UNERGATIVE AND UNACCUSATIVE VERB COMPOUNDS IN CHINESE

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There have been a lot of discussions about resultative verb compounds in Chinese in recent linguistic studies, as illustrated by several analyses of such verb compounds proposed by Huang (1988 & 1992), Li (1990 & 1993), Cheng (1992), Gu (1992) and Zou (1994) respectively. The fact that the Chinese resultative verb compound is so interesting to many linguists is probably attributable to the following two factors: i) there exists a complex thematic relation between the verb compound and its NP arguments; ii) the formation of the verb compound may involve grammatical function change of its NP arguments, and iii) the referentiality of its NP arguments might affect the interpretation or grammaticality of the verb compound construction. The purpose of this paper, however, is to examine the Chinese unergative and unaccusative verb compounds, which are the subcategories of the resultative verb compounds, and to argue for a morpho-syntactic analysis of these verb compounds within the framework of the minimalist theory. I will show how this morpho-syntactic analysis incorporates the thematic relation between the verb compounds and their NP arguments, and how it captures various grammatical function changes involved. I will also provide both empirical motivation and theoretical arguments for this morpho-syntactic analysis.

1. THE TYPES OF UNERGATIVE AND UNACCUSATIVE VERB COMPOUNDS

According to Li and Thompson (1981), the Chinese resultative verb compound consists of two lexical verbal morphemes, of which the second verbal morpheme indicates the result of the activity or process expressed by the first one. In terms of the syntactic and semantic relations between the two verbal morphemes and their NP arguments, we might divide the Chinese unergative and unaccusative verb compounds into five categories: i) unergative-transitive; ii) unergative-stative; iii) unergative: iv) intransitive-unaccusative; and v) transitive-unaccusative (cf. Chao 1968; Li & Thompson 1981; Ma 1987; Fan 1988; Zan 1989; Li 1990; Li 1990 & 1993). These verb compounds and their basic properties are discussed in the following sections.

1.1. The Unergative-Transitive Verb Compound

Of the unergative-transitive V-V compound, V1 is an unergative verb, whereas V2 is a transitive verb. The subject of this type of verb compounds is both the Agent of V1 and the Experiencer of V2,

and their object is the Theme of V2, as displayed by the examples below:[1]

(1) wo pao-diu-le   yi zhi xie.
    I run-lose-ASP one CL shoe
    'I ran, and as a result I lost one shoe.'
(2) ta wan-wang-le   zijide zhize.
    he play-forget-ASP own   duty
    'He played so much that he forgot his own duty.'
(3) Lisi zou-ying-le   Zhangsan.
    Lisi walk-beat-ASP Zhangsan
    'Lisi beat Zhangsan by walking.'

1.2. The Unergative-Stative Verb Compound

Of the unergative-stative verb compound, V1 is an unergative verb, whereas V2 is a stative or unaccusative verb. The subject of this type of verb compounds is the Agent of V1 only, and the object is the Experiencer of V2 only, as shown by (4), (5) and (6) below:

(4) ta ku-shi-le   liang kuai shoujuan.
    He cry-wet-ASP two   CL   handkerchief
    'He cried so much that two handkerchiefs got wet.'
(5) Zhangsan xiao-xing-le   Lisi.
    Zhangsan laugh-awake-ASP Lisi
    'Zhangsan laughed so loudly that Lisi woke up.'
(6) Lisi chang-fan-le   wo.
    Lisi sing-bored-ASP I
    'Lisi sang so long that I became bored.'

1.3. The Unergative Verb Compound

Of the unergative verb compound, V1 is still an unergative verb and V2 is still a stative or unaccusative verb, just like the unergative-stative verb compound described in the above section. But unlike the unergative-stative verb compound, the unergative verb compound takes only a subject argument which is both the Agent of V1 and the Experiencer of V2, as shown below:

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[1] That the logical subject of V2 in the unergative-transitive verb compound needs to be construed as an Experiencer rather than an Agent is evidenced by the fact that V2 in (1), (2) and (3) can not be modified by an Agent-oriented adverbial such as **guyide** 'deliberately' (Gu 1992:93):

