

# TWO TYPES OF V-DE CONSTRUCTIONS IN MANDARIN CHINESE

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## 1. Introduction

This paper intends to study the *V-de* constructions in Mandarin Chinese. There are two types of them, exemplified in (1-2).

(1)        Zhangsan    pao-de    henkuai        (depictive)  
              p.n.        run-DE    fast  
              ‘Zhangsan runs fast.’

(2)        Zhangsan    pao-de    henlei         (resultative)  
              p.n.        run-DE    tired  
              ‘Zhangsan has run and is tired.’

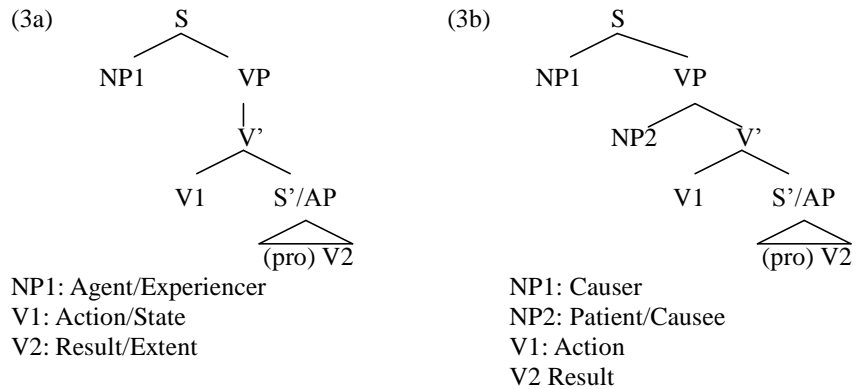
They are documented in the literature, according to the meaning of the complements each takes respectively. In (1), the *V-de* takes a depictive complement *henkuai* “fast,” while another instance of *V-de* takes a resultative one *henlei* “tired” as in (2). Huang (1988) argues that the syntactic structures of (1-2) are the same, in that *V-de* is the primary predicate in both cases. However, the data here will show that *V-de* taking a depictive complement may enjoy a different structure than that taking a resultative one. The evidence comes from the various positions of modal adverbs like *keneng* “possibly” and *yiding* “certainly” etc, and anaphoric *ziji* “self”. The analysis suggests that *-de* may occupy various syntactic positions in Mandarin Chinese in the hope that a unified explanation of the *V-de* constructions may be developed.

The organization of this paper is as follows: in the next section, we will reinforce a light verb analysis in the spirit of Huang (1988). Then more evidence shall be brought up in section three, to argue against a unified analysis of two types of *V-de* taking a depictive or a resultative complement. Our analysis will be presented in section four, where a sentential subject *V-de* is assumed. Section five concludes this paper and proposes some possible future research orientation.

## 2. A Light Verb Analysis

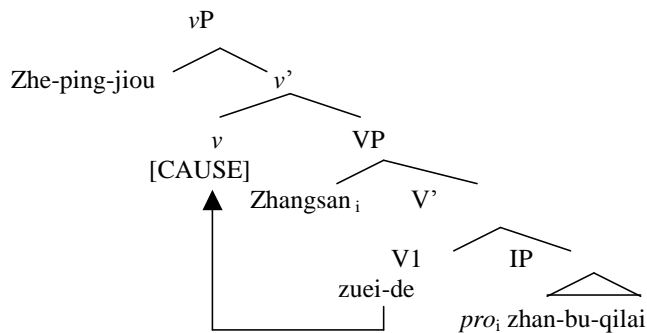
Huang (1988) has proposed a secondary-predication-analysis of the *V-de* construction in Mandarin Chinese. The *V-de*'s are the primary predicates and

may either take a depictive complement or a resultative one, which is a secondary predicate, but syntactically there are no differences, as in (3), adopted Huang's tree diagrams. There are two types of *V-de* constructions, namely unaccusative (3a) and ergative (3b), similar to the two usages of the English verb *break*.



We may devise a light verb analysis in the spirit of Huang's analysis, as in (4). The configuration of the arguments, namely, agent and theme, conforms to UTAH (Baker, 1988).

