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Contents

SUBJECT IN CHINESE
AND THE THEORY OF CASE ASSIGNMENT[1]

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1. Introduction

According to G-B theory, in languages like English, the subject of a sentence is assigned nominative Case by AGR and governed by INFL. In pro-drop languages like Spanish, Italian and others, a zero-subject is assigned nominative Case by AGR and is properly governed by INFL because AGR is actually a Noun (Chomsky 1982, Rizzi 1982, Jaeggli 1982). These hypotheses have been accepted by many linguists. However, it is not at all clear where the subject gets its Case from in languages like Chinese, which has no AGR and also no overt Case marker for Subjects.

In this paper I shall argue that INFL in Chinese is so weak that it cannot assign Case to the subject and that the subject position at the level of S-structure is indeed a non-Case-marked position. Furthermore, I will suggest that Case assignment to the subject in Chinese is different from languages like English --- where nominative Cases is assigned by INFL, and from languages like Japanese --- where nominative Case is assigned by an overt morphological marker "Ga"[2]. A tentative suggestion for Case assignment to the subject in Chinese is given in section 5, and the Case-theory is modified.

2. The INFL in Chinese

In this section, I want to show that INFL in Chinese is very weak. If we compare Italian, English and Chinese, we can see that there are three types of languages in terms of the degree of richness of AGR (see Huang 1984).

1.			
	Type I.	Rich AGR:	Italian
	Type II.	Poor AGR:	English
	Type III.	Zero AGR:	Chinese

It is well-known that, in general, INFL is composed of four elements: Agreement, Tense, Aspect and Mood. As Chinese lacks AGR, and Tense we have enough reason to consider it to have a very poor INFL, or perhaps it can be called "Half-INFL" as compared with languages having full INFL.

The following sentences which are taken from the so-called "Jia-Gu-Wen"(the inscriptions on oracle bones or tortoise shells of the Shang Dynasty. 16th-11th century B.C.) show no evidence that AGR or TNS have ever existed in Chinese.

2. WangHai sha wo. (Yi.5403)
   WangHai kill me.

3. Wo fa   Kou-Fang (Yi.5408)
   I attack Kou-Fang

As Alexander pointed out, (1834, Grammar of the Tibetan Language p72), in Tibetan:

> "among the verbs there are no terminations in
> any tense whatever, expressive of persons. It
> is the preceding noun, pronoun, or the context
> that must show them. There are many impersonal
> or indefinite locutions or expressions formed
> by the participles: present, past, and future."

If so, the fact that Tibetan --- a more Inflected language in the Sino-Tibetan family --- has no AGR and Inflectional tense marker is consistent with the hypothesis that Chinese has had no AGR and TNS throughout its history. Based on this evidence, I conclude that INFL in Chinese cannot assign Case to its Subject. This hypothesis is based not only on the general assumption that nominative Case is assigned by AGR, which Chinese lacks, but also on the fact that if we adopt the assumption that nominative Case is assigned to the subject by INFL, it will lead us to serious theoretical contradictions and paradoxes, as I will demonstrate below.

3.1. A contradiction to the pro-drop parameter

It is well-known that subject can be dropped freely in pro-drop languages like Italian. In GB theory, AGR does not count as a proper governor for ECP. Thus the EC in subject position violates the ECP. But since AGR has the typically nominal features for gender, number, and person, it has been suggested that AGR actually is a noun and acts as a proper governor when rich. (Jaeggli,1982 and Rizzi 1982.) This is what has been called the **pro-drop parameter**.

What is crucial for EC in subject position is whether the AGR is rich enough. If this analysis is taken to account for the pro-drop phenomena, we immediately face a counter-example to it. Chinese does not have AGR, but it is a pro-drop-language:

4. ____ BEI ta peng-jian Lisi-le][3]
        BEI he meet   Lisi-Asp.
        Lisi is be met by him.

5. ____ You ren   lai-le.
        have someone   come.
        There is someone coming.

6. ____ Kanqilai John bu xiang qu-le.
        seem   John not want go.
        It seems that John didn't want to go.

An alternative to the pro-drop parameter has been proposed by Huang (1984, 1989), that '$_{Infl}$[Asp. Mood]' can serve as a proper governor and as a Case assigner in Chinese.

> "...The subject is always properly governed from within its own clause in this language (Chinese), perhaps by INFL." (Huang, 1984. Footnotes 18, p551.)

