

Mandarin resultative verb compound has a VP complementation syntax

Mingming Liu (*Rutgers University*)

Intro: Mandarin Resultative Verb Compounds (RVCs) are verbal complexes of the form V1-V2, where V1 denotes an activity and V2 the result of that activity. Previous literature either assigns to RVCs a Complex Verb structure [_V V1-V2] (Li 1990, Williams 2012) or a Small Clause structure [_{V1P} V1 [_{SC} V2]] (Sybesma 1999).

Thesis: In this talk, I will propose a VP Complementation syntax for Mandarin RVC [_{V1P} V1 [_{V2P} V2P]] (similar to Sybesma 1999 but contra Williams 2011, see (1) (Also, in (1) there are multiple V-to-v movements, see Collins 2002)) and present new data to support it.

Specifically, the data involves two types of Event Modifiers Duratives and Locatives, and I will show those event modifiers can modify either V1 or V2, independently; also, the positions of these modifiers determine their interpretations and that certain positions of Duratives are not allowed, all of which are predicted by the VP Complementation syntax.

Support 1: Independent Modification-Durative Phrase (DurP) and Locative

Mandarin Chinese DurP (Lin (2008)) has the form of Number + (Classifier) +Time, and no prepositions is needed (Examples are given in (2)). Although DurPs can appear both before and after an RVC, different positions incur different interpretations (See (3) and (4)). For the sentence in (3), where the DurP comes after the RVC, it only means the duration of the resultant state; while for sentence in (4) where the DurP comes before the RVC, it can only be interpreted as describing the duration of the process.

The above facts are nicely explained under the VP complementation syntax. First, the Post-RVC DurP in (3) that only modifies the resultant state can be analyzed as a DurP attaching to the lower V_{2P} consisting of the result V₂ (and its complement) only (for the assumption that DurP adjoins to VP, see Soh 1998, Lin 2007). Then, the Pre-RVC DurP in (4) that modifies the process can be analyzed as a DurP adjoining to the little vP. This captures the Independent Modification fact. Further, the obligatory post-verbal position of Result-related DurP is also expected, since they attach the lowest V_{2P} whose head V₂ will eventually moves out (to little v). The two possible positions of DurP are also represented in (1).

Further supports for the above claims come from Locatives, which behave the same ways as DurP ((5) and (6)) and can be given the same analysis as sketched above.

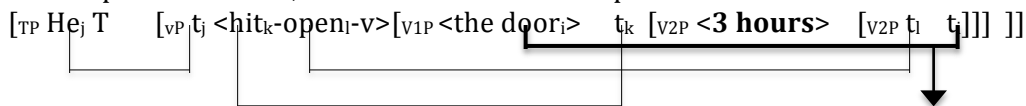
Support 2: *V+ Durative phrase + Object

As has been observed before (Soh 1998, Lin 2008), Chinese Post-verbal DurP can appear at two positions: between the verb and its object, or after the object, which can be schematized as V + DurP + Object and V + Object + DurP (see (7) and (8)). The V + DurP + Object in (7) and V + Object + DurP in (8) usually do not involve a meaning change (Soh 1998) and I will follow Soh in treating the V + DurP + Object as the underlying order and derive the V + Object + DurP order via object scrambling. But now turning to RVC, interestingly RVC does not allow the V + DurP + Object order (See (9) and (10)).

This mystery can also be explained under the VP complementation syntax. First, assuming Accusative Case is assigned by little v (Chomsky 1995, Kratzer 1996), then if we look at the structure in (11) we notice the object NP₂ has to obligatorily scramble out of the lower V_{2P} because it cannot get Case from there. Thus, it is easily understood that it is the obligatory scrambling of the NP₂ that makes the derived order V + Object + DurP obligatory.

Further Correlation: Under the above syntax, V₁ selects for a bare VP as its complement. This is further related to the fact that there is an aspectual restriction on V₂, i.e. V₂ can only be state/ achievement verbs, not activity/ accomplishment verbs (witness **pao-tiao* 'run-jump' and **da-sha* 'hit-kill'). This fact can be given a syntactic account under the assumption that V_{2P} is a bare VP. Assuming activity/accomplishment verbs have a little v, they can never be the complement of V₁ in an RVC; and assuming stative and achievement verbs do not have a little v, they are suitable complements of V₁ by being a bare VP.

- (1) *Zhangsan kan-dao le da shu*
 Zhangsan hack-fall LE big tree
 Zhangsan hacked tree and the tree fell as a result.
- S V1 - V2 O
 [TP Zhangsan_j T [vP (DurP) t_j <hack_k-fall_i-v> [v1P <the big tree_i> t_k [v2P (DurP) t_i t_i]]]]]]
- (2) *yi tian san ge xiaoshi wu fenzhong liu miao*
 one day three CL hours five minutes six seconds
- (3) *zhangsan zuotian da-kai le men san xiaoshi (Post-RVC DurP modifying V2)*
 Zhangsan yesterday hit-open LE door 3 hours
 Yesterday, Zhangsan opened the door, and the door remained open for 3 hours.
- (4) *Zhangsan zuotian san xiaoshi cai da-kai le men (Pre-RVC DurP modifying V1)*
 Zhangsan yesterday 3 hour then hit-open LE door
 Yesterday, Zhangsan tried to open the door for three hours, and then, the door got open as a result.
- (5) *Zhangsan da - sui le beizi zai di-shang (Post-RVC Locative modifying V2)*
 Zhangsan hit-broken LE cup on floor-surface
 Zhangsan broke the cup and the broken cup is on the floor.
- (6) *Zhangsan zai chu-fang da - sui le beizi (Pre-RVC Locative modifying V1)*
 Zhangsan in kitchen hit-broken LE cup
 Zhangsan broke the cup in the kitchen.
- (7) *wo (yijing) kai ershi nian jichengche le (V+DurP+Object)*
 I already drive twenty years taxi LE
 I have (already) driven a taxi for twenty years. (Lin 2007)
- (8) *wo (yijing) kai jichengche ershi nian le (V+Object+DurP)*
 I already drive taxi twenty years LE
 I have (already) driven a taxi for twenty years. (Lin 2007)
- (9) *Zhangsan da-kai le men san fenzhong (RVC + Object + DurP)*
 Zhangsan hit-open LE door three minutes
 Zhangsan has opened the door and the door opened for three minutes.
- (10) **Zhangsan da-kai le three minutes men (*RVC + DurP + Object)*
 Zhangsan hit-open LE three minutes door
 Zhangsan has opened the door and the door opened for three minutes.
- (11) *ta da-kai le men san ge xiaoshi*
 He hit-open LE door 3 CL hours
 He opened the door, and the door remained open for three hours.



Obligatory Scrambling of the Object due to Case

Selected Reference: Li, Yafei. 1990. On V---V compounds in Chinese. *Natural Language and Linguistic Theory* 9:177---207. Lin, Jo-wang. 2008. Event decomposition and the syntax and semantics of durative phrases in Chinese. In *Event Structures in Linguistic Form and Interpretation*, ed. Johannes Dölling, Tatjana Heyde-Zybatow, Martin Schäfer, 31-54. Berlin, Walter de Gruyter. Soh, Hooi Ling. 1998. *Object Scrambling in Chinese*. Doctoral Dissertation, Massachusetts Institute of Technology. Sybesma, Rint. 1999. *The Mandarin VP*. Dordrecht: Kluwer. Williams, Alexander. 2011. Objects in resultatives. Accepted with minor revisions to *Natural Language and Linguistic Theory*.