Looking into Clauses

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There is a conflict between the claim that clauses in Chinese are always Case-marked when they are assigned thematic roles (Li 1985, 1990, Tsai 1995) and the contrasting claim that such clauses are not assigned Case (Li 2008). In this paper we argue that clauses in Chinese are not assigned Case (Pesetsky 1982). The Case filter applies only to NPs. The apparent instances of clauses in Case positions actually involve nominal phrases and Case is assigned to the dominating nominal phrase instead of the clause. This is supported by the fact that such clauses do not allow extraction from within (complex NP constraint). Further support for this analysis comes from a number of important facts not noted before, which distinguishes clauses in the positions alternating with nominal expressions (CANP) and those not alternating with nominal expressions (non-CANP). First, only CANP can be conjoined by the nominal conjunction word *he/gen* and the conjoined CANPs can co-occur with *dou,* whose appearance signals plurality. Secondly, only CANP can be followed by an overt noun (phrase), such as '(the) matter/question/saying" and only CANP can have nominal interpretations. Thirdly, non-CANP, such as the objects of verbs *renwei/cai* 'think/guess', cannot undergo topicalization, in contrast to CANP.
Among other theoretical implications, this work shows that the notion of s(emantic)-selection coupled with the Case requirement on NPs can derive the notion of c(ategorial)-selection (Pesetsky 1982, contra Tsai 1995).

Keywords: Case, clause, conjunction, Chinese

1. **Introduction: Case and Clauses**

Case theory was a major tool in the government and binding theory to capture the generalizations regarding order and constituency in natural languages (Chomsky 1980, 1981, 1986). For instance, NPs[1] must be assigned Case --- the Case filter (Chomsky 1980).

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[1] As the distinction between NP and DP is not significant in this work, we adopt the traditional label of "NP" sensitive to the Case filter.

(1) The Case filter
*[$_{NP}$ e]
where NP has phonetic content but not Case

The function of (1) is to ensure that noun phrases appear in the appropriate positions structurally, such as the object position of verbs and prepositions and the subject position of tensed clauses in English (right next to the Case assigners, V, P and Tense).[2] The Case filter was further connected to the Theta theory: Case must be present when a theta-role is assigned - the Visibility Condition on theta-role assignment. Every theta-role must be assigned and every argument must be assigned a theta-role.[3] The requirement of Case is reduced to the need of theta-roles properly assigned to arguments and arguments properly receiving theta-roles. However, the NP Case filter and the Visibility condition have different empirical coverage. The former applies to NPs; whereas the latter is relevant to all the complements assigned thematic-roles, including clauses. To distinguish the two formulations, it is important to determine if clauses are subject to the Case filter.

Pesetsky (1982) distinguishes between NPs and clauses categorically and claims that only the former needs Case. [4] Accordingly, the subcategorization properties of heads can be determined by the s(emantic)-selection properties of a head, coupled with the Case assigning ability of the head; that is, the c-selection (categorial) properties of a head can be derived from its semantic properties (s-selection) and the Case assignment properties of the head (cf. Stowell 1981 for a different account.)

Pesetsky's claim predicts the empirical contrast: clauses occur only in non-Case positions; NPs must appear in Case positions.

(2) a. I am afraid *(of) it
     b. I am afraid (*of) that the weather won't be good.

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[2] Not all Case markers are overt. For instance, Larson (1985) suggests that bare NP adverbs of time, location such as *tomorrow, now, here, someplace warm and sunny* and a limited set of bare-NP adverbs of manner are inherently Case marked.

[3] A common assumption is that only subcategorized complements are assigned thematic roles. However, a more inclusive view has also been proposed, such as the following condition on adverbial theta-role assignment (Larson 1985: 606):

(i) *Adverbial θ-Role Assignment*
    Assign an adverbial θ-Role to α, where α is any phrase.

If this is adopted, the Visibility condition does not exempt adverbial NPs from the Case filter,

[4] Following a widely adopted convention, we use the capitalized "Case" to refer to the notion of abstract Case in Case theory.

However, Li (1985, 1990) and Tsai (1995) observe that clauses in Chinese seem to appear in Case positions and therefore claim that clauses in Chinese are always Case-marked (henceforth referred to as CCC) when they are assigned thematic roles (appearing as objects of V, P or as subjects). Tsai 1995 claims that both the notions of c-selection and s-selection are needed in grammar according to the behavior of clauses in Chinese.

Li (2008) makes the contrasting claim that clauses do occur in non-Case marked positions in Chinese (henceforth referred to as Not-CCC), such as the complement positions of verbs like *think*.

This study will help resolve the conflict between CCC and Not-CCC. We will show that clauses in Case positions behave like they are nominal expressions.[5] This follows if Case is assigned to NPs, rather than clauses, as in Pesetsky (1982). Chinese is not different from English in regard to the Case requirement on clauses and NPs. The conclusion has significant consequences on how Case should be characterized in the grammar and whether the notion of c-selection is needed in the grammar.

Empirically, this work will focus on the clauses in the object positions of verbs and prepositions, leaving other possibilities to a separate work because of the limited space. We will first review the data and claims leading to CCC in section 2. In Section 3 we review Li (2008) that casts doubt on CCC. Section 4 brings a different perspective, namely conjunction, to the issues regarding whether the Case filter applies to clauses or not. In Section 5 we propose an NP structure for clauses in clearly Case-marked positions and arrive at the claim that NPs and clauses are, after all, not identical in their roles in Case theory. We make concluding remarks in Section 6.

2. Li (1985, 1990) and Tsai (1995): Clauses in Chinese are case-marked (CCC)

In her works on the role of Case in the grammar of Chinese, Li (1985, 1990) notes that clauses in Chinese behave like nominal phrases and occur in Case-marked positions, in contrast to English clauses. Tsai (1995) further explored the similarity between clauses and nominal phrases with respect to their sensitivity to the Case requirement. The following examples are from Tsai (1995, 282-285),[6] illustrating the relevance of Case to clauses as well as to NPs.

(3) wo [*(dui) [Akiu weishenme bu lai]] hen guanxin.
    I   about Akiu why   not come very care
    'I care about why Akiu will not come.'