> "...Case Filter applies to Chinese and ...the subject of a clause is assigned Case only if it is governed by an element in Infl, ..." (P188)

> "Since AUX governs the subject, the possible occurrence of a lexical subject is expected under Case theory." (P190)

But this assumption is questionable. If INFL is a Case assigner, we have nothing to say about what kind of correlations there are between aspects and the NP-subjects. Since there is no subject-verb agreement, *aspect* cannot be a marker of nominative Case assigned through co-indexation with some non-overt AGR. In fact, there is a more serious problem in assuming that INFL assigns Case to subject.

3.2. A contradiction to Case-filter

```
7.      Lisi BEI ta   peng-jian [e] le.
        Lisi BEI he   meet          prt.
        Lisi was met by him.
```

(7) is a natural passive sentence in Chinese. According to GB, in English, for example, the passive morphology takes away the ability of the verb to assign Case, and the object has to move to the subject position to get Case from INFL, therefore (8) is out:

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8.      *[e ] Was met John by Bill.
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But since in Chinese the verb in a passive sentence has no Inflectional change at all, the verb in passive formations can and must assign Case to its object (c.f. note 2), and the so-called NP-movement in the passive construction is optional. Notice that if INFL in Chinese also assigns Case to its subject, then the NP that moves from object position to subject position must be considered to move in order to get Case[4], and the object-NP will receive double Case and therefore violate the Case-theory: an NP which has double Case is as bad as one which has no Case. Besides, in this system there is no reason for the object-NP to move at all since it does not lack Case as shown in (4).

```
9.      John kanqilai [e] bu xiang qu-le.
        John seem         not want go.
        John seems not to want to go.

6.      [  ] Kanqilai John bu xiang qu-le.
             seem    John not want go.
        It seems that John didn't want to go.
```

The NP "John" in (6) must have Case. When "John" is moved into the matrix subject position in 9, it will also get Case from the matrix INFL. As a result, the NP "John" will be assigned double Case.

In general, nominative Case is assigned by AGR, but there is no AGR in Chinese. and the data outlined in 3.2. even lead us to an evident theoretical paradox on the basis of GB-theory: on the one hand, INFL must assign Case to a NP-subject to avoid it being filtered out by the Case filter (i.e. an NP in subject position must have Case and INFL must properly govern its subject to license an empty-subject in terms of the ECP; on the other hand, INFL must **NOT** assign Case to its subject in order for it to escape being filtered out by the Case-filter, (i.e. an NP cannot have double Case c.f.Ex.7,9). If we adopt the assumption that a nominative Case is assigned by INFL, we are forced into an extremely difficult position: INFL has to assign Case to its subject, and also, INFL must **NOT** assign Case to its subject. This paradox cannot be solved under this assumption.

3.4. Questions about Case-assigner

It seems clear, as I discussed above, that the Half-Infl in Chinese cannot serve as a Case assigner for the subject. But the subject NP cannot be licensed at S-structure without Case under the Case-filter. One way to get around this difficulty is to consider something else in a sentence a Case assigner for the subject NP. However, this attempt is not available and examples given below show that the S-structure subject position indeed is a non-Case marked position.

Huang (1989) pointed out an important syntactic requirement in Chinese Grammar:

10. **Only NPs can fill the subject position**

This generalization holds in examples he gives as follows:

11. a. Zhuo-shang fang-zhe yiben shu
       table-top put-ing one   book.
       There is a book on the table.
    b. *Zai Zhou-shang fang-zhe yiben shu
       At table-top put-ing one   book.
       There is a book on the table.

    c. Zai Zhou-shang Zhangsan fang-zhe yiben shu
       At   table-top Zhangsan put-ing one   book.
       On the table, Zhangsan is putting a book.

    d. Zhangsan Zai Zhou-shang fang-zhe yiben shu
       Zhangsan At table-top put-ing one   book.
       Zhangsan is putting a book on the table.

This syntactic constraint holds not only in the examples above, but also

in passive formations like the following:

12. a. Jing-li$_i$ bei Zhangsan [zai nar$_i$] xia-le du.
Well-inside Bei Zhangsan [at there] put-Asp. poison
The well is poisoned by Zhangsan.

 b. *Zai Jing-li$_i$ bei Zhangsan [zai nar$_i$] xia-le du.
At Well-inside Bei Zhangsan [at there] put-Asp. poison
The well is poisoned by Zhangsan.

