

The Middle Construction in Mandarin Chinese

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The middle is an unaccusative construction which expresses a modal generalization over events (Keyser and Roeper 1984). Although the middle is not homogenous cross-linguistically (Ting 2006), manifestations of the middle have been observed in most Indo-European languages. In this thesis, I will develop criteria for middles based on cross-linguistic generalizations and argue for the existence of a middle construction in Chinese. Chinese has a class of so-called 'notional passives,' unaccusative sentences which display active morphology but receive passive interpretation. I will provide evidence that the notional passive is distinct both structurally and semantically from the canonical Chinese passive and demonstrate the inadequacy of the topic-comment account of such constructions proposed by Li and Thompson (1981).

My account of the middle will crucially define it as a resultative form in Chinese, appearing exclusively with Resultative Verb Compounds (RVCs). I will adopt Cheng and Huang's (1994) classification of RVCs into four verbal subcategories (unergative, transitive, ergative, and causative) and consider the syntactic and semantic properties of the resultative middle based on the argument structure of its component predicates. Using data, I will analyze whether these Chinese middle verbs pattern in a predictable, cross-linguistically consistent way, considering syntactic distribution, aspectual composition, and semantic constraints on middle formation.

1.0 Introduction

The middle construction is defined cross-linguistically as an unaccusative construction expressing an intermediacy between active and passive voice and transitive and intransitive valence. Chinese has a class of so-called 'notional passives,' sentences that display active morphology but receive passive interpretation, which suggest some elements of the middle form. Li and Thompson propose that such sentences are topic-comment constructions with a Pro subject while Ting (2006) and Cheng and Huang (1994) argue that they are middles.

The following sentences are from Li and Thompson (1981), pp. 88-89:

(1) nei ben shu chuban le

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- that CL book publish PFV¹
 That book, (someone) has published it.
- (2) yifu tang-wan le
 cloth iron finish PFV
 That clothing, (someone) has ironed it.
- (3) fan zhu-jiao le yidian
 rice cook burnt PFV a bit
 The rice, (we) burnt it a little. (Li and Thompson, 1981: 88-89)

2.0 What is the middle construction?

I will take a cross-linguistic comparative approach to defining the middle construction in this paper, considering both syntactic and semantic properties. It is important that both syntax and semantics are analyzed: First, Chinese demonstrates very limited morphological marking, ruling out the possibility that the middle is marked morphologically as in a language like Greek. Secondly, the middle construction has very different syntactic incarnations across languages, as we will see in a moment. I argue that a syntactic and semantic approach to the middle construction is the best and only way to arrive at a unified definition of the construction. This requires a comparison of studies of the middle in a number of languages which have well-documented middle constructions. According to Fagan (1992:4), “A comparative approach [to the middle] is important because one can often discover the relevant properties of a construction by accounting for differences between it and a related construction in a different language.”

2.1 Middle voice and Ancient Greek

¹ In glosses of Mandarin, PFV stands for ‘perfective’ and corresponds with *le*, the perfective or inchoative aspectual marker. ASP will be used to gloss aspectual markers other than *le*. For the sake of simplicity and consistency, I will base the majority of my observations on data involving the perfective marker *le* only. As we will see, the middle most readily appears with predicates describing a change-of-state process; in Chinese such a telic reading depends upon the completive aspect denoted by the accompanying aspectual marker *le*. Other abbreviations used are CL, for ‘classifier,’ RFL for the reflexive form *ziji*, and DE, for the *de* particle. Though *de* demonstrates an enormously complex range of functions in Mandarin, a more detailed analysis of its uses is beyond the scope of my project; all instances will therefore be glossed indiscriminately as DE.

Since the term was originally applied to the inflectional class of verbs in Ancient Greek, “middle voice” properties have been recognized cross-linguistically as a category situated intermediately between active and passive voice. As we will see below, the middle voice often receives a reflexive reading and, like passives, entails a subject with patient or experiencer role. Middle constructions share these properties but further involve syntactic specifications: a middle construction has a patient argument which appears in subject rather than object position, but a verb which is not morphologically marked as a passive.

The middle is an inflectional voice category of the Classical Greek verb (therefore morphologically marked). Semantically, it is interpreted as an action that affects the subject or the subject’s interests, while the subject possesses a patient, theme, experiencer, or benefactive (not agentive or causative). Fagan (1992) notes that the patient argument and affected object reading are often strong enough that middle forms can have a passive sense as well as a ‘middle’ sense.

(4) Porizomai khre:mata
get-MIDDLE money
‘I get (myself) money.’

(5) Eple:ksato te:n kephale:n
hit-MIDDLE the head
‘He hit his head’, ‘he hit himself in the head.’

In Ancient Greek, middle voice is morphologically marked as an inflectional category of the verb. According to Bakker, “its specific feature is the *affectedness* of the subject of the verb in, or by, the event denoted by the verb.” (Fox and Hopper 1994:24)

Bakker argues that the notion of “affectedness” is not sufficient for explaining the range of meanings expressed by the middle, but that lexical information, especially event type, constrains

formation and influences interpretation. Bakker distinguishes event types on a scale of transitivity features: *volition*, *agency*, and *causation*.

Most eventive verbs in Greek have both active and middle forms, but some only appear with middle morphology (called *deponent* verbs). These are most commonly verbs about psychological state or activity—again, focusing reflexively on the agent.

2.2 French middles

The middle construction in French is perhaps the most similar to the Chinese reflexive in that it demonstrates an eventive reading rather than the stative/noneventive/generic readings that characterizes the middle in other Indo-European languages. (Fagan) In French middle is marked by the reflexive clitic ‘se;’ in the case of the middle this reflexive clitic is used exactly as it would be in a true reflexive sentence, bound by a nominal subject, only in the case of true reflexives the nominal must be animate whereas in the case of the middle it is typically inanimate

Middle sentences in French are very often stative, as in English, but can be passive/eventive, as in Chinese.

