitude, while the same implication can not be associated with (31a). We may therefore consider the purpose clause as an inner adjunct in a Larsonian tree, bearing a close relation to the main predicate (also cf. Hale and Keyser (1991)), as sketched below:

(33)  
\[
\begin{array}{c}
\text{IP} \\
\text{Top} \\
\text{Akiu}_i \\
\end{array}
\]

The above distinction is further supported by the fact that iteration is possible for serial-VPs but not for purpose infinitives, as shown by the contrast between (34a, b):
(34) a. Akiu, [e_i chuan-le tuoxie] [e_i shua ya] [e_i xi lian]
Akiu wear-Prf slippers brush teeth wash face
[e_i shang ke].
attend class

‘Akiu wore slippers, and then brushed his teeth, and then washed his face, and then went to school.’

b.*Akiu chuan-le tuoxie [qu shua ya] [qu xi lian]
Akiu wear-Prf slippers go brush teeth go wash face
[qu shang ke].
go attend class

‘Akiu wore slippers in order to brush his teeth, in order to wash his face, and in order to go to school.’

Second, in order to get a clearer picture, it is instructive to illustrate in some details the constructions involved. Following Huang (1991, forthcoming), we assume that V-to-V movement in (35) is to create a head-government configuration for Case assignment (i.e., from the head verb to the object):

As for the topic construction (36), we adopt Chomsky’s (1977) proposal that there is always a null operator involved, which plays a role similar to a relative who:
Here the head verb moves to license the chain created by null operator movement, which, in parallel to a \textit{wh}-chain, needs to be Case-marked (cf. Lasnik and Freidin (1981)).

Passivization, characterized by the presence of \textit{bei} 'by', is traditionally treated in line with its English counterpart, i.e., with \textit{bei} and the D-structure subject forming an adjunct PP. Nevertheless, there is another way to look at it under the VP-internal subject hypothesis, as sketched in (37):

We may consider \textit{bei} as a two-place predicate, taking a Patient as its external argument and a proposition as its complement (cf. Mei (1972), Li (1985,
The interpretation of "NP bei VP" would be "NP suffer from something corresponding to VP". As a result, there is no straightforward way to detransitivize the head verb of (37) in this theory. This seems to be a desirable consequence in view of the following example:

(38) Lisi bei [Akiu da-le san-zhi quanleida].
    Lisi by Akiu hit-Prf three-C1 home run
    'Lisi suffered from Akiu's hitting three home runs.'

No gap can be found in (38), which suggests that the PATIENT Lisi does not originate from within the complement of bei. The THEME san-zhi quanleida 'three home runs' is then Case-marked by da 'hit', while the AGENT receives Case from bei through head-government. An apparent problem with this approach is that it does not seem to work in the simplest cases like (39a):

(39) a. Lisi~ bei [Akiu sha-le t].
    Lisi by Akiu kill-Prf
    'Lisi was killed by Akiu.'

b.*bei [Akiu sha-le Lisii].
   by Akiu kill-Prf Lisi

If the main verb sha 'kill' is not detransitivized, why can we say something like (39b), which means exactly (39c)? There are actually three logical possibilities to consider here. First, if the subject position is left empty throughout the derivation, as in (40b), the PATIENT role of bei is not discharged, and the θ-criterion is violated. Second, if the subject position is filled by a pro coindexed with the object, as in (40b), the sentence is ruled out by Binding Principle C. Also note that the subject position is θ-marked by bei, and accordingly expletive pro is not an option.

(40) a.*[e] bei [Akiu sha-le Lisii].
    by Akiu kill-Prf Lisi

b.*pro, bei [Akiu sha-le Lisii].
   by Akiu kill-Prf Lisi

c. ?prok bei [Akiu, sha-le Lisii]. (Zhen bu gan-xin.)
   by Akiu kill-Prf Lisi really not settle-heart
   ' (We) are rid of Lisi by Akiu. (I) really cannot take it.'

The reading of (40c), on the other hand, is quite acceptable with proper
contexts, especially when the arbitrary pro is understood as a group of which Lisi is a member. However, our treatment also implies that Lisi in (39a) receives two θ-roles (PATIENT and THEME), resulting in potential violation of the θ-Criterion. A natural response would be that (39a) involves a null operator, just like those in tough-constructions (cf. Chomsky (1977, 1986b)):

(41) Lisi, bei [Op, [Akiu sha-le e]].
Lisi by Akiu kill-Prf

Our position is supported by the fact that the complement of bei may contain a resumptive pronoun (Lü (1980: 57)), as shown by (42):

(42) [zhe tiaopigui], bei [wo ba ta gan-zou-le].
This little rascal by BA him chase-leave-Prf
‘This little rascal was driven out by me.’