- (4)      Zhe-ping-jiou      zuei-de      Zhangsan      zhan-bu-qilai  
           this-bottle-wine    drunk-DE      p.n.            stand-not-able  
           'This bottle of wine made Zhangsan so drunk that he could not stand up.'



The V-to-v movement is justified by the causative meaning of (4), where *V-de* takes a resultative complement. With a depictive one, such a movement is not motivated, and the bracketing in (5) indicates that *Zhangsan* is not an agent.

- (5) [VP Zhangsan<sub>i</sub> [V' zuei-de [IP *pro*<sub>i</sub> zhan-bu-qilai]]]  
 p.n. drunk-DE stand-not-able  
 'Zhangsan was so drunk that he could not stand up.'

Huang argues against a movement analysis which treats (5) the result of raising the *Zhangsan* in (6). The reason is that there is an empty cause in (6) of *Zhangsan*'s inability to stand up, which is not at all transparent in (5). Noted that this empty category is not coindexed with *Zhangsan* in (6), otherwise, a violation of Binding Principle C will rule out the structure.

- (6) [VP e [V' zuei-de [VP Zhangsan<sub>i</sub> [V' [IP *pro*<sub>i</sub> zhan-bu-qilai]]]]]  
 drunk-DE p.n. stand-not-able  
 '(Something) made Zhangsan so drunk that he could not stand up.'

Another piece of evidence comes from (7), where *zhejianshi* "this matter" does not occupy the specifier of vP. *Zhangsan* may be, or may be not, angry at this matter.

- (7) [TOPIC Zhe-jian-shi [IP [vP Zhangsan qi-de shuo-bu-chu<hua>lai]]]  
 this matter p.n. angry-DE say-not-able-<word>  
 'This matter made Zhangsan so angry that he could not say a word.'

Huang has suggested two pieces of evidence to support his analysis which treats depictive and resultative *V-de* alike. The first concerns the scope of *meiyou* "not;" the second, verb reduplication in Mandarin Chinese. As both types of *V-de* constructions behave similarly in this regard, Huang's argumentation for a structure like (3) based on backward anaphora is well supported. We briefly repeat Huang's examples in (8-10) below. The reader is referred to Huang's article for a detailed explication.

In (8-9), both types of *V-de* behave the same. The negative *meiyou* has scope over *V-de* plus its complement as *meiyou* in both examples of (8) c-commands the whole predicate, which also disfavors the alternative analysis that [*ta meiyou pao-de*] is a sentential subject. In fact, (8) denies the constituency of [*ta meiyou pao-de*]. Though the test of backward anaphora seems to work for only a resultative *V-de* construction, it still justifies that *V-de* is the main predicate, not an adjunct, where backward anaphora is allowed as in (10b).

- (8) a. [Ta [meiyou [pao-de henhuai]]] (depictive)  
 he not run-DE fast  
 'He didn't run fast.'  
 b. [Ta [meiyou [pao-de [henlei]]] (resultative)  
 he not run-DE tired  
 'He hasn't run and is not tired.'
- (9) a. Ta nianshu \*(nian)-de henkuai (depictive)  
 he read.book read-DE fast

- ‘He reads fast.’
- b. Ta nianshu \*(nian)-de henlei (resultative)  
 he read.book read-DE tired  
 ‘He has read books and is tired.’
- (10) a. \*Ta<sub>i</sub>-DE meimei shuo Zhangsan<sub>i</sub> shueizhao-le  
 his sister say p.n. sleep-LE  
 ‘\*His<sub>i</sub> sister said that Zhangsan<sub>i</sub> was asleep.’ (backward anaphora)
- b. Ta<sub>i</sub>-DE meimei yi huei-dao-jia, Zhangsan<sub>i</sub> jiu ku  
 his sister once come-arrive-home p.n. cry  
 ‘As soon as his sister arrived home, Zhangsan began to cry.’
- c. \*Ta<sub>i</sub>-DE meimei qi-DE Zhangsan<sub>i</sub> zhi fadou  
 his sister angry p.n. keep shiver  
 ‘\*His<sub>i</sub> sister made Zhangsan<sub>i</sub> so angry that he<sub>i</sub> kept shivering.’