- | | |
|--|---|
| (6) Il s'est fâché he SELF-is angered “He became angry.” | (7) Elle s'est cassée le bras she SELF-is broken the arm “She broke her arm.” |
|--|---|

2.3 German middles

The German middle demonstrates an uncommonly wide array of properties and variations. In the reflexive middle form, the German form expresses events in a way that is very similar to the middle voice in Greek—an event with some effect or outcome for the subject. However, it can also appear in sentences expressing a generalization over events, similar to the English middle:

- (8) Diess Buch liest sich leicht
 This book read REFL easily
 'This book reads easily.'

Middles in German have an understood subject, like passive clauses, and an implied agent.

An unusual property of the German middle is its appearance with both intransitive and transitive verbs, in contrast to English, French, Russian, and others (Fagan 1992) which can only form middles with transitive verbs. This suggests that the middle in German is not underlying transitive and formed via syntactic movement (subject deletion and patient promotion). Such an account of formation has been suggested for English by Keyser and Roeper, (1984) and for Chinese by Cheng and Huang (1994).

2.4 Dutch middles

Ackema and Schoorlemmer (1994) argue that middles do not pattern with unaccusatives, as has been proposed for Dutch middles, but with unergatives. Unaccusatives and unergatives, both intransitive in form, differ in the degree of volition implied by the subject's relation to the action of the verb.

Unaccusative:

- (9) a. My dog died.
 b. The trapeze artist fell.

Unergative:

- (10) a. John resigned after 25 years.
 b. I ran to the store.

In the unaccusative sentences, the subject is interpreted as having no role or responsibility in the action of the verb, while in the unergative sentences the subject is agentive. In unergative sentences, the subject is interpreted as having an agentive role in promoting the action of the verb.

Ackema and Schoorlemmer's proposed middle/unergative correlation implies that the grammatical subject of a middle is also the subject in the D-structure. Under the syntactic account,

the grammatical subject is predicted to be a D-structure object, which appears in subject position in the surface sstructure after undergoing NP-movement. Therefore Ackema and Schoorlemmer endorse a lexical account of middle formation, contra Keyser and Roeper (1994).

2.5 English middles

In the English middle construction, the subject corresponds to the patient argument of a typically transitive verb but the verb is in the active form.

(11) Sandwich bread is sliced easily. (Passive)

(12) Sandwich bread slices easily. (Middle)

The English middle expresses a generalization over events described by the sentence. Keyser and Roeper's account centers on an analysis of the English ergative. An ergative verb can be transitive or intransitive, but when used intransitively its syntactic subject corresponds to its transitive direct object. Thus, the ergative is a verb which assigns no external theta-role; i.e. it is subcategorized for a direct object but does not assign a subject theta-role. The transitive form of a sentence with an ergative verb is a causative. Corresponding transitive and intransitive sentences with an ergative verb demonstrate a causative/inchoative alternation, which Keyser and Roeper (1984) call *ergative pairs*:

(13) a. The sun melted the ice.

b. The ice melted. (Keyser and Roeper 1984:381)

Keyser and Roeper note the similarities between ergatives like (13b) and the middle construction: both are intransitive with a patient argument in subject position, but are distinct from strict intransitives like *die* or *sleep* because middle and ergative pairs have underlying objects while strict intransitives do not. (Keyser and Roeper 1994) Nonetheless, they argue for a distinction between ergative verbs and 'middle verbs'/'middle pairs.' Although the transitive form of an ergative pair can

undergo middle formation via syntactic Move α , Keyser and Roeper use the term ‘middle verb’ to refer exclusively to non-ergative (= accusative) transitive sentences which undergo middle formation. That is to say, all ergative verbs can appear in the middle construction but not all middle verbs are ergatives. This entails that in English, middle formations with ergative verbs are ambiguous between ergative and middle reading.

- (14) a. The sun melted the ice. (Causative)
 b. The ice melted. (Ergative)
 c. Ice melts easily. (Middle *or* Ergative + adverbial)

As we see in (15), true middle verbs yield an unambiguous middle reading because they disallow an ergative form.

- (15) a. The chef sliced the sandwich bread. (Transitive/Accusative)
 b. *Sandwich bread slices.
 c. Sandwich bread slices easily. (Middle)

Keyser and Roeper propose that the ergative/middle distinction arises from derivational difference: the middle is generated by syntactic movement and thus is represented as transitive in the lexicon, while ergative pairs are generated lexically and are thus represented as having both a transitive and intransitive form in the lexicon. (Keyser and Roeper 1994:382)² Keyser and Roeper therefore characterize the middle as a “surface ergative,” which undergoes movement to pattern with deep ergatives but is underlying transitive.

2.6 Summary of cross-linguistic generalizations

| Criteria for middle construction | Common cross-linguistic characteristics |
|----------------------------------|---|
|----------------------------------|---|

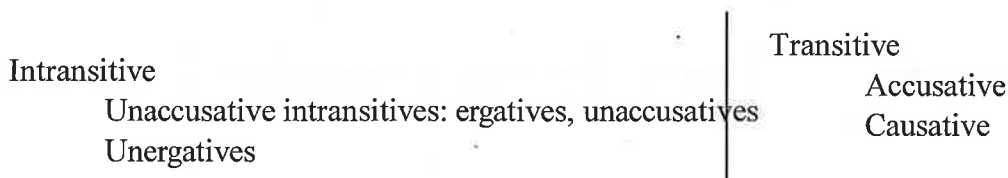
² Both forms are generated via Move α , just within different domains:
 The Ergative Rule – a lexical rule; undergoes lexical Move α .
 Middle Formation – syntactic rule; undergoes syntactic Move α .

| | |
|--|--|
| a. Patient/experiencer argument in subject position b. Absence of passive morphology c. No overt agent | a. Passive or reflexive interpretation b. Morphologically marked as reflexive c. Only formed with eventive verbs d. Promotes patient argument e. Defocuses agent argument f. Stativizes the event |
|--|--|

This thesis is most concerned with demonstrating the existence of a middle in Chinese that corresponds with the criteria listed above. But developing an account of the Chinese middle necessitates distinguishing it from other forms that may share some necessary but not sufficient features.