(i)   wo (*guyide)   diu-le   yi zhi xie.
      I (deliberately) lose-ASP one CL shoe
(ii) ta (*guyide)   wang-le   zijide zhize.
      he (deliberately) forget-ASP own   duty
(iii) Lisi (*guyide)   ying-le   Zhangsan.
      Lisi (deliberately) beat-ASP Zhangsan

(7) **Lisi xiao-feng-le.**
    Lisi laugh-insane-ASP
    'Lisi laughed to the extent of becoming mad.'
(8) **wo zou-lei-le.**
    I   walk-tired-ASP
    'I walked so much that I got tired.'
(9) **Laoshi jiang-fan-le.**
    teacher talk-bored-ASP
    'The teacher talked so long that he got bored.'
(10) **Mali chi-pang-le.**
    Mary eat-fat-ASP
    'Mary ate so much that she gained weight.'

1.4. The Intransitive-Unaccusative Verb Compound

Like the unergative verb compound above, V1 is an unergative
verb and V2 is an unaccusative or stative verb in the intransitive-
unaccusative verb compound. However, the subject argument of this
type of verb compounds is the Experiencer of V2 only, and it has no
thematic relation with V1, as shown by (11), (12) and (13) below:

(11) **shoujuan   ku-shi-le.**
    handkerchief cry-wet-ASP
    'Someone cried so much that his or her handkerchief got wet.'
(12) **duzi xiao-tong-le**
    belly laugh-ache-ASP
    'Someone laughed so much that his or her belly ached.'
(13) **toufa chou-bai-le.**
    hair depress-whiten-ASP
    'Someone was so depressed that his or her hair became grey.'

1.5. The Transitive-Unaccusative Verb Compound

As for the transitive-unaccusative verb compound, its V1 is a
transitive verb and its V2 is an unaccusative or stative verb. This
type of verb compounds also takes a subject argument only, and this
subject is both the Theme of V1 and the Experiencer of V2, as shown
by (14), (15), (16) and (17) below:

(14) **na   ke shu kan-dao-le.**
    That CL tree cut-fall-ASP
    'That tree was cut and as a result it fell.'
(15) **wode chenyi liang-gan-le.**
    my   shirt hang-dry-ASP
    'My shirt was hung and as a result it became dry.'
(16) **diren gan-pao-le.**
    enemy chase-flee-ASP
    'The enemy was chased and as a result they fled.'
(17) **zhe pi ma   qi-lei-le.**
    this CL horse ride-tired-ASP
    'This horse was ridden so much that it got tired.'

2. A MORPHO-SYNTACTIC ANALYSIS OF THE UNERGATIVE AND UNACCUSATIVE VERB COMPOUNDS

2.1. Theoretical Background

As mentioned above, both the unergative and unaccusative verb compounds consist of two lexical verbal morphemes, of which the second one indicates the result of the action or process conveyed by the first one. Thus, the events associated with the two verbal morphemes could be captured by Vendler's and Dowty's complex event structure for accomplishment verb. According to Vendler (1967) and Dowty (1979), an accomplishment verb denotes a complex event that consists of an *activity* subevent and a resultant *state* subevent. Each of these two subevents projects its own predicate structure. The combination and alignment of the two subevent structures form a complex event structure for the whole sentence, as shown by (18):

(18)   event
            /   \
      activity   state
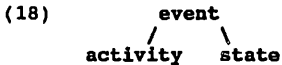
The complex event structure in (18) directly applies to the events denoted by the two verbal morphemes of the Chinese unergative and unaccusative verb compounds, because such compounds are a class of accomplishment verbs (Cheng 1989; Liu 1992): that is, the process or activity designated by the first verbal morpheme matches the *activity* part of the complex event, and the resultant state denoted by the second verbal morpheme fits the *state* part of the complex event. Since the resultant state expressed by the second verbal morpheme is activated by the activity denoted by the first verbal morpheme, a natural way to capture this fact is to have these two events project their separate predicate structures with the two verbal morphemes as their heads, and render the asymmetric semantic or implication relation between the two events as a complementation relation between the first verbal morpheme and the VP-predicate headed by the second verbal morpheme (cf. Baker 1988; Hale & Keyser 1993): that is, the first verbal morpheme asymmetrically c-commands the second one, as the activity denoted by the former "implicates" the state denoted by the latter:[2]