However, more data will be brought up in the next section, which indicates that the two types of *V-de* constructions might be different structurally. The analysis will have to consider the similarity of (8-9), which will be done in section four.

### 3. Problems

In this section, data of *V-de* which interacts with the reflexive *ziji* ‘self’ and modal adverbs like *keneng* ‘possibly,’ *yiding* ‘certainly,’ and *yinggai* ‘possibly’ will be discussed. Both types of *V-de* allow these items, but behave differently.

We will begin with the interpretation of *ziji* ‘self’.

- (11) \*Zhangsan pao-de ziji henkuai (depictive)  
 p.n. run-DE self fast  
 ‘\*Zhangsan runs himself fast.’
- (12) Zhangsan pao-de ziji henlei (resultative)  
 p.n. run-DE self tired  
 ‘Zhangsan has run and made himself tired.’

In (11-12) depictive *V-de* disallows the anaphor *ziji* ‘self’ as the ungrammatical (11) indicates, while resultative one has an extra argument position and hence renders (12) grammatical. Huang’s analysis smoothly explains the contrast of (11-12). In (11) *Zhangsan* is an internal argument of an unaccusative predicate with the structure of (3a), raised to check the EPP feature, another instance of Burzio’s Generalization. In (12), on the other hand, there are two argument positions as indicated by (3b), one for *Zhangsan* and the other for *ziji*. In short, there are two types of *V-de* in Huang’s analysis: one is an ergative or two-place predicate (3b); the other, an unaccusative one. Such a distinction results in the ambiguity of (13).

- (13) a. [<sub>VP</sub> Zhangsan [<sub>V</sub> zuei-DE [<sub>IP</sub> *pro* [<sub>VP</sub> ziji zhan-bu-qilai]]]]  
 p.n. drunk-DE self stand-not-able  
 ‘Zhangsan was so drunk that he could not stand up by himself.’  
 (*ziji* as an adverbial “alone”)
- b. [<sub>VP</sub> Zhangsan [<sub>V</sub> zuei-DE [<sub>VP</sub> ziji [<sub>V</sub> e [<sub>IP</sub> *pro* zhan-bu-qilai]]]]]  
 p.n. drunk-DE self stand-not-able  
 ‘Zhangsan made himself so drunk that he could not stand up.’  
 (*ziji* as an anaphor)

Interestingly, in an unaccusative *V-de* construction (taking depictive complement), *ziji* still applies, and this instance of *ziji*, as in (13), is ambiguous. Either an anaphoric reading or a reflexive adverbial “alone” is derived. The depictive vs. resultative distinction seems to be able to be simplified syntactically as unaccusative vs. ergative. In other words, [*pro ziji zhan-bu-qilai*] in (13a) describes the status of Zhangsan’s being drunk, and [*pro zhan-bu-qilai*] in (13b) is the result of Zhangsan’s drinking. The ungrammatical (11) is due to the incompatibility of *henkuai* “fast” and *ziji*, being a reflexive adverbial as a result of the lack of an extra argument position.

The above discussion may shed lights on the argument realization of the *V-de* construction in Mandarin Chinese. There are two usages of *V-de*, an unaccusative (one-place) predicate and an ergative (two-place) one. This renders *V-de* construction in Mandarin similar to the verb *break* in English. Secondly, the subject argument of *V-de* construction is always related to V1 (*V-de*, following Huang’s terminology) thematically. (14) provides good pieces of evidence.