Terminology

Two prominent features of the middle are intransitivity and the patient/experiencer status of the argument, though these properties are not necessarily sufficient for ascribing the label 'middle construction.' To refer generally to forms with these properties I will use the umbrella term 'unaccusatives', a category in generative syntax which differentiates intransitives with a patient/experiencer object from 'regular' intransitives in which the argument acts as an agent or initiator (Levin and Rappaport-Hovav). Note that some authors use the term unaccusative more narrowly to refer to only those verbs with patient arguments which are strictly intransitive, distinguishing them from ergatives which have causative counterparts (Ackema and Schoorlemmer 1995) I will likewise observe this distinction when relevant.



Likewise, it will be important to subdivide transitive verbs. Transitive verbs in which the subject is an agent are ‘accusative,’ while verbs in which the subject plays a more general role of causer will be called causatives.

3.0 Does Chinese have a Middle Construction?

Several authors have posited Mandarin verb classification systems which, if not using the terminology ‘middle’, do come close to the capturing distinctions in argument structure which underlie middle formation in other languages. Cheng and Huang (1994) argued for the characterization of certain RVC constructions as middles, which led to Ting’s (2006) focused analysis of Cheng and Huang’s proposed middles in which she argues for a ‘pre-syntactic’ (i.e. lexical) rather than syntactic account of middle formation in Chinese.

3.1 Chao’s “middle voice” verbs

Perhaps the first observation of ergative or middle-type verbs in Chinese came from Chao’s highly influential *Grammar of Spoken Chinese* (1968). Chao divides verbs in terms of directionality of the action described: in a regular transitive verb the direction of the action moves outward from the subject as an actor toward the object as a patient, but in another class of verbs the direction of the verb’s action can also move inward towards the subject as a goal. Comparing this directional ‘ambivalence’ to middle verbs in Ancient Greek, Chao labels these ‘middle voice’ verbs—“verbs of action the direction of which goes either way.” (Chao 1969:703) Really what he has observed is the four way distinction later demonstrated by Cheng and Huang (1994): regular transitive verbs pattern with unergatives, while “middle voice” verbs are those which demonstrate the causative/ergative alternation. The distinction observed by Chao between transitive and middle voice verbs is that when

appearing with only a patient argument the transitive verbs allow only one interpretation, an agentive reading, while a middle voice verb allows two—agentive and non-agentive. (Chao 1968:703) So in fact, what Chao was calling middle voice verbs are causative/ergative pairs, e.g. ‘Zhangsan opened the door’(causative)/’The door opened’(ergative).

3.2 Cheng and Huang on RVCs

Cheng and Huang’s (1994) article focuses on Resultative Verb Compounds (RVCs), complex phrasal predicates comprised of two compounded predicates, with the second expressing a result state. They can belong to four predicate classes: unergative, transitive, ergative, and causative.

- (16) a. Zhangsan chang-le hen jiu (unergative)
 Zhangsan sing-PVC very long
 Zhangsan sang for a very long time.

Characteristics: Intransitive; Activity-denoting; No internal argument; Agentive subject

- b. Zhangsan chang-le san-shou ge (accusative)
 Zhangsan sing-PFV three-cl song
 Zhangsan sang three songs

Characteristics: Transitive; Activity-denoting; Internal argument; Agentive subject

- c. Zhangsan xia-le yi tiao (ergative)
 Zhangsan shock-PFV one jump
 Zhangsan was taken by surprise

Characteristics: Intransitive; Change-of-state; No external argument;
 Subject receives causee/experiencer/patient role

- d. Lisi xia-le Zhangsan yi tiao (causative)
 Lisi shock-PFV Zhangsan one jump
 Lisi surprised Zhangsan

Characteristics: Transitive; Change-of-state; External argument assigned causer role

Sentences (a-d) (from Cheng and Huang 1994:188) demonstrate the basic predicate classification system that I will adopt for my analysis of the Chinese middle. Bare verbs are used in the above examples for simplicity, but RVCs are the central focus of their study as well as mine.

Cheng and Huang argue that the argument structure and thematic properties of RVCs is determined by the event structures of the component parts together. Based on their analysis of RVCs, the authors propose that Chinese has a middle construction which is derived from the ergative, based on Keyser and Roeper's (1984) account of the middle in English. Like Keyser and Roeper, Cheng and Huang conclude that the binary transitive/intransitive classification of argument structure cannot sufficiently account for ergatives and middles. RVCs and the middle will be considered in more detail in section 5.0 .

3.3 Ting and presyntatic derivation

Ting follows Cheng and Huang in classifying certain unaccusative constructions as middles but probes more deeply into the derivation of middles in Chinese and posits a presyntactic approach to formation contrary to the syntactic (NP-movement) approach applied by Cheng and Huang (1994) based on English formation. Demonstrating the subjecthood of the initial NP and disproving the topicalization account of notional passives proposed by Li and Thompson (1981), Ting argues that this patient NP is a base-generated external argument of the middle verb, with the logical subject suppressed at the presyntatic level. Ting supports this analysis with comparisons of the middle construction to inchoatives and resultative *ba*-constructions: she demonstrates that the middle cannot undergo the same sort of NP movement to A-position, suggesting that the middle is not formed by NP movement.

Although theoretical accounts of the middle construction in Chinese have been proposed in Cheng and Huang (1994) and Ting (2006), neither have sufficiently demonstrated the boundary lines of the construction. In particular, I feel that the question of the middle/notional passive division has been insufficiently explored: most grammars describe all patient-promoted intransitive sentences as notional passives, which Cheng and Huang (1994) and Ting (2006) reject based on evidence that some sentences of that form cannot be topic-comment, the structure assumed to underlie notional passives (Li and Thompson 1981, Po-Ching and Rimmington 2004). Although Cheng and Huang (1994) develop a four-way verb classification for the purpose of examining RVCs, their account neglects other verb forms, like inchoatives and unaccusatives, which have proven cross-linguistically to be relevant in analyzing middles. Since Ting (2006) adopts Cheng and Huang's classification for her own work, she leaves the same theoretical questions unanswered.