This is hardly expected if zhe tiaopigui ‘this little rascal’ has undergone NP-movement.

Finally, we may treat ba as a light verb of some sort, as illustrated below:

(43) IP
    Subj ... VP
    ti V' V0 VP
    V ba Obj V' V PP NP/CP P

There are, consequently, two ways to satisfy the Case requirement of an in-situ object: one is through V-to-V movement, as we have already seen in (35); the other is by ba-support, in which case the head verb remains in the lower VP shell and ba serves as an acting Case-marker, as in (43).

In the light of the above illustrations, we will now return to the dilemma. First consider a non-trivial distinction between purpose infinitives and double-object constructions, concerning their islandhood in the presence of overt preposing:
(44) a. [PRO\textsubscript{i} kan men\textsubscript{j} tamen pai Akiu\textsubscript{i} [\textsubscript{PP} (lai/qu) t\textsubscript{j}].
\hspace{1cm} watch door they assign Akiu come/go
\hspace{1cm} ‘They assigned Akiu to watch door (here/there).’
b. ?Akiu\textsubscript{i}, [PRO\textsubscript{i} kan men\textsubscript{j} tamen pai [\textsubscript{PP} *(lai/qu) t\textsubscript{j}].
\hspace{1cm} Akiu watch door they assign come/go
\hspace{1cm} ‘Akiu, they assigned (him) to watch door (here/there).’
c. [PRO\textsubscript{i} kan men\textsubscript{j} Akiu\textsubscript{i} bei tamen pai [\textsubscript{PP} *(lai/qu) t\textsubscript{j}].
\hspace{1cm} watch door Akiu by they assign come/go
\hspace{1cm} ‘Akiu was assigned to watch door by them (here/there).’
d. [PRO\textsubscript{i} kan men\textsubscript{j} tamen ba Akiu\textsubscript{i} pai [\textsubscript{PP} *(lai/qu) t\textsubscript{j}].
\hspace{1cm} watch door they BA Akiu assign come/go
\hspace{1cm} ‘They assigned Akiu to watch door (here/there).’

As shown by (44a–d), purpose infinitives can be preposed as long as \textit{lai} and \textit{qu} are present, presumably serving as a head governor.\textsuperscript{15} The fact that the PP node in question does not display CED effects (Huang (1982)) indicates that it is \theta-governed/L-marked by the verb head (cf. Chomsky (1986a)), and accordingly does not count as a barrier. In contrast, PPs headed by \textit{gei} do block extraction, as illustrated below:

(45) a. * Akiu\textsubscript{i}, wo song-le na-ben shu [\textsubscript{PP} gei t\textsubscript{j}].
\hspace{1cm} Akiu I send-Prf that-Cl book to
\hspace{1cm} ‘I sent that book to Akiu.’
b. **na-ben shu, Akiu\textsubscript{i}, wo song-le [\textsubscript{PP} gei t\textsubscript{j}].
\hspace{1.5cm} that-Cl book I send-Prf to
\hspace{1cm} ‘That book, I sent (it) to Akiu.’
c. * Akiu\textsubscript{i}, na-ben shu bei wo song-le [\textsubscript{PP} gei t\textsubscript{j}].
\hspace{1cm} Akiu that-Cl book by I send-Prf to
\hspace{1cm} ‘That book was sent to Akiu by me.’
d. * Akiu\textsubscript{i}, wo ba na-ben shu song-le [\textsubscript{PP} gei t\textsubscript{j}].
\hspace{1cm} Akiu I BA that-Cl book send-Prf to
\hspace{1cm} ‘I sent that book to Akiu.’

This suggests that what is subject to \theta-marking here is the NP \textit{Akiu} within the PP, not the PP node itself. Hence the CED effects of (45a–d).\textsuperscript{17} Now suppose that an inherent Case is assigned to \textit{Akiu} along with \theta-marking.
Then *gei* should be understood as a structural licenser of Case realization, whose role is redundant when preceded immediately by the head verb, as in (30c–d). In contrast, since it is the PP note, rather than its CP complement, that is θ-governed in (29a–c), the Case requirement of purpose infinitives has to be satisfied internally (also cf. Stowell (1981)). Consequently, either *lai* or *qu* must be present to act as a structural Case-marker.

The problem is then reduced to the optionality of (28a). First note that the meaning of (28a) is slightly changed without *lai/qu*. Namely, it does not have the implication that the event denote by the purpose infinitive occurs over here or there. Deletion, therefore, is not involved in view of recoverability. It is more likely that *lai* and *qu* have a non-lexical counterpart, which is neutral with respect to the "here/there" reading. Rather surprisingly, the right question to ask is thus not why *lai* and *qu* can be deleted in (28a) but why their empty counterpart cannot appear in (29a–c).