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[5] Nominal expressions in argument positions will be labeled as NPs in this work, because of the reference to the classic term Complex NP constraint, the Case filter applying to NPs, and the irrelevance of the distinction between NPs and DPs in this work.

[6] Tsai's translation includes the intensifier *do*: *I do care about…* The *hen* here need not be interpreted as a real intensifier, as the deletion of *hen* makes the sentence unacceptable (see, for instance, Li and Thompson 1981 for *hen* without its intensifier interpretation).

(4) wo [*(dui) [Akiu bu lai]] hen zaiyi.
   I   about Akiu not come very mind
   'I do mind Akiu will not come.'

(5) wo [*(dui)   zhe-jian shi] hen guanxin.
   I   about this-CL matter very care
   'I care about this matter.'

(6) wo [*(dui)   zhe-jian shi]   hen zaiyi.
    I   about   this-CL matter very mind
    'I do mind this matter.'

   These examples show that a complement clause and a complement NP in the preverbal position equally require a Case-marker *dui*.[7]

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[7] Chinese allows SOV word order without a Case marker preceding the O, especially when the preposed object has a special discourse function (such as contrast, focus):

(i) wo ji   bu chi .
   I   chicken not eat
   'I don't eat chicken.'

(ii) ta zhe-jian shi   zhidao le
   he this-cl   matter know LE
    'He knows about this matter.'

Unexpectedly, a clause generally is not quite natural in such an object position:

(iii) ??ta ni bu neng lai zhidao le.
    he you not can come know LE
    'He know s that you cannot come.'

Dui is not possible when the verb is *zhidao*:

(iv) *ta dui ni   bu   neng lai   zhidao le.
    he to you not can   come know LE

There are also patterns disallowing the use of *dui* to Case-mark a preverbal nominal object:

(v) ta ba/*dui haizi da le ji   ci.
   he   child hit LE several times

Postverbally, a clause and an NP complement are assigned Case by the verb; therefore, the Case-marker *dui* does not appear:

(7) wo hen guanxin. [(*dui) [Akiu weishenme bu lai]/zhe-jian shi]
    I   very care   about Akiu why   not come/this-CL matter
    'I care about why Akiu will not come/this matter.'

(8) wo hen zaiyi [(*dui) [Akiu bu lai]/zhe-jian shi].
    I   very mind   about Akiu not come/this-CL matter
    'I do mind Akiu will not come/this matter.'

Other prepositions behave like *dui*:

(9) a. cong [Akiu jinlai zheli] dao [ta likai], Lisi yi-ju   hua   dou mei   shuo.
       from Akiu enter here to   he leave Lisi one-CL word all have-not speak
       'From the moment Akiu entered here to the moment he left, Lisi did not say
       a word.'

   b. cong [Akiu shenmeshihou qichuang] dao [ta zai nali   chifan], Lisi dou
      from Akiu when   get-up   to   he at where eat   Lisi all
      dating-de   yiqingerchu.
      investigate thorough
     'From the question of when Akiu wakes up to the question of where he eats,
      Lisi made a thorough investigation.'

        The following examples, with sentential subjects in relative clauses, illustrate the possibility of a clause staying in subject positions.

(10) a. [henduo [[Akiu neng huo-zhe hui-lai]   shi   tamen$_i$ jingya]   de ren$_i$]
         many   Akiu can   live-Dur back-home make them   surprised DE people
        dou mei   lai.
        all   have-not come
        '[Many people to whom it is surprising [that Akiu can come back alive]] did not
        come.'

These facts suggest that *dui* is not simply a Case marker for a preverbal object.
Therefore, the instances in (7) and (8) do not convincingly argue for the need of Case for
clausal complements. The need of *dui* in these sentences might be due to factors other
than Case.

b. [henduo [[Akiu neng-bu-neng huo-zhe hui-lai]   gen tamen$_i$ wuguan] de
        many   Akiu can-not-can   live-Dur back-home to them   irrelevant DE
        ren$_i$]   dou mei lai.
        people all have-not come
         '[Many people to whom it is irrelevant [whether Akiu can come back
        alive or not]] did not come.'

The identity in the possible positions for clauses and NPs suggests that clauses are assigned Case and the Case filter can be appropriately reduced to a Visibility condition on theta-assignment.

     The data, however, are more complicated. The parallel distribution between NPs and clauses fails in the following instances, where only a clausal complement is allowed postverbally, not an NP complement (Tsai 1995, 301-302, ex.51-52)

(11) *wo hen haoqi [zhe-jian shi   de qiyin]
       I   very curious this-CL matter DE cause
      'I am curious about the cause of this matter.'

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

     Tsai suggests that the Visibility condition is obeyed consistently, i.e., both clausal and NP complements should be assigned Case in order to receive theta-roles. The difference in the above examples is simply that *haoqi* selects a clause, not an NP.[8] In other words, *haoqi* specifies a categorical selection requirement (c-selection): the complement following *haoqi* must be a clause (or a PP, see note8). C-selection is arbitrary: the c-selection requirement for each lexical item must be listed.[9]

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[8] Tsai (1995) notes that the preverbal PP is selected by *haoqi*, although he did not discuss further why the selected PPs appear preverbally, not postverbally, which is the normal case for selected items (see Li 1985, 1990 for the split between the Case directionality requirement and the head parameter, which would need to be recast in different terms in the current framework):

(i) wo [*(dui) [Akiu weishenme bu lai]/ na-jian shi   hen haoqi.
    I   about Akiu why   not come that-CL matter very curious
    'I am curious why Akiu will not come.'

[9] This contrasts with Pesetsky's (1982) proposal that c-selection should follow from the semantic selection (s-selection) properties and the abilities of the heads to assign Case. According to Pesetsky, the following contrasts show that the verb *ask* in English assigns

However, such an analysis misses some generalizations on categorical distribution and raises the question of why clauses in English and Chinese should behave differently.[10] First, there is clear evidence in English that clauses are not assigned Case. The English counterparts of (11-12) show that the clausal complement in the English sentence corresponding to (12) is not assigned Case. In discussing the Case requirement of clauses in English, Stowell noticed that some heads license their clausal complements without Case assignment, as illustrated by the following examples:

(13) a. Mary is happy that Charles is leaving home.
     b. Kevin is certain that the tent is in the car.
     c. Neil is afraid that the computer will break down.
cf.
(14) a. Kevin is [certain of Ray's genius]
     b. Neil is [afraid of Constable O'Malley]

(15) a. *Kevin is certain Ray's genius
     b. *Neil is afraid Constable O'Malley

Stowell (1981:204) suggests that "these psychological-state-denoting adjectives have a special property that excludes them from the general requirement that theta-roles can only be assigned to A'-chains headed by PRO or Case….the adjective phrases [in these cases] instantiate a special case of theta-role assignment, which is limited to relations of awareness or recognition of the propositional content of a complement clause." That is, theta-roles can be assigned to clauses when the head has a lexical feature [+R].