3.4 Is the notional passive a middle construction?

Cheng and Huang (1994) and Ting (2006) adopt Chao's ergative ('middle voice') verb as a distinct syntactic verb category, not purely transitive or intransitive. They argue that the Chinese middle construction is the 'notional passive'³ demonstrated in sentences (1-3), which mimic the form and interpretation of the ergative but with an accusative verb.

In this section I will present the traditional category of notional passives and evidence that these are in fact a kind of middle construction. This depends on demonstrating the inadequacy of the topic-comment account proposed by Li and Thompson (1981) and other grammarians.

Sentences (1-3) are repeated here from Part 1.0.

³ Cheng and Huang (1994) and other authors call these 'pseudo-passive,' while Lin (2004) calls such constructions with an RVC 'reduced RVCs.'

- (1) nei ben shu chuban le
 that CL book publish PFV
 That book, (someone) has published it.
- (2) yifu tang-wan le
 cloth iron finish PFV
 That clothing, (someone) has ironed it.
- (3) fan zhu-jiao le yidian
 rice cook burnt PFV a bit
 The rice, (we) burnt it a little. (Li and Thompson, 1981: 88-89)

Just on an intuitive level, there are immediate reasons to consider these sentences as possible middles: they are not morphologically marked as passive (because they do not appear in a *bei* construction or alternative passive formation) yet they display a patient argument in sentence-initial (subject) position, two crucial characteristics of middle constructions cross-linguistically as we saw in Part 2.0. However, unlike Indo-European languages, Chinese is typologically a topic-prominent language, in which fronted topic NPs are common if not prevalent.⁴

Li and Thompson, however, introduce these sentences as examples of topic/comment constructions lacking an overt subject. The interpretations of (1-3) provided by Li and Thompson emphasize this analysis by using the form ‘The rice, (0) burnt it a little,’ characteristic of a topic/comment construction in its implication of a dropped anaphor indicating an agent. However, the verbs in (1-3) may also receive a different interpretative in which no syntactically present agent

⁴ Though Chinese also has the grammatical relations of subject and direct object, topic-comment constructions play a much more prominent role than in other languages. A topic is distinct from a subject in that it does not require a direct semantic relationship with the verb, but rather is linked to the rest of the sentence loosely through a general constraint of “aboutness.” The topic is interpreted as being what the sentence is about, it is the theme about which the rest of the sentence comments. (Li and Thomson 1981) An English sentence like “That man, I saw him here yesterday” demonstrates topicalization, but the construction is not prominent and appears only conversationally.

is implied.⁵ Sentences (17-19) and their English interpretations were provided by native speakers I interviewed:

(17) Gong ke xie de cha bu duo le
homework finished DE difference not a lot PFV
'The homework was almost finished.'

(18) zhao pian xi-chu lai le
pictures wash out come PFV
'The pictures have already been developed.'

(19) wan pan xi-wan le
bowls plates wash finished PFV
'The bowls and plates have been cleaned.'

Now the question is whether sentences like (17-19) are topic-comment constructions with a Pro subject, or whether the sentence-initial NP is occupying subject position. A middle formation account of sentences (1-3) depends crucially on demonstrating the subjecthood of the sentence-initial NP. Li and Thompson (1981) subscribe to the former account, a topic-comment approach, but don't provide any argumentation. Under the topic/comment analysis, sentences (1-3) and (17-19) consist of a topicalized object and Pro subject.

3.5 Against the Topic-comment account of notional passives

Syntactically, the topic position exists outside of the IP while the subject position is within the IP, as

⁵ I asked native speakers to give their own interpretations of the sentences, without being shown Li and Thompson's translations. All of the speakers I questioned translated sentences (1-3) as simple completive passives, i.e.

(1a) That book has been/was published.

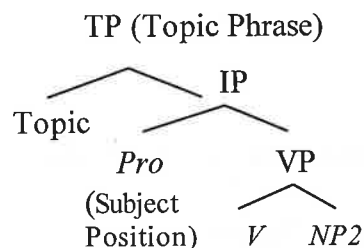
(2a) That clothing has been/was ironed.

(3a) That rice has been/was burnt.

Speakers acknowledged that Li and Thompson's translations are legitimate as well, but said that the topic/comment syntax and the indefinite agent are not as strongly implied as Li and Thompson's interpretations would suggest and that a simply passive translation might be more accurate. Although interpretation and paraphrasing across languages is not a solid source of data, the fact that a non-agentive reading is possible and more immediate suggests that there is at the very least an ambiguity between topic and non-topic readings. Therefore, for this study I will opt to use the simple passive interpretations (1a-3a) from my language sources rather than Li and Thompson's topic-comment paraphrases.

demonstrated in the following tree diagram:

(20) Topic-comment structure:



(2b) [TopicP yifu [IP Pro [VP tang-wan le]]]
 cloth iron finish PFV
 That clothing, (someone) has ironed.

In order to study sentences like those in (1-3) and (17-19) as possible middles, we must demonstrate that

they are not topic/comment constructions as Li and Thompson assume. I will summarize the evidence

indicating the subjecthood of the initial NP based on evidence from Cheng and Huang (1994) and Ting

(2006).

3.5.1 Aspectual constraints

Cheng and Huang (1994) point out that under the topicalization account, a sentence like (21) should be permitted.

(21) *Zhangsan hen xihuan
 Zhangsan very like
 'Zhangsan, [someone] likes him very much.'
 (Based on sentence (45) in Cheng and Huang, 1994: 209)

The grammatical sentences (1-3) and (17-19) have eventive predicates, but *xihuan* is a stative predicate. A well-documented feature of the middle cross-linguistically is that its formation is lexically restricted by aspect. Middle formation only occurs with telic (non-stative) predicates

which involve an affected theme or change-of-state. (See part 5.0 for a detailed discussion of aspectual features and middle formation.)