The answer, in our opinion, lies in Aoun et al.'s (1987) proposal that empty heads, as well as traces in the PF component, must be head-governed (see also Authier (1992)). Now consider the following data:

(46) a. \([pp \text{(lai/qu) \[PRO_i \text{kan men]}_i \text{tamen pai Akiu}_j \text{t}_j, \text{come/go watch door they assign Akiu}}]\n
   'They assigned Akiu to watch door (here/there).'

b.*\(\text{Akiu}_i, [pp \text{(lai/qu) \[PRO_i \text{kan men]}_i \text{tamen pai t}_j, \text{come/go watch door they assign Akiu}}]\n
   'Akiu, they assigned (him) to watch door (here/there).'

c.*\([pp \text{(lai/qu) \[PRO_i \text{kan men]}_i Akiu}_i \text{bei tamen pai t}_j, \text{come/go watch door Akiu by they assign }}\n
   'Akiu was assigned to watch door by them (here/there).'

d.*\([pp \text{(lai/qu) \[PRO_i \text{kan men]}_i \text{tamen ba Akiu}_i \text{pai t}_j, \text{come/go watch door they BA Akiu assign}}]\n
   'They assigned Akiu to watch door (here/there).'

As shown by the contrast between (46a) and (46b–d), the whole PP complement can be preposed only in the default configuration. This indicates that the extraction site in (46a) is head-governed while those in (46b–d) are not. Although the cause of this distribution remains mysterious, it seems to be a general property of Chinese postverbal complementation, as shown by the parallel on the part of double object constructions (47a–d):
(47) a. \([_{pp} \text{gei Akiu}], \text{wo song-le na-ben shu t}_i\) to Akiu I send-Prf that-Cl book
I sent that book to Akiu.

b.*\([_{pp} (\text{gei}) \text{Akiu}], \text{wo song-le t}_i\) that-Cl book to Akiu I send-Prf
That book, I sent (it) to Akiu.

c.*\([_{pp} (\text{gei}) \text{Akiu}], \text{na-ben shu bei wo song-le t}_i\) to Akiu that-Cl book by I send-Prf
That book was sent to Akiu by me.

d.*\([_{pp} (\text{gei}) \text{Akiu}], \text{wo ba na-ben shu song-le t}_i\) to Akiu I BA that-Cl book send-Prf

For the purpose here, let’s assume that when a head governs an XP, it also governs that head of the XP (for instance, if a verb governs a CP, it also governs its Comp). It follows that the null preposition in (28a) is head-governed while those in (29a–c) are not. We thus have an explanation why qu and lai are optional in (28a) but obligatory in (29a–c).

To sum up, we have shown that there is a general Case requirement of Chinese clausal arguments: subject and object CPs alike. Even in cases such as infinitival complements, where complications have been piled up by obscure factors, the need for Case-marking is still easy to detect. Although some of the proposals we made here are highly tentative, it seems safe to say that Chinese represents a type of language where the Visibility Condition reveals its full strength due to the diminished status of the CRP.

3. C-SELECTION VS. CASE THEORY

An immediate consequence of our observation is that it casts doubt on any attempt to generalize Case theory to complement selection based the Case-marking asymmetry between NP and CP, as championed by Pesetsky (1982). Instead, it envisions an extension of Visibility on the part of CP.

Based on the selection theory sketched by Grimshaw (1979, 1981), Pesetsky proposes to reduce categorial selection (c-selection) to semantic selection (s-selection) in terms of the interaction between Case Theory and Canonical Structure Realization (CSR). Specifically, the CSR function maps the semantic categories P (proposition), Q (question), and E (exclamation) onto either CPs or NPs, while Case Theory serves as a switch in UG turning an NP on or off. This move accounts for the non-existence of
predicates which select concealed NPs without their clausal counterparts (see below). As a result, the redundancy between c-selection and the CSR function is eliminated, with the latter exclusively providing selection information to lexical entries.

The crucial data under debate here concern the fact that CPs, but not NPs, may occur in Caseless positions, as shown by the following contrasts:

(48) a. *it was proved [NP a theorem].
    b. it was proved [CP that tomatoes are fruits].

(49) a. John is curious *(about) [NP life].
    b. John is curious (about) [CP where I went].

For verbs like wonder, which is generally assumed to lack Case-assigning ability, the option CSR(Q)=NP is blocked by the failure to satisfy Case requirement. The option CSR(Q)=CP, on the other hand, is never affected by this consideration since there is no principled way to turn off a CP in UG. The contrast between (50a, b) thus falls under Case Theory without referring to c-selection.