Case to its complement, not *wonder*, even though they both require a question complement:

(i)   a. John asked the question.
      b. John asked what the time was.

(ii)   a. *John wondered the question.
      b. John wondered what the time was.

These pairs of sentences demonstrate that not all verbs in English assign Case and accept NPs as their complements. Clauses do not need Case; therefore, they can be complements of the verbs unable to assign Case.
[10] Li 1985, 1990 and Tsai 1995 did propose some rationale, which needs re-evaluation in the current approach.

As a corollary of the clauses in the above instances not assigned Case, Stowell notes that such clauses cannot undergo topicalization, which requires the trace left by topicalization be a variable, to be assigned Case.

(16) a. *[That Charles is leaving], I believe that Mary is [happy ___]
  b. *[That the computer will break down], I know that Neil is [afraid ___]
cf.
(17) [That the water is bad] $_i$ I believe Jenny forgot to mention [e$_i$]

Second and more importantly, there is theoretical advantage in recognizing non-CCC cases (clauses in non-Case-marked positions in Chinese). Li (2005, 2007) observes the following pattern:

(18) a. If a verb is subcategorized for a nominal object, such an object can be
      empty.
   b. If a verb is subcategorized for a clausal object, such an object
      cannot be empty.

(18a) is illustrated by (19), where verbs allowing nominal objects also accept null objects:

(19) a. wo tingdao-le na-jian shi.
      I   hear-LE   that-CL matter
      'I heard that matter.'

   b. wo tingdao ta de-le   da jiang le; ta ye   tingdao-le.
      I   heard he get-LE big prize LE he also hear-LE
      'I heard that he got a big prize; he also heard.'

(18b) is illustrated by (20)-(22), which show that verbs allowing only clausal objects, not nominal objects, would disallow a null object. When the full clausal objects of such verbs do not appear, the pro-form *zheme(yang)* 'so' must appear:

(20) a. *wo renwei/yiwei na-jian shi.
       I   think/ think that-CL matter
      'I thought/thought that matter.'

   b. wo renwei/yiwei ta hen congming; tamen ye *(zheme(yang))
      I   think/ think he very smart   they   also so
      renwei/yiwei.
      think/ think
      'I thought that he was smart; they thought so, too.'

(21) a. *wo cai   na-jian shi.
      I   guess that-CL matter
      *'I guess that matter.'
   b. wo cai   ta hen congming; tamen ye *(zheme(yang)) cai.
      I   guess he very smart   they   also so   guess
      'I guess that he is smart; they guess so, too.'

(22) a. *wo dasuan na-jian shi.
      I   plan   that-CL matter
      '*I planned that matter.'

   b. wo dasuan mingtian qu; tamen ye   *(zheme(yang)) dasuan.[11]
      I   plan   tomorrow go they also   so   plan
      'I planned to go tomorrow; they planned to do the same.'

      This discrepant behavior of NPs and clauses in the object position can be captured if we assume that only NPs are assigned case, not clauses. This correlation between case assignment and empty categories can be subsumed under the following condition.

(23) The Visibility Condition on Empty Categories
    Empty categories in argument positions should be assigned Case or in a chain containing Case.

      This means that a null object is possible only if Case is assigned to the object position. The condition also captures the different possibilities of a null object between English and Chinese. As is well-known, Chinese, not English, allows its object to be null:

(24) a. John saw him. *Mary saw, too.
    b. I like him. *She doesn't like.
cf.
(25) a. John kanjian-le ta; Mary ye   kanjian-le.
      John see-LE   him Mary also see-LE
      'John saw him; Mary saw him, too.'

   b. wo xihuan ta; ta bu xihuan.
      I   like   him he not like
      'I like him; he doesn't (like him).'

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[11] If *dasuan* is only subcategorized for an infinitival clause, it would not affect the discussion on the Case status of clauses in this work, as infinitivals are not assigned Case, as shown by Stowell (1981).

This contrast can be captured by an adapted inverse Case filter in Bošković (1997:134-142).

(26) English, not Chinese, requires Case to be realized on a lexical item.

The obligatoriness of overtly realizing Case features and the requirement on null arguments to be Case marked conspire to rule out any null objects in English. In this language, if a Case feature is available, it must be realized on a lexical item; if such a feature is not available, a null argument is not licensed. These considerations also capture the fact that the object CPs in the following instances cannot be "deleted" (cf. Lobeck 1995, Merchant 2001 for the impossibility of CP deletion in English).

(27) a.*Mary was afraid that the idea wouldn't work and Bill was [AP [happy
       [CP e]].

   b.*I suppose that he will come and they suppose [CP e], too.

     The facts presented so far reveal two conflicting generalizations: those in (3-10) seem to indicate that clauses are like NPs and are Case-marked in Chinese. In contrast, other facts, such as those related to the generalization about empty categories stated in (23), suggest that clauses in Chinese, as in English (13-17), are not like NPs and are not Case-marked. How can this conflict be resolved? Three logical options suggest themselves:

(28) a. Clauses must always be assigned Case in Chinese but not in English. (18) should
        not be accommodated by Case.

   b. Different types of clauses must be recognized in Chinese. That is, we need to
      recognize finer peripheral structures for clauses (Cinque 1999, 2002; Rizzi 1997,
      2004). A clause may have some or all of the following projections at the left
      periphery: Force Phrase, Topic Phrase, Operator Phrase, etc. Case is required
      with certain projections but not the others.

   c. Clauses in Chinese are not in Case positions, just as in English. The occurrence
      of clauses in Case-marked positions is only apparent.