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[2] According to Hale and Keyser (1993), the parallel semantic and syntactic characterizations of the relation between the events designated by lexical categories suggest that thematic roles are just derivative of lexical syntactic relations, and the argument structure is determined wholly by lexical categories and their projections. This explains why there are so few thematic roles as thematic roles are nothing but the syntactic relations which are determined by lexical categories and their projections, and which are limited by the very small inventory of lexical categories (V, N, A, P) and by the principles of Unambiguous Projection and Full Interpretation. This also explains why θ-role assignment conforms to Baker's (1988) Uniformity of Theta Assignment Hypothesis, since the lexical-syntactic argument structure (e.g. (19b)) has biunique

(19) a.   event1   —->   event2

    b.

$$\text{NP} \overset{\text{VP1}}{\diagdown} \underset{\text{V1}}{\overset{\text{V'1}}{\diagup}} \diagdown \text{VP2}$$
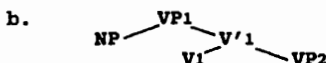
Based on the syntactic structure and its associated semantic relation shown by (19ab), we could establish the basic structure of the Chinese unergative and unaccusative verb compound constructions in (20), assuming a version of Chomsky's (1993) clausal structure:

(20)

$$\text{Spec} \overset{\text{AGRP}}{\diagdown} \underset{\text{AGR}}{\overset{\text{AGR'}}{\diagup}} \diagdown \underset{\text{Spec}}{\overset{\text{ASPP}}{\diagup}} \overset{\text{ASP'}}{\diagdown} \underset{\text{ASP}}{\overset{}{\diagup}} \diagdown \underset{\text{Spec}}{\overset{\text{VP1}}{\diagup}} \overset{\text{V'1}}{\diagdown} \underset{\text{V1}}{\overset{}{\diagup}} \diagdown \text{VP2}$$
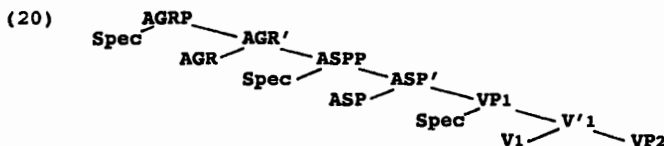
With this basic structure in hand, I now proceed to offer a morpho-syntactic analysis of the five types of unergative and unaccusative verb compounds described in the sections above.

2.2. The Unergative-Transitive Verb Compound Construction

Consider the unergative-transitive verb compound construction in (1), which is repeated below and would be expected to have the structural representation in (1'), given the basic structure of the Chinese unergative and unaccusative verb compound construction in (20) and the hypothesis of VP-internal subject (Koopman & Sportiche 1988; Kuroda 1988):

(1) wo pao—diu—le   yi zhi xie.
    I   run—lose—ASP one CL shoe
    'I ran and as a result I lost a shoe.'

(1') [$_{AGRP}$ [$_{AGR}$ [$_{ASPP}$ [$_{ASP}$] [$_{VP1}$ [$_{NP1}$ wo] [$_{V'1}$ [$_{V1}$ pao]
                                     I   run

[$_{VP2}$ [$_{NP2}$ Pro] [$_{V'2}$ [$_{V2}$ diu—le] [$_{NP3}$ yi zhi xie]]]]]]]]
                             lose—ASP   one CL shoe

With this structural representation, (1) can be simply derived by verb-raising and NP-movement. That is, V2 diu-le is first raised to V1 to compound with pao by means of verb incorporation (Baker 1988).[3] The resulting verb compound pao-diu-le is then raised to

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structural-thematic relationships for all lexical items.