(50) a. *John wondered [NP the time].
    b. John wondered [CP what the time was].

It also follows from the NP/CP asymmetry that when a predicate does assign Case, it can not take a concealed NP like the time in (50a) without taking its CP counterpart.

Pesetsky’s account, though conceptually desirable of its own accord, goes against the Visibility hypothesis (particularly in Stowell’s conception). For one thing, the problem posed by (48a, b) is less obvious if we entertain the possibility that it can never act as a place holder for NPs, just as there never does for CPs. In other words, there should be a co-occurrence restriction which dictates the pairing between it and CPs, as well as that between there and NPs (cf. Jackendoff (1977)). The proposal, if correct, automatically rules out (48a). The real empirical challenge thus comes from the contrast between (49a, b).

To start with, let’s consider the corresponding Chinese data, which may shed some light on the issue. As illustrated by (51a, b), the need for Case-marking is indeed parallel on the part of NP complements:

(51) a. *wo hen haoqi [NP zhe-jian shi de qiyin].
    I very curious this-Cl matter of cause
    ‘I am curious about the cause of this matter.’

    b. wo [(dui) [NP zhe-jian shi de qiyin]] haoqi.
    I about this-Cl matter of cause very curious
By comparing (51a) with (49a), it is easy to get the impression that *haoqi* 'curious' does not assign Case and accordingly cannot license its argument. The same observation, however, does not hold for CP complements:

(52) a. wo hen haoqi [CP Akiu weishenme bu lai].  
   'I am curious why Akiu will not come.'  
   I very curious Akiu why not come

   b. wo [*dui] [CP Akiu weishenme bu lai]] hen haoqi.  
   'I am curious about why Akiu will not come.'  
   I about Akiu why not come very curious

Since the presence of *dui* 'about' is obligatory for the preverbal CP complement in (52b), its postverbal counterpart in (52a) must somehow be Case-marked as well. Similar cases can also be found with predicates s-selecting propositions, as exemplified by (53) and (54):

(53) a.* wo hen yihan [NP zhe-jian shi].  
   'I regret this matter.'  
   I very regret this-Cl matter

   b. wo [*dui] [NP zhe-jian shi]] hen yihan.  
   'I regret about this-Cl matter very regret

(54) a. wo hen yihan [CP Akiu bu neng lai].  
   'I regret that Akiu cannot come.'  
   I very regret Akiu not can come

   b. wo [*dui] [CP Akiu bu neng lai]] hen yihan.  
   'I regret about Akiu cannot come very regret

Unless we arbitrarily reject the Visibility hypothesis on the part of CPs, predicates like *haoqi* 'curious' and *yihan* 'regret' should in principle assign Case to their CP complements and accordingly to their NP complements. The contrast between (51a) and (52a), as well as that between (53a) and (54a) thus suggests that c-selection may indeed play a role in complement selection. That is, the only thing wrong with (51a) and (53a) is that *haoqi* and *yihan* do not c-select NPs. Instead, they c-select PPs. Consequently, there is nothing mysterious about (49a, b): *curious* c-selects PPs rather than NPs, and (49a) is ruled out accordingly. Period. 18

It becomes clear at this stage that the Case-theoretic account cannot hold unless we assume that CP complements are not subject to the Visibility Condition. Grimshaw's approach, in contrast, does not involve Case theory
and therefore has no trouble in the relevant respect. For one thing, Pesetsky (1982) points out a potential problem with Grimshaw's theory. That is, by allowing LAD (Language Acquisition Device) to build subcategorization frames on the basis of empirical data, the function of CSR becomes redundant. The redundancy, however, does not seem so harmful if otherwise we have to stipulate that the Case requirement of CP varies among languages while the Case requirement of NP does not. For another, the redundancy in question may appear to be an undesirable consequence from the viewpoint of a formal theory of grammar. Nevertheless, since subcategorization frames can be built solely on evidence from NP complements, the redundancy in effect facilitates the acquisition process: children do not learn but just confirm the selection of CP complements, which is not unusual where UG and individual grammars meet.

The conclusion reached here is by no means unique. Rothstein (1992) argues intensively that the correlation between Case-assigning capability and c-selection of NP complements cannot be established: For instance, verbs typically labeled "unergative" nonetheless take object NPs in resultative and "X' way" constructions, as evidence by (55c) and (55d) respectively:

(55) a.*They laughed John.
   b. They laughed at John.
   c. They laughed John off the stage.
   d. They laughed their way out of the quarrel.