3.5.2 Anaphor binding

Ziji, ‘self,’ can function as a reflexive pronoun in Chinese. In reflexive constructions, it “signals that its referent is coreferential with that of the subject of the same clause.” (Li and Thompson, 1981: 137) The reflexive construction in Chinese requires an antecedent NP in subject position. If Li and Thompson’s account of sentences (1-3) as topic-comment constructions with a *Pro* subject is correct, a construction similar to (1-3) with a reflexive should be ungrammatical. Even if the subject position is merely phonetically null but semantically and syntactically present and coreferential with the topic, it still could not bind the reflexive because *ziji* requires an overt antecedent. (Ting 2006) If the interpretation is grammatical, we can deduce that the initial NP indeed occupies subject position. The following sentences are from Ting (2006: 92):

- (22) a. *Lisi_i xiafang – dao le ziji_i de lao jia*
 Lisi demote-arrive PFV RFL DE old home
 ‘*Lisi_i has been demoted to his_i own hometown.*’
- b. *Lisi_i bei lingdao xiafang – dao le ziji*_{i/j} de lao jia_j*
 Lisi BEI leader demote-arrive PFV RFL DE old home
 ‘*Lisi_i has been demoted to his*_{i/j} own hometown by the leader_j.*’
- c. *Lisi_i lingdao_j xiafang – dao le ziji*_{i/j} de lao jia*
 Lisi leader demote-arrive PFV RFL DE old home
 ‘*Lisi_i, the leader_j has demoted to his*_{i/j} own hometown.*’

The initial NP in (22a) binds the reflexive, just like the patient NP subject of the *bei* sentence in (22b). In the topic-comment construction (22c), however, we see that the topic is unable to similarly

bind a reflexive. This suggests that middle sentences, like *bei* passives, have a preverbal patient NP in subject position.

Ting also notes that, in addition to taking a c-commanding NP in subject position as its antecedent, *ziji* is able to take a 'subcommanding' NP located inside the subject NP as its antecedent. (Tang 1989, cited in Ting 2006)

- (23) Zhangsan de cuowu jiaoyu le ziji
 Zhangsan DE mistake taught lesson PFV RFL
 'Zhangsan's mistake taught him a lesson.'
- (24) Zhangsan de cuxin hai-le ziji
 Zhangsan DE carelessness hurt PFV RFL
 'Zhangsan's carelessness hurt him.'
- (25) Zhangsan de xingmei hai le ziji
 Zhangsan DE action hurt PFV RFL
 'Zhangsan's actions harmed him.'

Sentences (23-25) are based on (6) from (Ting 2006: 92). Five native speakers were asked to interpret the derived sentences (23-25) and assess their grammaticality, which was unanimously declared fine. In (23-25) the reflexive *ziji* takes the subcommanding possessor *Zhangsan* as its antecedent, which is not supported in a topic-comment construction.

3.5.3 Missing Pro

One final example of the subjecthood of the initial NP is provided by Lin (2004):

- (26) Zhangsan qi lei le (Ambiguous)
 Horse ride tired PFV
 'Zhangsan rode the horse (and)...'
 i. 'The horse got tired from someone riding it.'
 ii. 'Zhangsan got tired from riding the horse.'
- (27) Ma qi lei le (Unambiguous)
 Horse ride tired PFV
 i. 'The horse got tired from someone riding it.'
 ii. ??'Someone got tired from riding the horse.'

In (26), the result state V2 could predicate on either subject or object, leading to an ambiguous reading. A topic-comment account of a notional passive form like (27) would predict the same ambiguity even without the presence of an overt agent, because a Pro subject should be able to control V2. The fact that this agentive reading is unavailable suggests that *ma* is in subject position, not Pro.

4.0 Passives and Middle in Chinese

In this section I will compare marked passive constructions in Mandarin with the unmarked ‘notional passive.’ As we have seen, the sentences in (1-3) receive passive interpretation but appear in a construction that resembles a typical active intransitive sentence. Although Chinese does not have a rich morphological marking system for verbs, the passive in Chinese is normally marked using one of three distinctive constructions, each involving auxiliary co-verbs.

4.1 The *Bei* passive

According to Li and Thompson (1981), the *Bei* construction is regarded as the canonical passive form in

Mandarin. The structure of a *Bei* sentence is summarized in the following pattern:

- Patient NP
- Passive coverb *bei*
- Optional “*Bei* noun phrase,” introducing agent of the action
- Sentence-final matrix verb

The *Bei* noun phrase can optionally be left out, yielding a passive construction without an overt agent.

This is known as the “short *Bei* passive,” while its agentive counterpart is the “long *Bei* passive.”

The long *Bei* passive: *bei NP-VP*

The short *Bei* passive: *bei VP*

- (28) Zhangsan bei Lisi da le
 Zhangsan BEI Lisi hit PFV
 ‘Zhangsan was hit by Lisi.’

- (29) Zhangsan bei da le
 Zhangsan BEI hit PFV
 'Zhangsan was hit.'

Because of the similarities between the middle and the passive (*Bei*) construction in Chinese, it might be useful to engage in a closer investigation of the passive, to compare and contrast it with the middle. Two important features of *bei* sentences that should be considered are *adversity* and *disposal*, which govern the use of passives in a number of Asian languages.

4.1.1 Adversity and disposal constraints

As the name would suggest, adversity refers to a constraint on passives in Chinese that limits their use to expressions of an adverse situation in which something negative or unfortunate has taken place, with an adverse effect for the affected argument (the sentence-initial Patient NP). The GET-passive in English is interpreted very similarly to short *bei*-passives and, considerably more than canonical English BE-passives, receives an adversative reading. (Bakker 1994: 20)

Some examples of common GET-expressions demonstrates their adversative implication:

- (30) Got lost
 Got killed
 Got fucked up
 Got drunk
 Got caught up
 ...etc.

Givon and Yang (1994: 119) explain that, "In the BE-passive, the demoted agent retains control, while in the GET-passive the promoted patient remains in control." In other words, in the GET-passive the subject is in some way responsible for what happens to him (usually something

unfortunate). The subject NP of a GET-passive receives a more agentive role than the subject the BE-passive, which may be a Patient or Theme but not an Agent.