If 10 is correct, then a question arises: why should only the subject have such a strict requirement? A direct way to account for this in terms of GB is to assume INFL to be a Case assigner. More precisely, since INFL has the property of assigning Case it must discharge its features onto the subject position, in the sense of Fukui (1986). Then the phenomenon can be explained in the following way: since INFL has to discharge its features (to assign nominative Case) to the subject, an NP with a preposition cannot appear in subject position; otherwise it will violate the Case-theory by being assigned a double Case. This is a straightforward and a desirable explanation for the subject requirement in GB terms. If this is so, what follows is that INFL in Chinese must discharge its features in general. But it cannot hold in the following examples.

13.   Laoshi pai John (qu)zhao ren   (qu)sao jiaoshi le.
Teacher send John to find someone to clear classroom.
The teacher sends John to find someone to clear the classroom.

There are 3 NPs which are properly governed in the positions where they occur. What is interesting here is that if this sentence is passivized, we want to know whether one or all of these three NPs can be moved into the subject position. From 10 and examples 11 we know that the initial NP of passive sentences is indeed the subject. According to the assumption that INFL must discharge its feature onto the subject position, an NP that is already assigned Case cannot be moved into subject position. But, in fact, each of these movements is possible, as the following three sentences show:

14. a.   [John$_i$] BEI Laoshi pai t$_i$ qu zhao ren sao jiaoshi le.

John was sent to find someone to clean the room by the teacher.
 b.   [ren$_i$] BEI Laoshi pai John zhao t$_i$ qu sao jiaoshi le.

Someone was found to clean the room by John who the teacher sends.

 c.   [jiaoshi$_i$] BEI Laoshi pai John zhao ren qu sao t$_i$ le.

The room was cleaned by someone who the teacher sends John to find.

All (14a-c) are well-formed sentences. Notice that, in each of these three sentences, any one of these three objects can be moved into the subject position in a single movement, and the remaining two stay in their basic positions. It shows that before the movements take place, all of these objects are already assigned Case by their governors, otherwise we must

assume that these three NPs are all non-Case marked NPs for the reason that each of them is available for movement to the subject position. Clearly the assumption that they are not Case marked is an undesirable one, because two of these NPs have to stay in their original position and therefore have to have Case. Ultimately these three NPs are all Case-marked NPs. If so, under the Case-filter, these three objects cannot receive nominative Case in the subject position additionally from INFL.

The logical conclusion to be drawn from these examples is that: INFL in Chinese **must not discharge its feature**. Note that this conclusion is exactly contrary to the one that we reached on the basis of (11) and (12). Note also that this contradiction arises not only from the assumption that INFL is a Case assigner, but also the assumption that there is a Case assigner somewhere in the sentence for the subject. If there does exist a Case assigner wherever in a sentence, it **has** to discharge its feature onto the subject position in order to rule out a PP being a subject on the one hand, and on the other hand, this Case assigner **must not** discharge its feature in contexts given above. No matter whether we assume INFL or some other element to be a Case assigner, the conflict cannot be avoided and the nature of Case-assignment will be lost completely. Therefore I would conclude that in Chinese INFL is not a Case assigner, and also there would not be a Case assigner existing for the subject NP/s at the level of S-structure.

4. More examples

The following examples show that an NP, if it is properly governed, can be moved into subject position:

15. a.   Zhei-dao shuxue ti   [gei wo] nong hutu-le.
             This   Math. problem [to I] make confusion.
             This Math. problem confused me.

      b.   Wo$_j$ BEI zhei-dao shuxue ti   gei t$_j$ nong hutu-le.
           I$_j$ BEI this   Math.problem to t$_j$ make confusion.
           I was confused by this Math. problem.

The NP "I" must have been assigned Case by "gei" in (15-a), and therefore the moved NP "I" in subject position in (15-b) must **NOT** be assigned Case by INFL.

As Huang argued in 1982, prepositions are proper governors and the general ban on preposition stranding is a property of PF in Chinese. Thus if the object of P is moved out, the trace following P gets spelled out as a resumptive pronoun at PF:

16.   Neige panzi$_j$, wo BA ta$_j$ shuai-cheng liangbar-le
        That dish$_j$, I BA it$_j$ break-into two pieces prt.
        That dish, I broke it into two pieces.