She points out that this otherwise unpredictable behavior of unergative verbs follows directly from Burzio's generalization (cf. Burzio (1986)), which states that a verb has the property of assigning an external $\theta$-role if and only if it has the property of assigning accusative Case. Under this view, the unergative verb $laugh$ always assigns Case since it assigns an external $\theta$-role to its subject they in (55a–c). (55a) is then rules out not by Case requirement but by c-selection: $laugh$ c-selects PP instead of NP, as suggested by the contrast between (55a, b). Our argument based on the Case requirement of CPs thus dovetails Rothstein's, with the former defending the generality of Visibility and the latter the generality of Burzio's generalization.

All in all, we have shown that c-selection is not reducible to Case Theory, which in turn maintains the Visibility Condition as a general principle for arguments, NPs and CPs alike. If this line of research proves to be feasible, the next step is to examine the cause of the typological differences between Chinese and English, particularly in regard to the CRP. We will address the issue next.
4. CASE RESISTANCE EFFECTS REVISITED

To account for the linguistic variations with respect to the CRP, it is necessary to ask why there should be a difference between Chinese and English CP arguments. As Huang (1993) has established from reconstruction effects in VP-preposing, there must be a subject trace within VP in Chinese. This means that Chinese, in parallel to English, has a functional projection hosting the subject under A-movement, whether we call it TP, Asp(ect)P, or Pr(edicate)P (cf. Cheng (1989, 1991), Tang (1990), Cole, Hermon and Sung (1990), among others). Since the functional head in question (i.e., T⁰, Asp⁰, or Pr⁰) should be able to license a subject in terms of Case-marking, it is unclear how we can distinguish Chinese CPs from their English counterparts with respect to the CRP.

One way to approach the problem is to hypothesize that Chinese Infl does not raise to Comp, either in syntax or in LF. Consequently, Comp never bears a Case-assigning feature in Chinese. But it also requires that English should always involve I-to-C movement, which is unlikely not only because verb-second is not a prominent feature of English but also because, as far as CP arguments are concerned, inversion (i.e., I-to-C raising) is impossible except when Comp is lexically governed (by a higher head; cf. Authier (1992)).

Alternatively, one may sketch a proposal in the vein of Stowell's observation that [+N] categories may be assigned Case, while [−N] ones may not, claiming that Chinese tensed CPs are [+N], while English tensed CPs are [−N]. This move, however, undermines the cross-linguistic generalization that the "bridgehood" of verbs is correlated to the nominality of CP complements (cf. Adams (1985), Tsai (1994)).

In this paper, we would like to entertain the possibility that the absence of CRP effects in Chinese is a typological correlation of its lacking Agr projections. According to Kuroda (1988), English-type languages differ from Japanese-type languages in displaying "forced agreement" on IP Spec. The same intuition has been implemented by Koopman and Sportiche ((1988); henceforth K&S) in Case-theoretic terms: Nominative Case is assigned to IP Spec in English-type languages through Spec-head agreement with I⁰ and to VP Spec in Chinese-type languages through government by I⁰. Now consider Chomsky's (1992) idea that Case assignment and morphological agreement should be uniformly recast as "feature-checking" in a Spec-head configuration. It is proposed that Case and agreement features reside on both parties of checking and are "checked off" once the checking mechanism applies. An immediate consequence under this "minimalist" approach is that the insight behind the above distinctions will be lost.
In view of the dilemma, we propose to replace Chomsky's "Economy of strategies" with "Economy of employment": We would allow both strategies in UG but only on the condition that languages employ them minimally and optimally. In other words, checking may apply under either government or Spec-head agreement, but only one of them can be employed. Along this line, let's make the empirical claim that morphological agreement can be realized only through spec-head checking. It follows from Economy of employment that languages with morphological agreement always check their Case features under Spec-head agreement. It is in this respect that our theory is consistent with Chomsky's view. In contrast, government is preferred by languages without morphological agreement, such as Chinese, because there is no further movement into higher Spec for Case reasons whatsoever and because movement is the last resort (cf. Chomsky (1989)). This move not only recaptures Kuroda's insight but also provides a rationale for K&S's typological distinction on Case assignment. Moreover, most of the Case-theoretic accounts regarding Chinese (e.g., those offered in section 2.3) can be carried over to the minimalist framework without further complications.

Along this line, the CRP is understood as a ban against vacuous agreement in the sense that, unlike NPs, CPs do not bear agreement features of their own in English. The function of expletive it and wh-traces left by CP-extraposition/topicalization is thus two-fold: One is to supply \( \varphi \)-features (always third person singular) so that Spec-head agreement can be achieved; the other is to serve as a place-holder for either LF raising or reconstruction. On the other hand, since there is no T-to-Agr and V-to-Agr movement in Chinese, feature-checking never involves agreement features, and hence the absence of CRP effects.