     In the following discussions, we, taking biased terms, will refer to the complement positions of the verbs in (24-26) as Case marked positions and those in (23), together with the objects of prepositions and subjects as Case positions. We will claim the option in (28c) is more adequate than the other two, contra the observations and analyses in Li (1985, 1990) and Tsai (1995).

3. Li (2008): CCC is too strong. Could there be different types of clauses?

As noted, the lack of inflectional morphology in Chinese tends to make it difficult to identify clearly what types of entities are being studied. For instance, the tensed clausal complements in (29a-b) and (31a-c) can all be translated as clauses in Chinese as well ((30), (32) respectively), even though only the verbs in (29) and (30) can assign Case to the complements.

(29) a. I know [that he does his work]/this matter.
　　b. I like his doing/him doing/him to do this work/this matter.

(30) a. wo zhidao [ta zuo zhe gongzuo]/zhe-jian shi.
　　　I　know　he do　this work　　this-CL　matter
　　　'I know that he does this work/this matter.'

　　b. wo xihuan [ta zuo zhe gongzuo]/zhe-jian shi.
　　　　I　like　　he do　this work　　this-CL　matter
　　　　'I like his/him doing this work/this matter.'

(31) a. He is happy that he is doing this work
　　b. He prefers for him to do this work.

(32) a. ta hen　gaoxing ta zuo zhe gongzuo.
　　　he very happy　he do this work
　　　'He is happy that he is doing this work.'

　　b. ta　bijiao　　　　xihuan ta zuo zhe gongzuo
　　　he comparatively like　　he do　this work
　　' He prefers for him to do this work.'

English distinguishes different types of clauses by overt morphological markings (the tense marker *-s,* the participial/gerundive marker *–ing,* infinitival *to,* etc). The question is whether Chinese also distinguishes different types of clauses in the relevant contexts, which might be responsible for the seemingly contradictory patterns: some clauses appear in Case-marked positions and some others do not. The data for the clauses in Case and non-Case positions seem to suggest that both allow the same types of clauses. They can be *wh*-questions, as demonstrated earlier. In addition, topic and focus elements are also allowed in both contexts.

(33) a. wo zhidao na-jian shi.
　　　I　know　that-CL matter
　　　'I know that matter.'

    b. wo dui na-jian shi   hen haoqi.
       I   to that-CL matter very curious
       'I am curious about that matter.'

    c.*wo yiwei   na-jian shi.
       I   thought that-CL matter

(34) a. wo zhidao **shi** ta na-le   na-ben shu.
       I   know be he take-LE that-CL book
       'I know that HE took that book.'

    b. wo dui ta **daodi** bu yuanyi zuo **shenme** hai mei gao   qingchu.
       I   to he to-end not willing do what   still not make clear
       'I am still not clear what on earth he is not willing to do.'

    c. wo yiwei   **shi** ta na-le   na-ben shu.
       I thought be he take-LE that-CL book
       'I thought that HE took that book.'

(35) a. wo zhidao na-ben shu, ta na-le   .
       I   know that-CL book he take-LE
       'I know that book, he took.'

    b. wo dui na-jian shi   shei yuanyi zuo hen haoqi.
       I   to that-CL matter who willing do   very curious
       'I am curious about that matter who will do (it).'

    c. wo yiwei   na-ben shu ta na-le   .
       I thought that-CL book he take-LE
       'I thought that book, he took.'

This suggests that the typical left-peripheral elements such as question operators, topic and focus elements are allowed in the complement positions of Ps and verbs assigning Case and those Vs not assigning Case. Another option to consider is tense: could it be that Chinese does distinguish tensed clauses from non-tensed ones: verbs like *renwei* 'think', *cai* 'guess' require tensed clausal complements but Case-marked positions take non-tensed clauses?

       The answer to this question is dependent on whether the notion of tense plays a role in the grammar of Chinese. Tsang (1981), Huang (1982), Li (1985, 1990), among others, argue that Chinese distinguishes infinitival clauses from tensed clauses and modal-like words such as *hui* can serve as a tense marker. In contrast, Hu, Pan and Xu

(2001) argue that Chinese does not make such a distinction. Lately, Lin (2003a,b, 2006), Sybesma (2007) and Tsai (2008) revisited the issue of whether Chinese has a tense projection syntactically. In the following paragraphs, we show that even if we follow the claim by Sybesma and Tsai that Chinese does express tense syntactically, such tensed clauses still appear in the typical Case-marked positions.

Let us illustrate the point with the most recent work, Tsai (2008). According to Tsai, there is some "incompleteness" effect observed in Chinese for sentences like the following:[12]

(36) a. [%]Akiu pao-zhe.
      Akiu run-Dur

   b. [%]Akiu kan-zhe   dianshi.
      Akiu watch-Dur   TV

(37) [%]Akiu   na-le   shu.
     Akiu   take-Prf   book
     'Akiu took books.'

These cases sound incomplete because of their failure of anchoring tense, i.e., to guarantee a proper temporal reference of a given sentence through syntactic measures. Adopting a generalization in S.-Z. Huang (2005), Tsai analyzes tense anchoring as a process of spelling out an underlying event argument by a variety of morpho-syntactic means. This process may involve event coordination, event subordination, event modification, event quantification, or verb raising to *v*/T.

(38) a. Akiu   yizhi   pao-zhe.
     Akiu   continuously run-Dur
     'Akiu is running continuously.'

   b. Akiu yibian kan-zhe   dianshi, yibian xie-zhe   baogao.
     Akiu while watch-Dur TV   while write-Dur report
     'Akiu is watching TV and writing the report at the same time.'

   c. Akiu na-le   san-ben   shu.
     Akiu take-Prf   three-CL   book

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[12] These examples are from Tsai 2008, in which Dur represents the aspect marker expressing duration, Prf, the perfective aspect marker. Prt stands for a sentence-final particle, which is simply represented as LE in the gloss of other examples in this work.

'Akiu took three books.'

   d. Akiu yinggai/mei   na   shu.
      Akiu should/have.not   take   book
      'Akiu should take/have not taken books.'

   e. Akiu na-le   shu   jiu   pao.
      Akiu take-Prf   book   then   run
      'Akiu ran away immediately after taking the book.'

   f. Akiu na-le   shu   le.
      Akiu take-Prf book   Prt
      '(As for now,) Akiu has taken the book.'