- (31) a. Mary was shot on purpose, the bastards!
 b. *Mary got shot on purpose, the bastards! (Givon and Yang, 1994:119)

Another feature of the *Bei* passive, which it shares with the *Ba* construction, is that it requires verbs which express *disposal*: As described by Li and Thompson, this notion of disposal involves “an event in which an entity or person is dealt with, handled, or manipulated in some way. That is why[...] *bei* is not found with verbs that do not signal disposal, even if they have adverse meaning.” (Li and Thompson 1981: 501) Consider the difference between sentences (32) and (33).

- | | |
|--|--|
| <p>(32) Wo ba cha-bei nong-po le. ‘I BA tea-cup make-broken asp’ “I broke the teacup.”</p> | <p>(33) *Ta ba xiao mao ai. ‘3Sg BA small cat love.’ (“S/he loves the kitten). (Li and Thompson, 1981: pp)</p> |
|--|--|

The disposal constraint in Chinese sounds equivalent to the affectedness constraint which plays a role in the formation of passive, middle, reflexive, and related forms in English and other Indo-European languages. In short, the affectedness constraint requires that the verb undergoing passivization or middle formation have an affected argument; that is, an argument which undergoes some change, alteration, or manipulation because of the action described by the predicate (Ting, 2006).

Another property of disposal is that it does not imply purposeful action in the subject. According to Li and Thompson (1981:473), in a disposal sentence “the subject...may be an inanimate entity or some unspecified force or situation,...or it may carry out an action accidentally.”

In terms of Aspect and passive formation, it would seem intuitive that most change-of-state (Achievement) verbs are eligible for passive formation, since they by definition describe a transformation of their internal argument from one state to another—a disposal phenomenon. But it should be noted that we cannot classify all Achievement verbs as disposal-entailing, as in some cases an Achievement verb's patient argument appears not to be directly 'affected' in the way described above.

- (34) a. John recognizes the sculpture.
 b. The sculpture is recognized by John.
 c. *Sculptures recognize easily.

Under Dowty's (1979) classification system both verbs like *recognize* and verbs like *break* are Achievements. However, a further categorical division may be made, and an important one for us. Only the Achievement verbs which describe a change of state may undergo middle formation in English. Non-change-of-state Achievement verbs—those that describe an instantaneous event but one that does not affect the object, like *cough* or *recognize*, are often called Semelfactive (Smith 1997). The distinction can most readily be observed through the inchoative: change-of-state verbs are those which can appear in the inchoative:

- (35) a. The glass broke
 b. *The sculpture recognized.

At this point an important question arises: what is the difference between *bei* passive and middles? The middle construction seems to receive a passive interpretation so, besides the absence of *bei*, what differentiates middles from passive *bei* constructions? If *bei* requires that adversity be expressed, does converting middle sentences like (1-6) into *bei* sentences cause them to take on a negative connotation? Let's consider sentences (1b-3b):

- (1b)?nei ben shu bei chuban le
 that CL book BEI publish PFV
 ‘That book was published (by someone).’
- (2b)?yifu bei tang wan le
 cloth BEI iron finish PFV
 ‘That clothing was ironed (by someone).’
- (3b)?fan bei zhu jiao le yidian
 rice BEI cook burnt PFV a bit
 ‘The rice was burnt (by someone).’

Native speakers observed that (1a-3a), while not impossible, would probably never be uttered in conversation, except in extraordinary circumstances and with a good deal of contextual interpretation on the part of the listener. Speakers intuited that the reason for the oddness was that the *bei* construction strongly prefers an overt agent. As we saw in sentence (29) above, it is possible for a *bei* sentence to lack the “*bei* NP”—i.e. the NP following *bei*, but the adversity and disposal readings which characterize *bei* are best captured when there is an overt agent. (Huang 1999) The *bei* construction with an overt agent in the “*bei* NP” position is perfectly grammatical and natural, as demonstrated in (1c):

- (1c)?nei ben shu *bei* Zhangsan chuban LE
 that CL book BEI Zhangsan publish PVR/CRS
 That book was published by Zhangsan

Because the middle does not have a syntactically active agent, it takes the focus away from the agent subject of a sentence. And although short *bei*-passives can similarly appear without an overt agent NP, *bei* passives always carry the implication of adversity. Since such an implication is not always appropriate, the middle construction could be used to express short sentences which receive passive interpretation but without any adverse connotations.

4.2 Passive readings in *Shi...de* and modal constructions

Although *bei* is the canonical passive construction in Chinese, there are at least “three ways to get passive” in Chinese, according to C.-T. James Huang and others (Huang 1999).

A passive reading can be derived from the *shi...de* construction, commonly called the ‘focus’ construction because it puts focus on a certain element in the sentence, usually time, place, agent, or patient. The patient-focused *shi...de* receives passive interpretation, but is semantically distinct from *bei* in that the *shi...de* construction describes a situation or state (Li and Thompson 1981, Po-Ching and Rimmington 2004), not an action or an event. This stative quality is illustrated by Li and Thompson (1981), who explain that a question such as ‘Why couldn’t she speak English?’ demands explanation of a situation and thus *shi...de* is the only passive construction appropriate for response.

(36) Q: ‘Why couldn’t she speak English?’

A: yinwei ta (shi) zuotain lai de
Because 3sg be yesterday come NOM
‘Because the situation is that s/he came yesterday.’

A question such as ‘Has s/he arrived yet?’ demands information about an event and is not appropriately

answered by a *shi...de* construction but requires a regular active sentence instead.

(37) Q: ‘Has s/he arrived yet?’

A: ta zuotain lai le
3sg yesterday come ASP
‘S/he came yesterday.’

The third common kind of passive is a topic-comment construction with a modal verb, e.g. ‘This dish

should cook quickly.’ The patient NP of a corresponding transitive sentence (e.g. ‘this dish’ from ‘Zhangsan cooks this dish’) is topicalized.