On empirical grounds, our position is backed by the fact that the binding domain of a Chinese subject self-anaphor is far beyond its immediate dominating CP node:

(56) a. Akiu\(_i\) renwei [\( \text{CP Lisi}_j \) hui xuan ta-ziji\(_{\text{ui}}\)].
   Akiu think Lisi will elect him-self
   Akiu\(_i\) thinks that Lisi\(_j\) will elect himself\(_{\text{ui}}\).

b. Akiu renwei [\( \text{CP ta-ziji} \) hui dang-xuan].
   Akiu think him-self will get-elected
   *Akiu thinks that himself will get elected.

As shown by (56a), ta-ziji 'him-self' differs from the genuine long-distance anaphor ziji 'self' in that it is clause-bound in object position, behaving
exactly the same way as English *himself* (cf. Tang (1989), Huang and Tang (1989), among others). Nevertheless, the parallel does not hold in subject position: the binding domain of *ta-ziji* ‘himself’ in (56b) is the matrix clause despite the fact that the embedded clause is tensed. A natural account of this subject/object asymmetry is that Chinese does not have Agr in IP-related projections, which may serve as an accessible SUBJECT in defining binding domains (cf. Chomsky (1981), Huang (1983), Aoun (1985, 1986)). Furthermore, Huang (1984, 1989b) also argues for a typological distinction between Chinese-type and Romance-type pro-drop: Chinese subject pro is licensed through identification from discourse, rather than agreement with Inf.

A desirable consequence along this line of thinking comes from another significant distinction between Chinese-type and English-type languages, that is, the rigidity on scope interaction (or the isomorphism in Huang’s (1982) sense). As is well-known, the following Chinese sentence does not have the ambiguity which its English counterpart has, as illustrated by the contrast between (57b) and (58b):

(57) mei-ge nüren dou taoyan mou-ge nanren.
    every-C1 woman all hate some-C1 man
    a. For every x, x a woman, for some y, y a man, x hates y.
    b. For some y, y a man, for every x, x a woman, x hates y.

(58) Every woman hates some man.
    a. For every x, x a woman, for some y, y a man, x hates y.
    b. For some y, y a man, for every x, x a woman, x hates y.

Now consider the following LF representation of (57), where the object remains in situ and checks off its Case feature under government (see above):

(59) [Asp mei-ge nüreni [Asp0 [. . . [vP t1 [v taoyan [vP mou-ge
    every woman hate some
    nanrenj . . . ]]]]]
    man

Since the object does not c-command any member of the subject chain, the (b) clause reading is impossible in violation of the Scope Principle (60) (Aoun and Li (1989)):

(60) A quantifier A has scope over a quantifier B in case A c-
    commands a member of chain containing B.

In contrast, the object chain overlaps with the subject chain in (58), as illustrated by the following LF representation:
Consequently, both the (a) and (b) clause readings are available according to (60).\(^{25}\) The rigidity contrast between (57) and (58) is then derived in a principle way, and no postulation of VP-adjunction is needed (cf. May (1985)). This is particularly appealing given Chomsky’s position that movement is motivated only by feature checking.

5. CONCLUDING REMARKS

Based on the Case requirement of CP in Chinese, this paper takes the stand that the Visibility Condition (1) should not discriminate between NPs and CPs as long as they are subject to θ-marking. Starting from Stowell’s (1981) observation that the Case requirement of English CPs is obscured by Case resistance effects, we have examined clausal complements, sentential subjects, and purpose infinitives in Chinese. And just as expected, (1) stands out as a full-blown principle wherever the charm of the CRP is removed. We have also addressed a few related issues in complement selection, such as the role of the CSR function and the defining property of “bridgehood”. Particularly, we spend a considerable length of time arguing for the autonomy of c-selection, which in turn maintains the Visibility hypothesis on the part of CP arguments. Finally, we have initiated an attempt to derive CRP effects from a general principle against vacuous agreement and explored some empirical consequences of the claim.

NOTES

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1 This implication can be extended to PRO if we adopt Chomsky’s recent observation that PRO receives null Case from some functional head in infinitivals. See also Yip, Maling, and Jackendoff (1987: 238) for a similar proposal from a quite different point of view.

2 We may assimilate the relation between *it* and *that a man is in the room* to that between *there* and *a man* through the notion “Case transmission” in Safir’s (1982) sense. Under this view, the embedded CP of (2b) receives Case-marking by virtue of forming a CHAIN with the expletive subject *it*. in the following terms (Chomsky (1986b)):

\[(i)\] A CHAIN is Case-marked if it contains exactly one Case-marked position; a position in a Case-marked CHAIN is visible for θ-marking.