Regardless of which analysis should be adopted in order to encode the notion of tense properly, what is pertinent to our discussion is that even if we recognize Chinese expresses tense syntactically (tense anchoring), these "tensed clauses" comfortably appear in typical Case positions, including the object of Case-assigning verbs and the object of prepositions:

(39) a. wo zhidao [Akiu   yizhi   pao-zhe]
      I   know   Akiu   continuously run-Dur
      'I know that Akiu is running continuously.'

   b. wo zhidao [Akiu na-le   shu jiu pao].
       I know   Akiu take-Prf book then run
       'I know that Akiu ran away immediately after taking the book.'

   c. wo zhidao [Akiu hen   kuai jiu na-le   shu le]]
       I   know   Akiu very fast   then take-Prf book Prt
       'I know that Akiu has taken the book very quickly'

(40) a. wo [dui [Akiu yizhi   pao-zhe] hen bu gaoxing.
      I   to Akiu continuously   run-Dur very not happy
     'I am not happy that Akiu is running continuously.'

   b. wo [dui [Akiu yibian kan-zhe   dianshi, yibian xie-zhe baogao]]
      I   to Akiu while   watch-Dur TV   while   write-Dur report
      hen bu gaoxing.
      very not happy
      'I am not happy that Akiu is watching TV and writing the report at the same time.'

c. wo [dui [Akiu na-le   san-ben   shu]] hen bu gaoxing.
  I   to   Akiu take-Prf three-CL   book very not happy
  'I am not happy that Akiu took three books.'

d. wo [dui [Akiu yinggai/mei   na shu]] hen bu gaoxing.
   I to Akiu should/have.not take book very not happy
  'I am not happy that Akiu should take/have not taken books.'

e. wo [dui [Akiu na-le   shu   jiu pao]] hen bu gaoxing.
   I to Akiu take-Prf book then run very not happy
  'I am not happy that Akiu ran away immediately after taking the book.'

f. wo [dui [Akiu name kuai jiu na-le   shu le]] hen bu gaoxing.
   I to Akiu that fast then take-Prf book Prt very not happy
  'I am not happy that Akiu has taken the book that fast.'

The range of possibilities shown above applies to the patterns with verbs **NOT** allowing NP complements, such as *renwei/yiwei/cai* 'think/guess'.

(41) a. wo yiwei [Akiu yizhi   pao-zhe].
    I think Akiu continuously run-Dur
   'I thought that Akiu was running continuously.'

b. wo yiwei [Akiu yibian kan-zhe   dianshi, yibian xie-zhe   baogao].
   I think Akiu while watch-Dur TV   while   write-Dur report
   'I thought that Akiu was watching TV and writing the report at the same time.'

c. wo yiwei [Akiu na-le   san-ben   shu].
   I   think Akiu take-Prf three-CL   book
   'I thought that Akiu took three books.'

d. wo yiwei [Akiu yinggai/mei   na shu].
   I   think Akiu should/have.not take book
   'I thought that Akiu should take/had not taken books.'

e. wo yiwei [Akiu na-le   shu   jiu pao].
   I   think Akiu take-Prf book then run
   'I thought that Akiu ran away immediately after taking the book.'

f. wo yiwei [Akiu hen   kuai jiu na-le   shu le].
   I   think Akiu very fast then take-Prf   book Prt

'I thought that Akiu had taken the book very fast.'

The lack of contrast in acceptability between (39-40) and (41) shows that, if indeed there is tense anchoring and it distinguishes tensed clauses from non-tensed ones, the types of clauses grouped under the tensed ones can appear in those positions allowing NPs (Case-marked positions), as well as the positions not allowing NPs.

A cautionary note should be made regarding (39), those with verbs allowing both a postverbal nominal and clausal complement. Although we recast this pattern in terms of Case marking – the verbs in this pattern can assign Case, it should be noted that the complement clause might not be always in Case positions, as such a clause might be extraposed (Stowell 1981). Therefore, we will focus on the patterns in (40) and (41).

Even though (40) and (41) show that the same types of clauses can appear in clearly Case marked positions (prepositional object) and non-Case marked positions (those disallowing NPs), the two patterns do not share the entire range of possibilities. For instance, the focus marker *shi* is quite natural in the clausal complements of the verbs disallowing NP complements (42); whereas the sentences in (43) show that *shi* is much less acceptable in clearly Case-marked positions:

(42) wo yiwei [Akiu shi yizhi   pao-zhe].
    I   think   Akiu be continuously run-Dur
    'I thought that Akiu indeed was running continuously.'

(43) a. wo [dui [Akiu (*shi) yizhi   pao-zhe]] hen bu gaoxing.
      I   to   Akiu   be continuously run-Dur   very not happy
      'I am not happy that Akiu indeed was running continuously.'

    b. wo [ba [Akiu (*shi) yizhi   pao-zhe]] dangzuo shi hen zhongyao de shi.
      I   ba Akiu   be continuously run-Dur   regard   be very important de matter
      'I took it as important that Akiu indeed was running continuously.'

    c. wo [bei [Akiu (*shi) yizhi   pao-zhe]] fansi le.
      I   bei Akiu   be continuously run-Dur   annoyed
      'I was annoyed by Akiu's indeed running continuously.'

The unacceptability of (43) is interesting. Have we finally found a clue to distinguishing the type of clauses that does occur, and the type that does not occur, in Case marked positions? In the next section, we will show that the fact from conjunction argues for a nominal structure for the clauses in the object position of prepositions. Together with the fact regarding the overt co-occurrence of nouns (phrases) with clauses, we claim that clauses in clear Case positions, such as prepositional object positions, are actually nominal expressions. Accordingly, there is no compelling reason to state that clauses

appear in prepositional object positions; there are no grounds to claim that clauses themselves are assigned Case, governed by the Case filter.

4. Surprising conjunction facts

As mentioned, the relative paucity of inflectional morphology in Chinese makes it challenging to distinguish categories. Indirect mechanisms help with the task. An interesting tool emerging from the recent works by Aoun and Li (2003), Huang (2006), Li (2008), Zhang (2009), and Huang and Li (to appear) is the choice of conjunction words.[13] Pertinent to this work is the fact that the conjunction words *erqie* 'and' and *he/gen* 'and' are used to conjoin different phrases: *he* and *gen* conjoin nominal phrases and *erqie*, non-nominal constituents, such as clauses. The distinction is illustrated below.