[3] Li (1990) argues that the Chinese resultative verb compound is unlikely the result of such an incorporation process because the first verbal morpheme in the compound does not θ-mark the maximal projection that is headed by the second verbal morpheme. Following

AGR via ASP to check its inflectional features (i.e. the aspectual and agreement features; cf. Chomsky 1993). NP1 **wo** gets its θ-role from V'1 and moves into the Spec of AGRP to check its Case feature against AGR (Chomsky 1993). NP3 **yi zhi xie**, which gets its θ-role from V2, moves into the Spec of ASPP to check its Case against ASP. And NP2 **Pro**, which is the specifier of VP2, is properly controlled by NP1 **wo** or its trace which is the closest NP C-commanding **Pro**. The derivation of (1) from (1') is illustrated below:

(1") [$_{AGRP}$ wo$_i$ [$_{AGR}$ [[pao-[diu-le]$_j$]$_k$]$_1$] [$_{ASPP}$ yi zhi xie$_m$ [$_{ASP}$ t$_1$]
 　 　 I 　 　 　 run-lose-ASP 　 　 one CL shoe

　 [$_{VP1}$ [$_{NP1}$ t$_i$][$_{V'1}$ [$_{V1}$ t$_k$][$_{VP2}$ [$_{NP2}$ Pro][$_{V'2}$ [$_{V2}$ t$_j$][$_{NP3}$ t$_m$]]]]]]]]

The motivation and arguments for the verb-raising and NP-movement in the derivation of (1) are as follows. First, the verb-raising from V2 to AGR via V1 and ASP is morphologically driven, because the inflectional features on V2 **diu-le** have to be checked against the features of ASP and AGR (cf. Chomsky 1993).[4] The verb-raising

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his argument, V1 **shine** in (1') could hardly be said to assign a θ-role to VP2, and VP2 would become a barrier, making the raising of V2 **hong-le** impossible.

However, by our morpho-syntactic analysis, the absence of the θ-marking relation between V1 and VP2 does not even arise, because the asymmetric semantic or implication relation between the action designated by the first verbal morpheme and the resultant state conveyed by the second verbal morpheme is "canonically structurally realized" as a complementation relation between V1 and VP2 (cf. Hale & Keyser 1993; also see Cheng's (1992) argument against Li's objection to an incorporation approach to the Chinese resultative verb compound).

[4] Li (1993) refers to the contrast between (i) and (ii) below to argue against the V-to-I raising (V-to-ASP and V-to-AGR in our terms) in Chinese, assuming that adverbials like **jingchang** adjoins to VP:

(i) **Zhangsan jingchang zhui Lisi.**
　 　 Zhangsan often 　 chase Lisi
　 　 'Zhangsan often chases Lisi.'
(ii)***Zhangsan zhui jingchang Lisi.**
　 　 Zhangsan chase 　 often 　 Lisi

But there is an alternative way to account for the ungrammaticality of (ii) (cf. Chomsky 1994). Supposing that the adverbial **jingchang** occupies the Spec of VP, we would then have the following structure for the sentence in (ii):

(ii') [$_{AGRP}$ [$_{AGR}$] [$_{ASPP}$ [$_{ASP}$] [$_{VP1}$ [$_{NP1}$ Zhangsan] [$_{V'1}$ [$_{V1}$]
　 　 　 　 　 　 　 　 　 　 　 　 　 　 Zhangsan

　 [$_{VP2}$ [jingchang] [$_{V'2}$ [$_{V2}$ zhui] [NP$_2$ Lisi]]]]]]]]
　 　 　 　 often 　 　 　 chase 　 　 Lisi

is also legitimate by the Minimal Link Condition (Chomsky 1994), since each of its three steps (i.e. from V2 to V1, from V1 to ASP, and from ASP to AGR) attaches the verb to the nearest head target that immediately c-commands the verb, without skipping an already-filled head position.

Secondly, the movement of NP1 wo into the Spec of AGRP and the movement of NP3 yi zhi xie into the Spec of ASPP are forced by the Case Filter, and they are both legitimate by the Shortest Movement Condition (Chomsky 1993), due to the verb-raising. That is, as the verb compound pao-diu-le is raised from V1 to ASP to form the chain (pao-diu-le$_k$, t$_k$) with the minimal domain {Spec of ASPP, Spec of VP1, VP2}, the Spec of ASPP and the Spec of VP1 are equidistant from VP2 or anything it contains. Thus, NP3 yi zhi xie, as a complement of V2, may move into the Spec of ASPP by crossing the Spec of VP1 which is filled with NP1 wo. When the verb compound pao-diu-le is further raised from ASP to AGR to form the new chain (pao-diu-le$_1$, t$_1$) with the minimal domain {Spec of AGRP, Spec of ASPP, VP1}, the Spec of AGRP and the Spec of ASPP are equidistant from VP1 or any element it contains. Thus, NP1 wo, as a specifier of VP1, may move to the Spec of AGRP by crossing the Spec of ASPP that is occupied by NP3 yi zhi xie now.[5]