Given this, an NP within PP can be moved freely into subject position in passive construction:

17.   a.   Zhangsan pp[zai zhe-kou jing li]   xia-le du.
                   Zhangsan pp[at this   well inside] put   poison.
                   Zhangsan put poison inside this well.

    b.   Zhekou Jing$_j$ BEI Zhangsan zai nar$_j$ li   xia-le   du.
                   This   well$_j$ BEI Zhangsan at there$_j$ inside put-prt. poison
                   This well was poisoned by ZhangSan.

Once again, the subject position must be an non-Case-marked position, so that it can be a landing-site for the Case-carried-NP.

In GB, NP-movement is motivated by lack of Case, and NP movement is obligatory. But in Chinese, the moved NP is Case-marked and optional. The examples of passivization and Raising may lead one to assume that the nominative Case is assigned optionally. However, the idea of optional Case-assignment is also problematic. Given such a hypothesis, there seems to be no reason for the generalization of 10 to hold, and we would still need to answer the question of how nominative Case is assigned without AGR, and what is the Case-assigner. Therefore there is good reason to conclude that in Chinese, there is no nominative Case to be assigned at S-structure.

5. Approaching a theory of Case assignment for Subject

5.1.   Under the discussion given above, the problem of assigning Case to the subject in Chinese becomes even awkward: for one thing, INFL is not a Case-assigner; for another, there is no other Case assigner at S-structure. Obviously, if we still consider that the Case-filter applies in Chinese, then a base-generated NP cannot appear in subject position without Case. Now we need to ask why an NP without Case should be ruled out at all? And what kind of grammatical function/role does "Case" apply in syntax?

Considering these questions, I would like to suggest that Cases, whether Abstract or morphologically Marked, all have some sort of grammatical function/s in nature. Obviously, the functions of Case are not stated by the Case-filter:

18.   *NP, if NP has phonetic content and no Case.

As it is stated above, the Case-filter is, in some sense, a stipulation, rather than a proper explanation as to why and how an NP should be ruled out if it has no Case. The function of Case/s, as a preliminary step toward a more general Case-theory, is stated roughly as follows:

19.   The Syntactic Function of Case (TSFC)

**Every NP appearing at the level of S-structure
of a sentence must be identified as being in
certain syntactic position by Case.**

Under this definition, Case functions to **identify** an appropriate syntactic
position of NPs at certain linguistic level. The Case-filter, under this
consideration, can remain, but it is only a result of the TSFC. Therefore,
an NP without Case, now, is seen as an NP without an appropriate syntactic
position to be identified at the level of Case being assigned. And this
is why it has to be ruled out.

The idea that Case functions as to identify a grammatical position is
consistent with the general assumption that theta-assignment is relatively
irrelevant to the word order, and that what is responsible for word order
is principles applying after Theta-roles have been assigned: the Case-
theory. In Chomsky 1981, he wrote:

"It is unnecessary to assign order to the complements in a lexical entry or in the rules
of the categorical component of the base. Unwanted orders will violate Case theory."
(p94)

Obviously, if Case is assigned at S-structure, the word order should be
fixed at this level. The TSFC clearly demands that the word order must be
fixed at the level Case is assigned, since Case is responsible for
identifying every NP in a proper position: the purpose of assigning Case
in the syntax is to mark an appropriate position in which an NP occurs.

5.2.   The theory presented above captures the differences between what
have been called Abstract Case and the morphologically marked Case.
Following Belletti (1988), the natural processes of Case marking are
always composed of the two parts of Case assignment and Case realization,
regardless of whether the Case involved is inherent or structural[5], I
propose that all NPs appearing in certain structural position must be
identified by their head through Case-assignment, and the identification
must be realized through some mechanism at a certain linguistic level (S-
structure in general). Then, it is natural to assume that some positions
which are identified by a Head and realized by an overt morphological
marker/s (for example, the object is identified/Case-marked by the verb
and realized by an phonological marker "O" in Japanese.), must be
different from some positions which are identified by a Head but not
realized by an overt morphological marker. In the latter case, under TSFC,
it has to be realized anyhow, and it is realized in a structural position
[V __]. That is, the structure [V __] here is responsible for the
Case-realization of the NP/s the head takes. So the so-called Abstract
Case now is seen as the realization of the Case-assignment being achieved
in a structure. Then what follows from the present theory is that if the
Case of an NP is realized in a structure, this NP cannot be separated from

within this structure, since otherwise the second part of the Case-Marking process will be lost. The "adjacency requirement" for Case assignment, then, can be reduced to the notion of structurally realized Case and morphologically realized Case. This reduction can be held if, on the other hand, Case is realized by an overt, independent, morphological marker, then the NP with its marker is relatively free to appear at S-structure in the domain (maximal projection) it is base-generated. And this seems to be the case as the following examples show.