Characteristics:

- Always begins with definite NP
- Requires adjectival modification
- Topic-comment construction

4.3 Agentivity in middles and *Bei* passives

We have seen that interpretive distinctions among passives, topic-comment, and middles constructions are largely based on the role and degree that an agent plays in a sentence. The question now is whether the middle construction has an implied agent. Detecting the presence or absence of a covert agent could help us to better understand the derivation of the middle, whether from a transitive sentence in the D-structure via NP-movement, or lexically like the ergative. We can easily test the agentive status of the middle, along with the passive for the sake of comparison, by testing the grammaticality of middle form sentences (1-3) and *bei* sentences (1a-3a) with the addition of the agent-oriented adverb *guyi*, ‘deliberately.’ Distinct from the reflexive *ziji* discussed above, which requires an antecedent to be the subject or within the subject NP, the agent-oriented adverb requires an antecedent NP with agent or experiencer theta-role (Huang, 1999).

- (38) a. *Zhangsan guyi bei Lisi ti le
 Zhangsan deliberately BEI Lisi kick PFV
 b. Zhangsan bei Lisi guyi ti le
 Zhangsan BEI Lisi deliberately kick PFV
 ‘Zhangsan was deliberately kicked by Lisi.’

Sentence (a) is unacceptable because the agent-oriented adverb follows *Zhangsan*, the patient NP, not

the agent NP *Lisi*. Agent-oriented adverbs are permitted even when the agent NP is unexpressed, as we

see in (39):

- (39) Yifu bei guyi si po le (BEI construction)

clothes BEI intentionally tear broken LE
 'The clothes were torn deliberately.'

(1) nei ben shu chuban le
 that CL book publish PVR/CRS
 'That book has been published.'

(1d)*nei ben shu guyi chuban le
 that CL book intentionally publish PVR/CRS
 'That book was published intentionally.'

(2d)*yifu guyi tang wan le
 clothes intentionally iron finish LE
 'The clothes were ironed intentionally.'

(3d)*fan guyi zhu jiao le yidian
 rice intentionally cook burnt LE a little

Native speakers stated that sentences (1d-3d) would never be uttered in conversation, but that (20) is

okay because it is a *Bei* sentence. Based on the sentences we have seen, we can conclude that middles

are ungrammatical with agent-oriented adverbs, suggesting that middles truly lack agents whereas passive

bei sentences always have agents, even if they are covert.

4.4 Summary of passives and middle

Summary of the three types of passive:

1. Is it a passive without the agent? (Notional passive/middle)
2. Does it describe a stative situation? (*shi...de*)
3. Does it tell you the degree of the action and the agent? (*bei*)

Bei strongly prefers an agent and in the absence of an overt agent the construction still strongly implicates the role of agent. The *shi...de* construction always requires an agent; it emphasizes the actor performing the event, but does not suggest the disposal or adversity readings of the *bei*

construction. The notional passive, then, is the only passive form in which one can express the event with the emphasis on the patient, not the actor or agent, and without implications of adversity.

The notional passive/middle conveys passive readings that are impossible to express in the *bei*, *shi...de*, and Modal passives; namely, stative and eventive passive interpretations which do not carry adversity/disposal implications (like the *bei*-construction) and are not limited to describing situations or constrained by a modal auxiliary. The semantic constraints posed by *bei* and *shi...de* passive constructions limit their applicability.

In their Chinese reference grammar, Li and Thompson (1981) consider the uncommonly infrequent use of the passive in Chinese, probably due to the constraints on *bei* and the option of using topic-comment constructions when a direct object is the focus of the sentence. “The topic prominence of Mandarin together with restriction of the *bei* construction to adverse messages combine to reduce the usage of passive in the language...The passive construction is much more rare in Mandarin speech and writing than in the speech and writing of Indo-European languages.” (Li and Thompson 1981:499) The claim that topic-comment constructions are often used instead of the passive to discuss a direct object is very reasonable; however, it does not consider the interesting differences in interpretation that occur in sentences with fronted patient NPs, nor does it take into account the evidence against a topic-comment account of notional passives. The semantic variations among passives, topic-comment, and middle sentences should be considered in further research.

5.0 The argument structure of Chinese middles

In this section I will focus on categorizing Chinese predicates at the level of argument structure, considering a predicate's inner composition based on the interplay of transitivity and aspect. This

particular definition of argument structure is adopted from Cheng and Huang:

"The argument structure of a compound is essentially a composition of the event structure...of its component parts...[argument structure] may be characterized in terms of two dimensions, aspectuality and transitivity, the latter referring to the number of arguments occurring with a given predicate, and the former to the event-types that a given predicate denotes." (Cheng and Huang 1994:187-188)

Theories of event classification are well-established cross-linguistically. I will be using Dowty's (1979) classification system, in which events are divided into four types: states, activities, accomplishments and achievements. In this section I will consider these two dimensions of argument structure and their relation to the formation of the middle construction.

I will present evidence demonstrating that the middle must be a resultative construction with an RVC. I have adopted Cheng and Huang's four-way classification of RVCs as transitive, unergative, ergative, and causative. In this section I will look more closely at properties of non-RVC predicates that may inform which type of RVC they may appear in. This could tell us more about the composition of the middle RVC and the middle/ergative distinction, a slippery definition in many languages (Keyser and Roeper 1984). This will result an analysis of subcategories of non-compound verbs which form RVCs and an argument for ergative and unaccusative subclasses.

5.1 Defining event types

State verbs differ from the other aspectual classes in their description of non-dynamic eventualities, eventualities without any built-in temporal structure (i.e. eventualities which are not processes involving change). Activities, accomplishments and achievements, on the other hand, describe "dynamic" processes or events that can be organized along a time scale. State verbs and activity verbs are similar in that they describe atelic eventualities, continuous in time with no clear beginning or end point. Accomplishment and achievement verbs, on the other hand, describe

eventualities which progress towards a particular end state or result and have affected objects which undergo a change-of-state.