In (ii'), VP1 is the maximal projection of the 'light verb' V1, while VP2 is the maximal projection of the verb zhui 'chase'. To derive (ii) from (ii'), V2 zhui must be raised into AGR via V1 and ASP to check its inflectional features, NP1 Zhangsan needs to move into the Spec of AGRP to check its Case, and NP2 Lisi has to move to the Spec of ASPP to check its Case. But the movement of NP2 Lisi to the Spec of ASPP is blocked by the intervening adverbial jingchang in the Spec of VP2, thus making the derivation crash at PF. That is, the raising of V2 zhui to V1 forms the chain (zhui$_j$, t$_j$) with the minimal domain {Spec of VP1, Spec of VP2, NP2}, and the Spec of VP1 and the Spec of VP2 are equidistant from NP2. But NP2 Lisi cannot move into either of the two positions, as they are both occupied by NP1 Zhangsan and the adverbial jingchang. NP2 Lisi can not move directly into the Spec of ASPP either, even after the verb is raised from V1 to ASP. This is because this verb-raising would form a new chain with the minimal domain {Spec of ASP, Spec of VP1, VP2}, of which the Spec of VP2 is not a member. Hence, NP2 Lisi can not cross the adverbial jingchang in the Spec of VP2 to reach the Spec of ASPP (cf. Chomsky 1993).

For the grammaticality of (i), it is simply that the adverbial jingchang is adjoined to AGRP (cf. Chomsky 1994).

[5] Why doesn't NP2 Pro, which is a specifier of VP2 and is much closer to the Spec of ASPP than NP3 yi zhi xie, block the movement of NP3, as a lexical element or an NP-trace may? The answer to the question lies in the nonvisibility of Pro and the visibility of a lexical element and NP-trace at PF, I believe. According to Aoun (1980) and Chomsky (1981), an element is invisible at PF if it does not have phonological features or Case. Thus, a lexical element is certainly visible at PF because it has phonological features (and

2.3. The Unergative-Stative Verb Compound Construction

The morpho-syntactic analysis proposed above also accounts for the formation of the unergative-stative verb compound construction such as (4), (5) and (6). Consider (4) here, which is rewritten below:

(4) **ta ku-shi-le   liang kuai shoujuan.**
     He cry-wet-ASP two   CL handkerchief
     'He cried so much that two handkerchiefs got wet.'

Given the basic structure of the Chinese verb compound construction in (20), we would expect (4) to be structurally represented in the following manner:

(4') $[_{AGRP}$ $[_{AGR}]$ $[_{ASPP}$ $[_{ASP}]$ $[_{VP1}$ $[_{NP1}$ ta] $[_{V'1}$ $[_{V1}$ ku] $[_{VP2}$
                                                        he   cry
      $[_{NP2}$ liang kuai shoujuan] $[_{V'2}$ $[_{V2}$ shi-le]]]]]]]]
            two   CL handkerchief   wet-ASP

Like the derivation of (1) above, V2 **shi-le** in (4') is first raised to compound with V1 **ku**, and then the resulting verb compound **ku-shi -le** is further raised to AGR through ASP to check its inflectional features. NP1 **ta** receives a θ-role from V'1 and moves to the Spec of AGRP to check its Case against AGR. And NP2 **liang kuai shoujuan** receives its θ-role from V'2 and moves to the Spec of ASPP to check its Case against ASP. Hence, (4) is also derived by verb-raising and NP-movement, as illustrated below:

(4") $[_{AGRP}$ ta$_i$ $[_{AGR}$ [[ku-[shi-le]$_j$]$_k$]$_l$] $[_{ASPP}$ liang kuai shoujuan$_m$
                he   cry-wet-ASP   two   CL handkerchief
      $[_{ASP}$ t$_l$] $[_{VP1}$ $[_{NP1}$ t$_i$] $[_{V'1}$ $[_{V1}$ t$_k$] $[_{VP2}$ $[_{NP2}$ t$_m$] $[_{V'2}$
      $[_{V2}$ t$_j$]]]]]]]

The motivation and arguments for the verb-raising and NP-movement in the derivation of (4) are almost the same as those presented in the above section.