(44) Zhangsan   he/gen/*erqie   Lisi dou hen congming.
     Zhangsan   and   Lisi all very smart
     'Zhangsan and Lisi are both smart.'

(45) Zhangsan hen congming   erqie/*he/*gen   Lisi ye hen congming.
     Zhangsan very smart   and   Lisi also very smart
     'Zhangsan is smart and Lisi is also smart.'

(46) wo renwei/yiwei/cai Zhangsan hen congming   erqie/*he/*gen   Lisi ye
      I   think/thought/guess   Zhangsan very smart and   Lisi also
     hen congmong.
     very smart
      'I think/thought/guess Zhangsan is/was smart and Lisi is/was also smart.'

Interestingly, not all clauses require *erqie* as the conjunction word. The "nominal" conjunction words, *hen* and *gen*, are possible in some contexts, such as the object of some verbs, the object of a P, and the subject of a sentence.

(47) wo xiang-zhidao Zhangsan zuole shenme he/gen Lisi zuole shenme
      I   want-know   Zhangsan did   what   and   Lisi did   what
     'I want to know what Zhangsan did and what Lisi did.'

(48) a. Zhangsan neng-bu-neng lai   he/gen Lisi neng-bu-neng lai   dou bu shi wenti.[14]

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[13] There is a long history of interests in and analysis of coordinate structure by Chinese grammarians. For a brief overview, the reader is referred to Guo 2005.
[14] If *erqie* conjoins clauses, *dou* is not possible. This is because *erqie* conjoins two CPs to make one CP.

(i) Zhangsan bu lai   erqie Lisi ye bu lai   (*dou) shi wenti.

Zhangsan can-not-can   come and   Lisi can-not-come come all not be question
'Whether Zhangsan can come and whether Lisi can come are not problems.'

  b. Zhangsan de jinpai   he/gen Lisi de yinpai   dou shi women
    Zhangsan get gold medal and   Lisi get silver medal all be we
    yuliaodangzhong de shi.
    expect   de matter
    'Both (the facts) that Zhangsan won gold medal and that Lisi won silver medal are
    what we expected.

(49) wo dui Zhangsan yao lai   he/gen Lisi ye yao   lai   dou mei yijian.
   I   to Zhangsan want come and   Lisi also want come all   not opinion
   'I have no objection to either of the facts that Zhangsan wants to come and Lisi also
   wants to come.'

(50) wo ba Zhangsan keyi lai   he/gen Lisi ye keyi lai   dou dangzuo shi hen
   I   ba Zhangsan can come and   Lisi also can come all   regard   be very
   Zhongyao de shi.
   important de matter
   'I take both of the facts as important that Zhangsan can come and Lisi can
   Come too.'

(51) wo bei Zhangsan keyi lai   he/gen Lisi ye keyi lai   xiadao le.
   I   ba Zhangsan can   come and   Lisi also can   come shocked

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  Zhangsan not come and   Lisi also not come   all   be problem
  'That Zhangsan can come and Lisi can also come is a problem.'

The entire CP can still be a clause followed by a singular noun:

(ii) wo dui Zhangsan bu lai   erqie Lisi ye   bu lai   zhe-ge wenti   hen danxin.
   I   to Zhangsan not come and   Lisi also not come this-CL problem very worried
  'I am worried about the problem that Zhangsan cannot come and Lisi cannot come
  either.'

(iii) *wo dui Zhangsan bu lai   erqie Lisi ye   bu lai   zhe-liang-ge wenti   hen
    I   to Zhangsan not come and   Lisi also not come this-two- CL problem very
  danxin.
  worried
  'I am worried about the two problems that Zhangsan cannot come and Lisi cannot
  come either.'

'I was shocked by the fact that Zhangsan can come and that Lisi can come too.'

(52) [cong [[Zhangsan jinlai] he/gen [Lisi jinlai]] dao [xianzai], wo   dou mei   shuo
    from   Zhangsan enter and   Lisi enter   to   now   I   all   have-not speak
    hua.
    word
    'From the time Zhangsan entered and the time Lisi entered till now, I did not say a
    word.'

      Why is it that the nominal conjunction is possible with (47)-(52) but not with
(44)-(46)? The translation of (52) provides a clue: it requires the use of nominal
expressions like *time, moment*. The obligatory use of time expressions in the translation
for (52) makes sense because the object for the preposition *cong* 'from' and *dao* 'to'
should not be a proposition. Rather, the relevant objects should express temporal points.
(52) is synonymous with the one below, which contains nominal temporal expressions
(even though the repetition of *na shihou* 'that time' sounds redundant):

(53) [cong [[Zhangsan jinlai] na   shihou he/gen [Lisi jinlai] na shihou] dao [xianzai],
    from   Zhangsan enter   that time   and   Lisi enter   that time   to   now
    wo dou mei   shuo hua.
    I   all   have-not speak word
    'From the time Zhangsan entered and the time Lisi entered till now, I did not say a
    word.'

Indeed, those accepting *hen/gen* as the conjunction word all allow the occurrence of a
nominal phrase with the clause:

(54) wo xiang-zhidao Zhangsan zuole shenme he/gen Lisi (ye) zuole shenme
    I   want-know Zhangsan did   what   and   Lisi also did   what
    zhe liang-jian shi.
    this two-CL   matter
    'I want to know the two matters what Zhangsan did and what Lisi (also) did.'

(55) Zhangsan neng-bu-neng lai   he/gen Lisi neng-bu-neng lai   zhe liang-ge
    Zhangsan can-not-can   come and   Lisi can-not-come come this two-CL
    wenti   dou bu zhongyao[15]

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[15] The two occurrences of *wenti* 'question' in the following example sound redundant:

(i) Zhangsan neng-bu-neng lai   he/gen Lisi neng-bu-neng lai   zhexie wenti
    Zhangsan can-not-can   come and   Lisi can-not-come come these   questions
    dou bu shi wenti

questions all   not important
'Neither of the questions is important whether Zhangsan can come and whether Lisi can come.'