- (14) a. [<sub>TOPIC</sub> Zhangsan [<sub>IP</sub> na-jian-shi [<sub>VP</sub> chuli-DE henqiadang]]]  
 p.n. this matter handle-DE proper  
 ‘Zhangsan handles this matter properly.’
- b. [<sub>TOPIC</sub> na-jian-shi [<sub>IP</sub> Zhangsan [<sub>VP</sub> chuli-DE henqiadang]]]  
 this matter p.n. handle-DE proper  
 ‘Zhangsan handles this matter properly.’
- c. na-jian-shi chuli-DE henqiadang  
 this matter handle-DE proper  
 ‘This matter has been handled properly.’
- d. Zhangsan chuli-DE henqiadang  
 p.n. handle-DE proper  
 ‘Zhangsan handles this matter properly.’
- e. *pro* chuli-DE henqiadang  
 handle-DE proper  
 ‘(Someone) handled (something) properly.’
- f. Zhangsan chuli na-jian-shi chuli-DE henqiadang  
 p.n. handle this matter handle-DE proper  
 ‘Zhangsan handled this matter properly.’

In (14), they are all depictive *V-de* constructions, with only one argument. The additional thematic involvement is realized as a base-generated topic (14a-b), or as an adjunct in the form of verb reduplication (14f).

Thirdly, V2 might not contribute anything to the transitivity relation of *V-de* and its argument(s). If it does, the contribution is restricted; it must be the external argument i.e. subject of V2, which follows straightforwardly, adopted Huang's control analysis. This also justifies a null operator analysis of secondary predication. However, problem arises, when *henqiadang* "appropriate" in (14) is considered as a secondary predication. If secondary predication involves a mechanism similar to lambda extraction, then we will have to ask what is extracted in (14). It is not *Zhangsan*, nor *najianshi* "that incident," as *chuli-de* "handle" cannot be omitted in (14).

Depictive *V-de* construction like (14) resists a control analysis is further exemplified in (15-16).

- (15) Zhangsan, shu du-DE hanbang (depictive)  
 p.n. book read-DE good  
 'Zhangsan is good at his schooling.'
- (16) a. \* Zhangsan, shu du-DE *pro* henlei (resultative)  
 p.n. book read-DE tired  
 'Zhangsan's studying made him tired.'
- b. Zhangsan du shu du-DE *pro* henlei  
 p.n. read book read-DE tired  
 'Zhangsan's studying made him tired.'

The ungrammatical (16a) is explained by an inappropriately controlled *pro*. While in (16b) *Zhangsan* is the only proper controller of *pro*, *shu* "book" in (16a) is the potential controller of *pro*, which results in an uninterpretable sentence. However, if depictive (15) is structurally similar to resultative (16a), then the grammaticality of (15) will certainly surprise us.

When we turn to modal adverbs like *keneng* "possibly" and *yiding* "certainly" etc, the differences between depictive *V-de* and resultative one cannot be explained by the unaccusative vs. ergative distinction. Examples are given in (17-18), and the discussions focus on the scope of the adverb *keneng*.

- (17) a. Zhangsan keneng pao-de henkuai (depictive)  
 p.n. possibly run-DE fast  
 'Zhangsan runs fast.'
- b. Zhangsan pao-de keneng henkuai  
 p.n. run-DE possibly fast  
 'Zhangsan runs fast.'
- (18) a. Zhangsan keneng pao-de henlei (resultative)  
 p.n. possibly run-DE tired  
 'It is possible that Zhangsan has run and is tired.'
- b. Zhangsan pao-de keneng henlei  
 p.n. run-DE possibly tired

‘Zhangsan has run and it is possible that he is tired.’

In (17) with a depictive *V-de* construction, the position of the modal adverb *keneng* will not lead to a shift of scope, while it does in the case of (18) with a resultative *V-de* construction. The context of (18a) might be this: the speaker sees Zhangsan, who is very tired, but do not know what Zhangsan has done makes him tired; the speaker then makes an assumption by uttering (18a). The context of (18b) is slightly different: the speaker knows that Zhangsan has run for a certain reason, and he assumes that Zhangsan should be tired after his running. Such a nuance is not detected in (17).

So much for discussion, an analysis will be proposed in the next section, and we will assume a different structure of a depictive *V-de* construction from that of a resultative one.