“CHAIN” is a collective term for standard A-Chains and expletive-argument pairs (e.g., *(there, a man)* in (2a).
According to Stowell (1982), a tensed clause has the feature matrix [+N, -V, +Tense, ±Past]. The Tense feature, by virtue of being ±Past, is lexically specified and counts a nominative Case-marker. An infinitive, [+Tense] but unspecified for [Past], is assumed to be intrinsically Case-marked, bearing resemblance to PPs. In contrast, NPs and gerunds are [-Tense] and unspecified for [Tense] respectively. As a result, they do not bear Case-assigning features. And hence the contrast between (ia, b) and (ic) with respect to CRP effects:

(i) a. Eeyore blamed it on [exp Roo].
   b. Eeyore blamed it on [exp Roo’s being too showy].
   c. *Eeyore blamed it on [cp that Roo is too showy].
   d. *Eeyore blamed it on [cp (for Roo) to have been too showy].

See section 2.3 and 2.4 for further evidence.

It should be noted that dui may still be construed either as a verb, meaning ‘face (v.); stand up to’, or as an adjective, meaning ‘correct; matched’. Moreover, when located in a pre-modal position, it alternates with dui yu ‘as for’, which is often optional and taken to be an indication of topics. Nevertheless, when appearing post-modally, its alternation with dui yu is blocked and its presence becomes obligatory (cf. Lü (1980)). Since here dui does not carry any verbal and adjectival meaning except vague “aboutness”, we may well treat it as a dummy Case-marker or a nullified verb in Chinese terms.

The abbreviations are glossed as follows: BA: affected Case-marker; CI: classifier; DE: postverbal complement marker; Dur: durative aspect; Exp: experiential aspect; Inc: inchoative aspect; Prf: perfective aspect; PNM: prenominal modifier marker; Prg: progressive aspect.

As a reviewer points out, even in English there are some constructions bearing close resemblance to (1la):

(i) Since John entered until he left. . .

Also note that the prepositions may have been grammaticalized as complementizers in (i), specialized in introducing temporal predicates. Their Chinese counterparts, on the other hand, do not have this tendency:

(ii) cong [cp Akiu chifan] dao [cp ta xizao], Lisi dou dei zhaogu.

   from Akiu eat to he bathe Lisi all must take-care-of

   ‘From the matter that Akiu eats to the matter that he bathe, Lisi must take care of all.’

As noted by a reviewer, the absence of sentential subjects in English yes-no questions also lends support to Stowell’s claim, the reason being that I-to-C movement is incompatible with topicalization:

(i) *Does that the house is empty depress you?

The lack of topicalization within relative clauses is widely observed in various languages. Our hunch is that there might be a general ban against double predication in a local domain, on the assumption that topicalization involves null operator movement (Chomsky (1977)), which may well block operator movement of the same sort (i.e., relativization) with respect to Relativized Minimality in Rizzi’s (1990) sense.

Unlike their tensed counterparts, English infinitives may and must appear in Caseless positions, as shown by contrast between (i) and (ii):

(i) a. Piglet expected [cp that Pooh would catch a Woozle]
   b. It was expected [cp that Pooh would catch a Woozle]

(ii) a. Piglet expected [cp to catch a Woozle]
   b. *It was expected [cp to catch a Woozle]

As pointed out by Stowell (1981), a verb taking infinitival complements counts as intransitive, which as a rule do not undergo passivization, as in (iib).
To some extent, *ba*, *lai*, and *qu* all count as "nullified verbs", in that they all descend from verbs: *ba* means 'grasp', and *dui* means 'face (v.)'. A precaution here is that *qu* 'go' does not lose all its semantic properties when taking infinitival complements. It may alternate with another nullified motion verb *lai* 'come', as illustrated by (i).

(i) tamen xuan Akiu lai/qu [PRO, dang zhuxi].

They elect Akiu come/go act-as chairman

'They elected Akiu to act as the chairman (here/there).'

The choice depends on whether, from the points of view of speakers, the event in question occurs close by or not. In other words, *lai* implies 'here' and *qu* 'there'.

It is crucial to note that the optionality of *gei* in (30b-c) cannot derive from an alternative form of (30a):

(i) wo song-le Akiu na-ben shu.

I send-Prf Akiu that-Cl book

'I sent Akiu that book.'

According to Larson (1988), *na-ben shu* 'that book' in (i) is an adjunct in the lower VP shell, which in principle cannot undergo passivization. Moreover, *ba* only licenses an A-position, which is unlikely to be a landing site for adjuncts. Topicalization is also out of the question in the absence of any lexical head governor for *na-ben shu* in (i). All in all, the optionality in question appears to be a matter of deletion rather than the alternation between (i) and (30a).