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perhaps Case). An NP-trace is also visible at PF as it obtains its Case feature from the moved NP. According to Chomsky (1986), the chain formed by a moved NP and its trace is headed by a Case-marked position (the position occupied by the NP) and terminates itself in a θ-position (the position occupied by its trace). Case is first *transferred* from the head position to the terminal position of the chain, thus making the NP-trace visible for θ-marking. The θ-role being assigned to the NP-trace is then *transferred* back to the head position of the chain occupied by the moved NP. However, Pro has neither phonological features nor Case, so it must be invisible at PF. As a result, NP2 **Pro**, which is unlike the lexical element or NP-trace, will not block the movement of NP3 to the Spec of ASPP, assuming the linkage between the (non)visibility and blocking (or minimality) effect (cf. Rizzi 1990).

2.4. The Unergative Verb Compound Construction

The morpho-syntactic analysis presented above further accounts for the formation of the unergative verb compound construction like (7), (8), (9) and (10). Consider (7), which is rewritten below and whose structural representation would be in the form of (7') by the basic structure of the Chinese verb compound construction in (20):

(7) **Lisi xiao-feng-le.**
     Lisi laugh-insane-ASP
     'Lisi laughed to the extent of becoming mad.'

(7') $[_{AGRP}$ $[_{AGR}$ $[_{ASPP}$ $[_{ASP}]$ $[_{VP1}$ $[_{NP1}$ **Lisi**$]$ $[_{V'1}$ $[_{V1}$ **xiao**$]$
                                            Lisi   *laugh*

      $[_{VP2}$ $[_{NP2}$ **Pro**$]$ $[_{V'2}$ $[_{V2}$ **feng-le**$]]]]]]]]$
                                      insane-ASP

The derivation of (7) also falls under verb-raising and NP-movement by the morpho-syntactic analysis proposed above, as illustrated by (7") below:

(7") $[_{AGRP}$ **Lisi**$_i$ $[_{AGR}$ $[[$**xiao-**$[$**feng-le**$_j]_j]_k]_i]$ $[_{ASPP}$ $[_{ASP}$ $t_i]$ $[_{VP1}$
               Lisi   *laugh-insane-ASP*

      $[_{NP1}$ $t_i]$ $[_{V'1}$ $[_{V1}$ $t_k]$ $[_{VP2}$ $[_{NP2}$ **Pro**$]$ $[_{V'2}$ $[_{V2}$ $t_j]]]]]]]]$

The motivation and argument for the verb-raising and NP-movement in the derivation of (7) are almost the same as those presented in the two sections above. However, there exists a difference between the unergative verb compound construction and the unergative-transitive or unergative-stative verb compound construction: that is, the former contains only one overt NP, whereas the latter contains two. As the only overt NP in the unergative verb compound construction is the logical subject of both V1 and V2, its ASP (being equivalent to AGRo) becomes *inert*, failing to assign Case or check the Case of an NP moved to its Spec-position (cf. Chomsky 1993). This results in the direct movement of NP1 **Lisi** to the Spec of AGRP to check its Case against AGR. This NP-movement satisfies the Shortest Movement Condition as the Spec of AGRP and the Spec of ASPP are equidistant from NP1 **Lisi**, due to the verb-raising from ASP into AGR: i) the raising of the verb compound **xiao-feng-le** from ASP into AGR forms a chain (**xiao-feng-le**$_1$, t_1) with the minimal domain {Spec of AGRP, Spec of ASPP, VP1}, so the Spec of AGRP and the Spec of ASPP are equidistant from VP1 or any element it contains; and ii) thus, NP1 **Lisi**, being a specifier of VP1, may move into the Spec of AGRP by crossing the Spec of ASP.