20.   a.   I spoke to Harry about communism.
             I spoke about communism to Harry.

        b.   I fought with Harry for your sake.
             I fought for your sake with Harry.

        c.   I looked for the virus with a magnifying glass
             I looked with a magnifying glass for the virus.

The free word order of these two PP in each of these sentences show that an NP with an overt independent Case marker (here, the P) can freely appear in S-structure in the domain in which it is base-generated --- the VP in this case[6]. Therefore what we found is what we expected. Note that it would otherwise be very difficult to explain the free word order of these two PPs in (20). A movement account is unmotivated (Chomsky 1986) But if they are base-generated, we have to allow freedom of word order at S-structure, and then we must answer the question of why and how the free word order here is allowed.

The following Japanese example provides further evidence for us.

21.   a.   John-ga naihu-de Bill-o   sasita.
                -nom knife-with   -acc stabbed
                (John stabbed Bill with a knife)
        b.   John-ga Bill-o naihu-de sasita.   (Muraki, 1974, p.86)

Although, as Saito (1985) argued, the word order of [NP-o, NP-ga...V] involves some sort of movement, the order of [NP-ga NP-de NP-o V] and [NP-ga NP-o N-de V] seems to me to be free in the domain in which they occur. If it is so, a natural question to ask is why the word order of (21-b) is not allowed in languages like English and Chinese?

22.   *John stabbed with a knife Bill.

Under the theory presented here, we can simply say that, since in English and Chinese Accusative Case is realized in the structure of [V __], the object NP cannot be separated from its head. However, Accusative Case in Japanese is realized not by position, but by an overt morphological marker "-o", therefore the object NP with "-O" has relative freedom of position at S-structure within the domain (the VP) where it is base-generated.

6. From where does the subject get Case in Chinese

Given the functional-Case theory, we are now in a position to solve the problem of nominative Case assignment in Chinese. As seen earlier, there is no Case-assigner at S-structure. What this now means is that at S-structure, Chinese lacks a morphologically marked way to realize Case assignment to the NP subject. This will be clear if we compare Chinese with English and Japanese. In English, the subject position identifier is INFL(AGR), and the identification is realized through co-indexation. In Japanese, the subject position identifier is the verb (assuming that Case is assigned under government and that there is no INFL) and the identification is realized by a morphological marker GA. In Chinese, even though we assume the same strategy as in Japanese (the verb identifies the subject position), there is no way to realize Case-assignment as in Japanese.

Along lines similar to Chomsky (1986) and Belletti (1988), I will propose that the subject NP in Chinese is assigned inherent Case by the Verb which is in line with Case being assigned under government, and realized in the structure [___ VP][7].

This hypothesis seems to be highly plausible, and it captures a very important property of Case assignment in Chinese. First, let us look at the multiple subject construction in Chinese:

23.　　Zheixie shu,　yiezi da.
　　　 These tree,　 leaves big.
　　　 The leaves of these trees are big.

Following Fukui (1986), the subject is iterable if INFL has no F-features to discharge, and the projection of V-bar would not be closed off. All of these NPs are base-generated in positions preceding VP and are assigned an inherent Case with some sort of theta-role. Under functional Case analysis, the inherent Case which is assigned to each of them is realized in the structure [__ __ ... __ VP], therefore the sentences of 23 is well-formed.

Second, the NP construction in Chinese supports this consideration:

24.　　a.　　[John de yianjing]np
　　　　　　 John DE glass
　　　　　　 John's glass

　　　 b.　　[John neifu yianjing]np
　　　　　　 John that-M glass

25.　　a.　　[Lin　Zhi(DE) ding]np
　　　　　　 Lin　DE　　　 head
　　　　　　 Lin's head

```
          b.      [ Lin zhi   ding ]np
                  Lin he      head
                  Lin's head

26.    a.      Wo guo        nanfang ge-sheng      qiuling diqu     liangshi
               I country     south   every-province hilly   country grain
               chanliang qingkuang   you-le   hen da bianha.
               yield        state         have-Asp. very big change.

               The state of grain yield around hilly country in every Province in the
               south of our country had big change.

       b.      Ta hen  guanxin [Wo guo       nanfang ge-sheng       qiuling diqu liangshi
               He very concern I country south     every-province hilly    country grain
               chanliang qingkuang ]np
               yield       state

               He is very concerned about the state of grain yield around hilly country
               in every province in the south of our country.
```
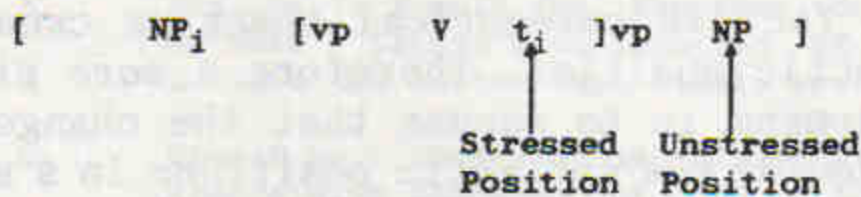
DE is a POSS marker in 24-a, but it can be substituted for by a demonstrative pronoun with a measure word and there is no POSS marker in 24-b. Historically speaking, DE originates from the classical form ZHI, and ZHI in early classical Chinese was a pronoun, rather than a POSS marker.(see Wang 1980, p335). The significance here is that the inherent Case in 24-b, 25-b and 26 must be considered to be realized within the structure of $_{NP}[$ ___ ... ___ N].

Thirdly, if the analysis is proposed, we can explain nicely the following syntactic movement in Chinese:

```
27.    a.      Ren qi-guo zheipi ma.
               Person ride this horse.
               Someone rides this horse.

       b.      Zheipi ma qi-guo ren
               This  horse ride person
               Someone rides this horse  This horse has been ridden by someone.
```

This kind of Chinese examples has not been well-studied in the GB literature. Presumably, there seems to be no way to characterize the exchangeable subject-object arguments in sentences like these. But as we have seen, a Case-Marked NP can move into subject position freely at S-structure, since there is no Case-assigner at S-structure, and the inherent Case of the subject NP is realized in the structure [VP ___], therefore the S-structure of sentence (27-b) is predicted by the theory:

```
          [    NP_i    [vp    V    t_i  ]vp   NP  ]
                                     |          |
                                 Stressed   Unstressed
                                 Position   Position
```

Furthermore, if the inherent Case is realized in a structure, we would expect Chinese to be a configurational language in the sense of word order being strictly fixed at S-structure. The fact that Chinese has no

Inflectional morphology and syntactic positions are "*categorized*" in this language suggest that this assumption seems to be a correct choice for Chinese.

(i) Adverbs must immediately precede verbs

(28) Ta henhen-de da-le   yixia John.
He hardly   hit-Asp. one   John.
He hardly hit John once.

*Henhen-de ta da-le yixia John.
*Ta da-le henhen-de yixia John.
*Ta da-le yixia John henhen-de

(ii) The lexical category is determined by syntactic positions

a. N ---> V
Ta renzhen-de Ma-Lie   le baozhang   jiju.
He seriously Marxism-leninism le the village head several words
He lectured the village head on Marxism-leninism a few words.

c. N ---> A
You shihou ni tai ganqing le.
Sometimes you too emotional le
Sometimes you are being too emotional.

d. N ---> Adv.
(Hu)   ren li   er   ti.
(Wolf) men stand and cry.
The wolf was standing like a men and crying.

e. Measure word ----> V
Baoshen yinian nachu shi-ge jiemu, dao jiuyuefen hai yi-ge bu ge ne.
Promise one year make ten   item, to September still one-M not Ge
(We) promised to make ten item in one year, but now it is September
already we have not made even one yet.

These examples show that the Lexical category [+N] can be either used as a verb, an adjective, or even an adverb without any inflectional change. To characterize this phenomena is not to add some sort of rules in the lexicon such as:

24.   [+N] ---> [+V]   [+N] ---> [+adv]

[+N] ---> [+A]   [+M] ---> [+V]

Because it will lead to an undesirable result: every lexical category can be every lexical category, and ultimately there will be no lexical categories needed at all. The fact is categorical changing cannot take place without a specific syntactic position. Therefore a more plausible way to characterize these phenomena is to assume that the change of one category to another is determined by the syntactic positions in a sentence and their distributions in general. If this is correct, the property of categorized position is consistent with the assumption that subject in Chinese is assigned an inherent Case and inherent Case is realized in a configurational structure.