#### 4. An Analysis of the Depictive *V-de* Construction

With regard to the structure of a resultative *V-de* construction, we will follow Huang’s analysis. There is a *V-to-v* movement in the case of resultative *V-de*, diagrammed in (4), which endows the sentence with a causative meaning. Huang’s argumentation based on backward anaphora (e.g. 10) provides convincing evidence, but it applies only to resultative *V-de*, for there is no extra argument position for depictive *V-de* to test. The discussion in the previous section indicates that it is necessary to devise a different syntactic structure for depictive *V-de*, as the analysis immediately launched below.

A *V-to-v* analysis for depictive *V-de* is discarded, for there is no causative meaning involved and hence such a movement is not motivated. Another type of sentence structure will be reinforced here, concerned depictive *V-de*. We might catch a glimpse of the structure of depictive *V-de* in the light of (19) compared with (17).

- (19) a. Zhangsan    keneng    changge            henhaoting  
          p.n.        possibly    sing.a.song    sweet-sounding  
          ‘It is possible that Zhangsan’s singing is sweet-sounding.’  
      b. Zhangsan    changge            keneng    henhaoting  
          p.n.        sing.a.song        possibly    sweet-sounding  
          ‘It is possible that Zhangsan’s singing is sweet-sounding.’

In (19), [*Zhangsan changge*] “Zhangsan sings” is a sentential subject with *henhaoting* “sweet-sounding” as its predicate. The modal adverb *keneng* “possibly” has scope over the whole sentence. No shift of meaning is detected, and (19a-b) behave exactly the same as corresponding (17a-b). The assumption is that [*Zhangsan pao-de*] “Zhangsan’s running” in (17) is probably like [*Zhangsan changge*], which is a sentential subject. And *henkuai* in (17) is the main predicate; secondary predication is irrelevant in this regard.

An apparent counter-argument is already noted in Huang (1988), that is, the scope of *meiyou* as in (8) and likewise, the scope of *keneng* in (17-18). If

[*Zhangsan keneng pao-de*] is a constituent, then the scope of *keneng* is in no way applied to the whole sentence \*[[*Zhangsan keneng pao-de*] *henkuai*]. Although the bracketing is not grammatical, the sentence itself is. We will have to develop a structure where the scope of *keneng* is properly described.

Tsai (1997) has discussed the absence of island effect of topicalization in Mandarin Chinese. His example is given in (20).

- (20) Akiu, [OP<sub>i</sub> [wo renwei [e<sub>i</sub> tan gangqing [henheshi]]]]  
 p.n. I think play piano appropriate  
 ‘I think that it is appropriate for Akiu to play the piano.’

Following this thread of reasoning, we propose that the subjects in (17a) and (19a) have undergone topicalization. In other words, the structure of (17a) is (21).

- (21) [Zhangsan [OP<sub>i</sub> [keneng [e<sub>i</sub> pao-DE [henkuai]]]]]  
 p.n. possibly run-DE fast  
 It is possible that Zhangsan runs fast.

Another argument for the similarity of two types of *V-de* construction already brought up is verb reduplication, as in (9). This phenomenon is intimately related to the argument realization with respect to the verb suffixed by *-de*. The suffix *-de* detransitivizes a verb. This intrinsic property of *-de* probably has not much to do with its syntactic properties, i.e. being a main predicate in a resultative construction or a sentential subject in a depictive one.

If this thought is on the right track that *-de* may serve as a nominalizer in the case of a depictive construction, then this *-de* is indeed similar in form to the nominalizer *-de* in Mandarin Chinese. However, we should make a clear distinction between the two. The ambiguity of (22) requires such a distinction.

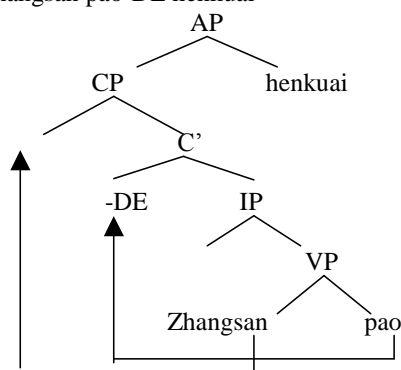
- (22) a. Zhangsan chi-DE henshao  
 p.n. eat-DE few  
 ‘(The amount of) Zhangsan’s eating is small.’  
 b. Zhangsan (neng) chi-DE henshao  
 p.n. (may) eat-NOM few  
 ‘The things that Zhangsan (may) eat are few.’