2.5. The Intransitive-Unaccusative Verb Compound Construction and Transitive-Unaccusative Verb Compound Construction

Both the intransitive-unaccusative verb compound construction and the transitive-unaccusative verb compound construction are no exceptions to the proposed morpho-syntactic analysis. Like the

unergative verb compounds above, the intransitive-unaccusative and transitive-unaccusative verb compounds take only one NP argument. But unlike the unergative verb compounds, the only NP argument in the intransitive-unaccusative verb compound construction is the Experiencer of V2, and it has no thematic relation with V1 (cf. (11), (12) and (13)); and the only NP argument in the transitive-unaccusative verb compound construction is both the logical object of V1 and the Experiencer of V2 (cf. (14), (15), (16) and (17)). Consider the intransitive-unaccusative verb compound construction in (11) first, which would have the structural representation in (11'), given the basic structure of the Chinese verb compound construction in (20):

(11) shoujuan   ku-shi-le.
     handkerchief cry-wet-ASP
     'Someone cried so much that his or her handkerchief got wet.'

(11') $[_{AGRP} [_{AGR}] [_{ASPP} [_{ASP}] [_{VP1} [_{NP1}$ Pro$] [_{V'1} [_{V1}$ ku$]$
                                                              cry

$[_{VP2} [_{NP2}$ shoujuan$] [_{V'2} [_{V2}$ shi-le$]]]]]]]$
         handkerchief   *wet-ASP*

Since the overt NP shoujuan in (11') is the Experiencer of V2 only and does not have a thematic relation with V1, its AGRP would then be *missing* according to Chomsky (1993), rendering (11') to (11"):

(11") $[_{ASPP} [_{ASP}] [_{VP1} [_{NP1}$ Pro$] [_{V'1} [_{V1}$ ku$] [_{VP2} [_{NP2}$ shoujuan$]$
                                              cry   *handkerchief*

$[_{V'2} [_{V2}$ shi-le$]]]]]]]$
         wet-ASP

The derivation of (11) from (11"), as shown by (11"') below, falls under the same type of verb-raising and NP-movement shown above, and their motivation and arguments are also the same as those given in the above sections:

(11"') $[_{ASPP}$ shoujuan$_i [_{ASP}$ [ku-[shi-le]$_j]_k] [_{VP1} [_{NP1}$ Pro$]$
                handkerchief   *cry-wet-ASP*
$[_{V'1} [_{V1}$ t$_k] [_{VP2} [_{NP2}$ t$_i] [_{V'2} [_{V2}$ t$_j]]]]]]]$

     The similar analysis also offers an account for the transitive-unaccusative verb compound construction, in which the only overt NP argument is both the logical object of V1 and the Experiencer of V2, as shown by the derivation of (14) below:

(14) na   ke shu kan-dao-le.
     That CL tree cut-fall-ASP
     'That tree was cut and as a result it fell.'

(14') $[_{ASPP} [_{ASP}] [_{VP1} [_{NP1}$ Pro$] [_{V'1} [_{V1}$ kan$] [_{VP2}$
                                              cut

$[_{NP2}$ na ke shu$] [_{V'2} [_{V2}$ dao-le$]]]]]]$
         that CL tree   *fall-ASP*

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(14") $[_{ASPP}$ na   ke shu$_i$ $[_{ASP}$ [kan-[dao-le]$_j$]$_k$] $[_{VP1}$ $[_{NP1}$ Pro]
             that CL tree   cut-fall-ASP
$[_{V'1}$ $[_{V1}$ t$_k$] $[_{VP2}$ $[_{NP3}$ t$_i$] $[_{V'2}$ $[_{V2}$ t$_j$]]]]]]]

Thus, under the proposed morpho-syntactic analysis, the distinction
between the intransitive-unaccusative and transitive-unaccusative
verb compounds and the unergative verb compound is reduced to a
trivial question of morphology.   In other words, the terms like
unergative and *unaccusative* will not have any substantive meaning
in grammar, as they could be totally determined by the choice of
active versus *inert* or *missing* AGR/ASP (cf. Chomsky 1993).

     In conclusion, the morpho-syntactic analysis presented above
offers a uniform and principled account for the Chinese unergative
and unaccusative verb compound constructions. Under this analysis,
the formation of these verb compound constructions simply becomes
the side effects of verb-raising and NP-movement without requiring
any specific lexical rules or stipulations.   The verb-raising is
morphologically driven as the inflectional features on the verbal
morphemes need to be checked, and the NP-movement is forced by the
Case Filter. Moreover, both the verb-raising and NP-movement are
constrained by the principles of universal grammar.

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