(56) wo dui Zhangsan keyi lai   he/gen Lisi ye keyi lai   zhe liang-jian shi   dou mei
     I to Zhangsan can come and   Lisi also can come this two-CL   matter all not
     yijian.
     opinion
     'I have no objection to either of the matters that Zhangsan can come and Lisi can also come.'

(57) wo ba Zhangsan keyi lai   he/gen Lisi ye keyi lai   zhe liang-jian shi
     I BA Zhangsan can come and   Lisi also can come this two-CL   matter
     dou dangzuo shi hen zhongyao de shi.
     all regard   be very important de matter
     'I take both matters as important that Zhangsan can come and Lisi can also come.'

(58) wo bei Zhangsan keyi lai   he/gen Lisi ye keyi lai   zhe liang-jian shi
     I BEI Zhangsan can come and   Lisi also can come this two-CL matter
     xiadao le.
     shocked
     'I was shocked by the two matters that Zhangsan can come and Lisi can also come.'

In contrast, those clauses not allowing *he/gen* as conjunction words do not accept an accompanying noun phrase:

(59) a. wo renwei/yiwei/cai   Zhangsan keyi lai   erqie Lisi ye keyi lai
        I think/thought/guess Zhangsan can come and   Lisi also can come
        (*zhe(liang-jian) shi).
          this two-CL matter
        'I think/thought/guess (*the (two) matter(s)) that Zhangsan can come and Lisi can also come.'

cf.   b. wo zhidao Zhangsan keyi lai   he/gen Lisi ye keyi lai (zhe liang-jian shi).
        I know   Zhangsan can come and   Lisi also can come the two-CL matter
        'I know (the two matters) that Zhangsan can come and Lisi can also come.'

---

all   not be question
'The questions of whether Zhangsan can come and whether Lisi can come are not questions.'

These contrasts suggest that what appears as a clause in a Case position might actually be a more complex nominal structure containing a clause and a covert noun (phrase), equivalent of the overt expression '(the) question', '(the) matter', "the time', etc. The relation between the clause and the noun (phrase) might be an apposition or a noun complement structure. We will not pursue in this work the precise characterization of the relation between the clause and the covert noun (phrase) and the nature of the covert element but simply refer to the nominal clausal structure as the complex NP structure. What is important is that recognizing a clause in Case positions as having a more complex structure provides a better understanding of the facts discussed so far in this work and other related phenomena.

5. Complex NP structures

Adopting a complex NP structure for the clauses in Case positions accommodates the facts described so far. First, because what are conjoined are noun phrases, it is expected that the nominal conjunction word *he* or *gen* is used. Two entities are conjoined; therefore, *dou* is possible, as in (48a) and other example sentences where it is used. Note that the use of *erqie* indicates that the conjunction creates one CP, which can be accompanied by a noun phrase expressing single, not plural entities. The occurrence of *dou* is impossible (see footnote 13):

(60) Zhangsan bu-neng lai   erqie Lisi ye bu-neng lai (*dou) bu shi wenti.
     Zhangsan not-can come and   Lisi also not-come come all not be question
     'That Zhangsan cannot come and Lisi cannot come either is not a problem.'
cf.
(61) Zhangsan bu-neng lai   he/gen Lisi bu-neng lai   dou bu shi wenti.
     Zhangsan not-can come and   Lisi not-come come all not be question
     'That Zhangsan cannot come and that Lisi cannot come are not problems.'

   In addition, it is expected that the focus marker *shi* does not appear within a complex NP, illustrated below:

(62) a. [Akiu (*shi) yizhi   pao-zhe] zhe-jian shi]
          Akiu   be   continuously run-Dur this-CL   matter

    b. [Akiu (*shi) neng-bu-neng lai]   zhe wenti]
        Akiu   be can-not-can   come this question
        'the question whether Akiu indeed can come'

The distribution of the focus marker *shi* is sensitive to island conditions, which is expected if the *shi* focus needs to be raised to the matrix clause at LF, which cannot cross island boundaries (complex NP constraint in this case – no extraction crossing the

boundary of a complex NP, one of the island constraints as in Ross (1967), Chomsky (1981).

The island effects created by the complex NP structure are manifested not only in the interpretive procedure of the *shi* focus but also in the constructions involving overt extraction.[16] Consider the patterns containing a clause assigned Case by *dui* 'to', *ba* and *bei*. Extraction of the subject of such a clause is not possible as in (63), in contrast to (64), which allows the embedded subject to be topicalized:

(63) a. Lisi, wo [dui [*(ta) bu hui   lai]]   hen bu gaoxing.
        Lisi I   to   he not will come very not happy
        'Lisi, I am not happy that (he) will not come.'

     b. Lisi, wo [ba [*(ta) bu hui   lai]]   dangzuo shi hen zhongyao de shi.
        Lisi I   ba   he not will come regard   be very important de matter
        'Lisi, I took it as important that (he) was running continuously.'

     c. Lisi, wo [bei [*(ta) yizhi   ku-zhe]] fansi le.
        Lisi I   bei   he continuously cry-Dur annoyed
        'Lisi, I was annoyed by (his) crying continuously.'

(64) Lisi, wo renwei/yiwei/cai   (ta) bu hui lai.
      Lisi I   think/thought/guess   he not will come
      'Lisi, I think/thought/guess that (he) would not come.'

In addition, only argument question words can appear inside a clause in the relevant Case positions and be interpreted as having scope outside the clause.

(65) ta dui shei hui bei qing   lai   yanjiang hen gaoxing ne?
      he to who will by invite come speak   very happy   Q
      'Who is x such that he is happy that x will be invited to speak?'

(66) a.*ta dui ni   weishenme yao yanjiang hen gaoxing ne?
        he to you why   will speak   very happy Q
        'Why(x) is he happy you will speak (x)?'
cf. b. ta dui ni   weishenme yao yanjiang hen haoqi   ma?
        he to you why   will speak   very curious Q
        'Is he curious about why you will speak?'

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[16] It is not possible to extract from within an appositive clause, either, even though the term "complex NP constraint' generally is not used to accommodate apposition cases.

(67) a. *ta dui ni yao-bu-yao   yanjiang hen gaoxing ne?
         he to you will-not-will speak   very happy   Q

cf. b. ta dui ni yao-bu-yao   yanjiang hen haoqi   ma?
        he to you will-not-will speak   very curious Q
        'Is he curious about whether you will speak?'