There are two characters in written Chinese for these two *-de*, and we can also distinguish the two by their syntactic and semantic properties. For (22a), the suffix *-de* detransitivizes the verb *chi* ‘eat’ and *henshao* ‘few’ is meant to describe the status of Zhangsan’s eating, which indicates that an action nominalization occurs. In (22b), *Zhangsan chi-de* ‘(the things) that Zhangsan eats’ is a headless relative construction and an argument nominalization is detected.

To sum up the discussion in this section, we will give a tree diagram of (1).



(23) Zhangsan pao-DE henkuai



The constituency of *V-de* is a sentential subject like [*Zhangsan change*] in (19), and the evidence comes from the configuration of a modal adverb like *keneng*. There are two structures, corresponding to two types of *V-de* constructions, e.g. (4) for resultative; (23) for depictive.

We treat this *-de* on a par with nominalizer *-de*, and both are treated as complementizers, which trigger movements of different syntactic categories. In (23), the verb *pao* “run” goes all the way from V to C, probably through I. The VP internal subject *Zhangsan* also moves to a topic position, to derive the actual word order. This structure explains: first, the reflexive *ziji* cannot apply. Secondly, we may assume a further projection for a modal adverb like *keneng* “possibly,” merged above AP; then the movement of either *Zhangsan* or the whole sentential subject (i.e. CP) will explain the invariability of the scope of *keneng* as in (17), and also why the scope of *meiyou* “not” in (8a) cover the whole the sentence. Finally, the argument realization of a depictive *V-de* is also explained, and the examples are (14-15), where the V2’s contribute not much to the argument of the depictive *V-de*’s.

## 5. Residue

This paper argues against a unified analysis on the two types of *V-de* constructions. Although the function of the morpheme *-de* is to detransitivize the verb it suffixes unanimously, the difference lies in the landing site of the target verb. In a resultative *V-de*, we follow Huang and treat it as an instance of V-to-v movement. In a depictive *V-de*, we suggest a V-to-C movement, and this *-de* is treated on a par with the nominalizer *-de*. And the consequence of such an analysis is not yet fully investigated. For one, the suffix *-de* is also used in a resultative verbal compound.

(24)      Zhonghua-duei      da-de-ying      meikuo-duei  
             Chinese-team      beat-DE-win      American-team  
             ‘The Chinese team may win the American one.’

This *-de* in (24) seems to indicate the potentiality. But we do not want to suggest a V-to-I movement, which treat this *-de* on a par with the modal verb like *neng* “can”. If there is such a V-to-I movement, verb gapping might be possible in Mandarin Chinese. And apparently it is not so.

For another, complementation is well developed in Mandarin Chinese, and we do not know yet the analysis of depictive V-*de* here actually applies to other types of complementation.

- (25) a. Zhangsan du-le san-tian zhe-ben-shu  
       p.n. read-LE three-day this-CL-book  
       ‘Zhangsan has read this book for three days.’  
       b. Zhangsan du-le zhe-ben-shu san-tian  
       p.n. read-LE this-CL-book three-day  
       ‘Zhangsan has read this book for three days.’
- (26) a. Zhangsan da-le liang-ci Lisi  
       p.n. beat-LE two-time p.n.  
       ‘Zhangsan has beaten Lisi twice.’  
       b. Zhangsan da-le Lisi liang-ci  
       p.n. beat-LE p.n. two-time  
       ‘Zhangsan has beaten Lisi twice.’

If [*Zhangsan da-le Lisi*] is a sentential subject, as our analysis of depictive V-*de*, then the data (25b) and (26b) will be perplexing. Still, we will have to assume a secondary predication in (25-26), and *liangci* “twice” is integrated into the NP.

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