This conclusion, as Pesetsky (p.c.) points out, may be avoided if we allow an A-chain with two θ-marked positions when the θ-roles in question are identical or closely related. But note that NP movement in (39a) is also blocked by the Greed principle in Chomsky's (1992) sense: since the Case requirement of the object *Lisi* is satisfied, it cannot move further to benefit *bei*, i.e., relieving the modal from violating the θ-criterion. Consequently, the problem does not go away even if we adopt Pesetsky's proposal.

For proposals in the same spirit, see Feng (1990) and Ting (1993). A similar case in Japanese *ni* passives is examined by Hoshi (1991), among others. A reviewer also notes that there may be a connection between *bei*-constructions and Haitian Creole raising constructions discussed in Déprez (1992).

*Ba* is often cited as a causative verb, taking a clausal complement containing either passive or unaccusative construction (see Yafei Li (1991), Sybesma (1992), Zou (1993), Ding 1994, among others), in a way similar to the analysis presented in (37). Since the issue is beyond the scope of this paper, we will simply adopt a modern version of the traditional view and keep our discussion to the point. For discussions concerning light verbs, see Miyagawa (1989), among others.

See Zou (1993) for a similar view on the alternation. We also leave open the possibility that *ba* functions as a place-holder for the head verb, triggering subsequent LF head movement.

Note that the optionality of *lai* 'come/go' in (44a) is quite unusual since in general, head governors have to be lexical in Chinese. One possibility is that the empty counterpart of *lai* has been preposed along with the infinitival, as in (46a). See also the discussion of (46).

For some reason, double topicalization causes even more serious degradation, as in (45b). This may well be an instance of a Relativized Minimality violation, with two crossing chains headed by null operators.

See Tsai (1994: 150) for further evidence for autonomous c-selection from a correlation between the selectional properties of control verbs and the possibility of long-distance wh-constructions.

See Mahajan (1990) for a parallel proposal on fulfilling wh-agreement.

If we choose not to make the empirical claim, then the prediction is that there exist
languages where morphological agreement is realized under government along with Case-marking, which is itself an empirical claim.

21 Under this approach, raising to IP Spec is motivated by the Extended Projection Principle alone in Chinese.

22 As a reviewer observes, the lack of CRP effects in Spanish, a language with rich morphological agreement, casts doubt on our theory (cf. Picallo (1984), Plann (1986)). Nevertheless, it should be further pointed out that this absence of CRP effects is only partial: As noted by Plann (1986: 337) herself, all three types of CP (i.e., indicative, subjunctive, and infinitive) extrapose from object position obligatorily. Moreover, they do not appear as subjects of small clauses either. Even more interestingly, she points out that some speakers prefer sentential subjects headed by the determiner el ‘the’ in the presence of transitive verbs:

\[(i) \quad [_{NP} \text{El} \quad [_{CP} \text{haber ganado el concurso}] \quad \text{garantiza nuestro triunfo.}]\]  
\[\text{the to-have won the contest guarantees our triumph}\]

\[(ii) \quad [_{NP} \text{El} \quad [_{CP} \text{que Luisa haya ganado el concurso}] \quad \text{garantiza nuestro}]\]  
\[\text{the that Luisa has won the contest guarantees our}\]
\[\text{triumph}\]

This indicates that Spanish has a very different upper CP structure from English, causing its mixed behavior toward the CRP. Our reasoning is further supported by Suñer’s (1993) observation that there are two distinct upper CP constructions for introducing wh-complements in Spanish: Verbs like se preguntar ‘wonder’ take wh-CPs headed by que ‘that’ whereas verbs like saber ‘know’ take “bare’ wh-CPs. It is proposed that this structural asymmetry directly reflects a semantic distinction between indirect questions and so-called “semi-questions” (denoting propositions).

23 Here the wh-traces in question may be analyzed as [+pronominal] variables in Cinque’s (1990) sense.

24 Note that the Visibility Condition may not have independent status under the minimalist approach. As a matter of fact, what we may envision is an “invisibility” condition, since all the Case features have to be checked off before LF.

25 An interesting observation here concerns that when an argument with a weak feature (e.g., the subject every woman) moves overtly to check a head with a strong feature (e.g., Agr), the greed principle appears violated in that the argument undergoes overt movement instead of otherwise less costly LF movement to rescue the head from some interface condition on PF. The notion of “greed” thus has to be defined in a farsighted manner: If overt movement will eventually benefit the argument itself in regard to Case Filter on LF, the greed principle can be compromised.

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National Tsing Hua University
Graduate Institute of Linguistics
Hsinchu 30043, Taiwan
wttsai@ling.nthu.edu.tw