(68) ta ba shei yao yanjiang kande hen   zhongyao ne?
     he to who will speak   regard very serious   Q
     'Who is x such that he takes it seriously that x will speak?'

(69) a.*ta ba ni   weishenme yao yanjiang kande hen zhongyao ne?
        he to you why   will speak   regard very serious   Q
        'Why(x) does he take seriously he will speak (x)?'

cf. b. ta dui ni   weishenme yao yanjiang kande hen zhongyao ma?
        he to you why   will speak   regard very serious   Q
        'Does he take seriously about why you will speak?'

(70) a. *ta ba ni yao-bu-yao   yanjiang kande hen zhongyao ne?
         he to you will-not-will speak   regard very serious   Q

cf. b. ta ba ni yao-bu-yao   yanjiang kande hen zhongyao ma?
        he to you will-not-will speak   regard very serious   Q
        'Does he take seriously whether you will speak?'

The fact that the clauses following *dui/ba/bei* behave like islands seems to support the proposal that these clauses are not what they appear to be. The structures are more complicated: there is a covert noun (phrase) – complex NP structures. Unfortunately, resorting to the complex NP constraint is not the only possibility. The unacceptable patterns discussed above involve extraction from a constituent on the left branch of the tree structures. Even though the nature of the left-branch condition is not clear (e.g., see Kennedy and Merchant 2000 for the claim that the left-branch condition is a PF phenomenon and see the variations regarding the relevance of left-branch condition in different types of languages such as Bošković 2005, Corver 1990, 1992, among many others), it is still a possible factor. Therefore, we can only claim that the facts regarding extraction are compatible with a complex NP structure but do not exclusively argue for it.[17]

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[17] Nonetheless, it is relevant to point out that the constituents following *dui, ba* and *bei* are all arguments (thematically-marked). Tsai (1995) notes that the *dui* phrase is selected by the verb or adjective. The object of *ba/bei* are both arguments among the layers of structures constituting the predicates of sentences (for the details of possible analyses on

Still, there is some evidence from the postverbal clausal complement that supports the more complex structure. Recall that some verbs can assign Case to their clausal complements and the nominal conjunction word *he* or *gen* can conjoin such clausal complements, as in (59b), repeated below:[18]

(59) b. wo zhidao Zhangsan keyi lai   he/gen Lisi ye keyi lai (zhe liang-jian shi).
   I   know   Zhangsan can come and   Lisi also can come the two-CL matter
   'I know (the two matters) that Zhangsan can come and Lisi can also come.'

As expected, the *shi* focus is not possible in this pattern, neither an adjunct *wh*-question with scope outside the clausal complement:

(71) *wo zhidao Zhangsan shi keyi lai   he/gen Lisi ye   shi keyi lai
  I   know   Zhangsan be can come and   Lisi also be can come
  (zhe liang-jian shi).
   the two-CL matter
   'I know (the two matters) that Zhangsan indeed can come and Lisi indeed can also
   come.'

(72)*ni xiangxin Zhangsan weishemne keyi lai he/gen Lisi ye weishenme keyi lai
  you believe Zhangsan why   can come and Lisi also why   can come
  (zhe liang-jian shi) ne?
  the two-CLmatter Q
  'Why(x) you believe Zhangsan can come(x) and Lisi can also come(x)?'

6. Conclusion

It is clear that Case-marked positions all allow NPs and NPs are assigned Case. We argued that the occurrence of clauses in the same positions as Case-marked NPs actually is deceptive. The new tools available from the study of conjunction and null objects helped make the discovery. The relevant clauses have more complex structures. They are complex nominals and Case is assigned to the nominal. The clause itself is not assigned Case. This is why clauses are possible in the contexts where Case is not assigned and NPs are not possible—we are back to the proposal by Pesetsky that the Case

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ba/bei, see Li 2002 on *ba*, Huang, Li and Li 2009 on *ba* and *bei*). Chinese may be considered as a head-final language (Li 1985, 1990). It would be important to investigate the nature of the Left Branch Condition in head-final languages.

[18] The postverbal position can be ambiguous: Case marked or non-Case marked. A verb can optionally assign Case in Chinese, as argued for in Li (1985, 1990). An extraposition option might also be entertained.

filter applies to NPs, not to clauses[19] and that c-selection can still be derived from s-selection interacting with Case.

To complete the paradigm, we should point out that, just like their English counterparts, non-Case marked clauses cannot undergo A'-movement, leaving variables in need of Case. Recall that the complement clauses of *happy/afraid* in (73) are not assigned Case, as illustrated by the unacceptability of topicalization in (74), in contrast to the possibility of topicalizing the clausal complement when Case is available as in (75):

(73) a. I believe that Mary is happy that Charles is leaving.
    b. I know that Neil is afraid that he computer will break down.

(74) a. *[That Charles is leaving], I believe that Mary is happy __.
    b. *[That the computer will break down] I know that Neil is afraid ___.

(75) a. [That Charles is leaving], I believe that Mary knows __.
    b. [That he computer will break down] I know that Neil understands ___.

The same contrast is found in Chinese:

(76) a. ta shuo tamen renwei/cai Lisi hui lai.
      he say   they   think/guess Lisi will come
     'He said they thought/guessed that Lisi would come.'

    b. * Lisi hui lai,   ta shuo tamen renwei/cai.[20]
        Lisi will come he say   they   think/guess

(77) a. ta shuo tamen zhidao/bu xiangxin Lisi hui lai.
      he say   they   know/not believe Lisi will come
     'He said they knew/did not believe that Lisi would come.'

    b. ta shuo, Lisi hui lai,   tamen zhidao/bu xianxin.
      he said   Lisi will come they   know/not believe
     'He said, Lisi would come, they knew/did not believe.'

The correlation between Case and NPs (including variables) does not hold with clauses. This means that clauses in Chinese are not in Case positions, just as in English. The occurrence of clauses in Case-marked positions is only apparent. Therefore, we can

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[19] Li (1985, 1990) argues that non-argument NPs such as duration phrases also receive Case. Some languages overtly case mark such NPs, such as Korean.
[20] A more complex sentence is created here to avoid the possibility that 'they/think/guess' is used as an afterthought remark.

maintain the proposal that the notion of c-selection can be derived from s-selection and Case assignment.

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