NOTES

1. I would like to thank Professor Anthony Kroch, Naoki Fukui, for much help and encouragement; to Caroline Heycock for many invaluable suggestions.

2. In Japanese, there is no AGR either, but the morphological marker 'Ga' can be considered to be a Case-marker for the subject. In Chinese, nothing can be considered as a Case-assigner or Case-marker for the subject except the "Half-INFL".

3. The following sentences which are the same as (4) are taken form (Xiang Xi. 1957) and form Li Lin-Ding (1986):

> ___ Bei ni sha-le si-ge Laohu.
> Bei you kill-prt. four Tiger.
> Four Tigers were killed by you. <u>Shuihu</u> (44.712)

> ___ Bei ta shipo-le qizhong de aomi.
> Bei he penetrate-prt. inside prt. mystery.
> The inside mystery was penetrated by him.

> ... Erqie, Bei ta pengjian-le Shuhua.
> ... In addition, Bei he meet-prt. Shuhua.
> ... In addition, Shuhua was met by him. -----Feng Gui-Ying

4. The following phenomena show that movement is involved in passive constructions:

> a. <u>San-ge</u> xuesheng mai-le shu.
> Three students by-Asp. book. Tree students bought books.

> b. Xuesheng <u>san-ge</u> mai-le shu.
> c. *Xuesheng mai-le shu <u>san-ge</u>
> d. Women ban, <u>sange</u> changba yizi Bei ren nong-huai-le.
> Our class, three long-handle chair bei someone break-Asp.
> In our class, three chairs are broken by someone.

> e. Women ban, changba yizi$_i$ BEI ren nong-huai-le <u>san-ge</u> t_i.
> f. *Women ban, Changba yizi Bei ren nong-huai-le san-ge <u>changba yizi</u>.

> g. Women ban, 10-ge yizi bei ren nong-huai-le san-ge yizi.
> In our class, there are 3 out of 10 chairs are broken by someone.

As Saito pointed out (1985), an NP and a quantifier cannot be related when another NP argument intervene between them, hence the ungrammaticalness of C. It is straightforwardly to account for why E is grammatical, if we assume that the NP "changba yizi" in subject position is extracted form the object position. Examples F and G show that it is not the case that some sort of Delation is involved in example E. The following Cross-Over phenomena also show movement involved in passive formations:

> a. Zhangsan$_i$ si-le Xiaoli gei ta$_i$ de neifeng xin.
> Zhangsan tore Xiaole give him DE that letter
> Zhangsan tore the letter that Xiaoli wrote to him.

> b. *Ta$_i$ si-le Xiaoli gei Zhangsan$_i$ de neifeng xin.
> He tore Xiaoli give Zhangsan DE that letter
> He tore the letter that Xiaoli wrote to Zhangsan

> c. Xiaoli ge Zhangsan$_i$ de neifeng xin, BEI ta$_i$ si-le.
> Xiaole give Zhangsan DE that letter, BEI he tore
> The letter that Xiaoli wrote to Zhangsan was torn by him.

> d. ?*Xiaoli$_i$ de neifeng xin, ta$_i$ si-le.
> Xiaoli DE that letter, he tore
> He tore Xiaoli's letter.

It is well known that when a pronoun c-commands its antecedent at D-structure but this c-command relation does not obtain at S-structure due to movement (to an A'-position), the sentence is grammatical only if the antecedent is embedded "deeply enough" in the moved phrase. (cf. for example, Postal 1971, Saito 1985, and references cited there.)

5. This is extended from Chomsky (1986): the two part process of inherent Case marking: Case assignment by a case-assigner and Case realization by the Case-marked NP.

6. If we take P to be a Case-marker for NP, then the freedom of [P-NP] is allowed under VP; if we take P as the head that directly assigns Case to NP, then the NP cannot be separated from the head P.

7. Following Chomsky (1986), the inherent Case is assigned at D-structure in conjunction with theta-role. Here, if we assume that the subject is theta marked by the head with its complement, i.e. the VP, then the inherent Case of the subject NP is assigned by the VP, and realized in the structure [__VP] at S-structure. If we assume the subject NP is theta-marked by the verb, then it is assigned an inherent Case by the Verb at D-structure, but the Case has to be realized in [__VP] at S-structure.

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