The defining characteristics of each class are summarized below, along with two example sentences in the English middle construction:

A. Stative characteristics:

- Atelic
- Non-durative
- Non-dynamic
 - a. *That child loves easily.
 - b. *The answer knows easily.

B. Activity characteristics:

- Atelic
- Durative
- Dynamic
 - a. This car drives easily.
 - b. ?This path walks quickly.

C. Accomplishment
Characteristics:

- Telic
- Durative
- Dynamic
 - a. Chocolate melts easily.
 - b. Linoleum floors wipe clean easily.

E. Achievement/Change-of-State characteristics:

- Telic
- Non durative—describes a momentary change of state event
- Dynamic
 - a. *This flower notices easily.
 - b. *Everest's summit reaches easily.

As has been observed that Chinese monomorphemic predicates are, with very few exceptions, atelic—events with successive stages and no natural endpoint, i.e. activities and states.

By adding the element of an endpoint, a predicate becomes telic. Such telic predicates are commonly

formed with the addition of a Resultative Verb Complement denoting such a result state.

5.2 The middle as a resultative construction

As seen in the last section, the so-called notional passive is at best a loosely defined phenomena, treated in a mere two pages in Li and Thompson's Mandarin reference grammar (1981: 88-89). The term notional passive is typically used to refer to any unmarked intransitive construction in which the patient/theme/experiencer argument appears in sentence-initial (subject or topic) position.

But some grammars argue that the notional passive functions as resultative construction that requires a Resultative Verb Compound (RVC). RVCs are comprised two predicates, the second always denoting a resulting state or effect of the action of the first verb.

Oxford's Centre for Teaching Chinese as a Foreign Language offers a thorough guide to the use of the notional passive in an online tutorial⁶, which lists the following verbal elements as necessary for formation of the notional passive construction:

1. *Resultative complements*

shu xi wán le
book write finish LE

2. *Directional complements*

zhuozi ban jìn qù le
table move in (away) LE
'The table has been moved in.'

3. *Potential complements*

kuzi zhao bu dào le
trousers find not attain LE
'The trousers cannot be found.'

⁶ The tutorial can be found at the following link: <http://www.ctcfl.ox.ac.uk/Grammar%20exercises/Bei2.htm>

4. *Complement of degree (the 得[de]⁷ construction)*

zi xi de zhen piàoliang
 Character write DE really beautiful
 'The character has been beautifully written.'

5. *Time measures and action measures*

Time measure:

Ke shàng le yí ge xiǎoshí
 Lesson last LE one GE hour
 'The lesson lasted for one hour.'

Action measure:

Kewen niàn le yí biàn
 Text read LE one time
 'The text was read through one time.'

According to the Oxford guide, all of the above sentences are classified as notional passives.

In this thesis, I will focus only on those constructions of the first two types, Resultative and Directional, as the most prototypical in form; however, I think that it is reasonable to assume that all five variants above indeed fall under our term 'middle.'

The sentences we have considered in this paper largely uphold the RVC account of middles: we have seen that achievements (sentence 3) and accomplishments (sentences 1 and 2) can appear in the middle construction but that, like English, German and many other languages, statives are not permitted:

(40) *zhei ge tímu hěn xǐhuan
 that CL topic very like
 'That topic is liked.'

- a. English: *This topic likes easily.
- b. German: *Die Antwort weiß sich leicht.
 'The answer knows easily.' (Fagan, 1992: 82)
- c. German: *Er ist dabei, einen BMW zu besitzen.
 'He's in the process of owning a BMW.' (Boschetti, 1986: 155, cited in Fagan, 1992: 82)

Of the native speakers of Mandarin I interviewed, none seemed to be able to construct any grammatical middles using a transitive stative. Adjectival/property-denoting intransitive statives are a little different, and will be discussed in a moment. I would now like to consider whether activities can appear in the middle.

- (41) *Wan pan xi le
bowls plates wash PFV/CRS
'The bowls and plates have been cleaned.'

- (42) Wan pan xi **wan** le
bowls plates wash **finished** PFV/CRS
'The bowls and plates have been cleaned.'

The addition of an RV complement corrects the ungrammaticality of (42). We can now conclude that the middle requires telic verbs. I argue that it is this property of the Chinese middle that makes it a resultative compound construction. If, as Lin (2004) and Smith (1990) assert, Chinese predicates in bare form are always atelic, telicity depends on some sort of compounding which is why the middle almost always occurs with RVCs. But the Oxford account fails to address sentences in which seemingly bare verbs appear in the same construction:

- (3) nei ben shu chuban le
that CL book publish PFV
'That book, (someone) has published it.'

If the middle/notional passive is fundamentally a resultative construction, only possibly via a compound with result state, how is a seemingly bare verb like *chuban* permitted? In fact, *chuban* appears to be a lexicalized RVC, consisting of V1 *chu* meaning 'to produce' and V2 *ban* meaning a book or bound set of pages. Many common RVCs may undergo such lexicalization. In the course of researching this thesis, I commonly encountered the construction *po-li*, 'hit-break.' About half the

time the Pinyin representation would be an RVC, and half the time *poli* was represented as a single word.

5.3 Atelic primitive predicates

It is a well-known property of Chinese that monosyllabic elements play a dominant role in the language, but that a good deal of combination, compounding, and gradual polysyllabic lexicalization occurs. Lin (2004) proposes that complex predicates encoding telicity are compositionally constructed from more basic predicates encoding states and activities. Smith (1990) had demonstrated a similar point in a piece on RVCs, which showed that for a predicate to receive a completed accomplishment reading two elements must be present: a complement denoting result state and the aspect marker *le*, implying the perfective viewpoint.⁸ It is important to note that in Chinese the notion of a telic event is independent of the perfective viewpoint, usually marked with *le*. That is, an event can be telic in compositional nature, but if it is not marked perfectly there is no implication that the action of the event has indeed been completed (Smith 1990).

In (43) (from Smith 1990) we can see the atelic nature of the first predicate, even though marked with the perfective viewpoint. Although in English, the negation in the second part of the sentence would give a contradictory reading, but in Chinese this is fine because no result state (*wan*) was explicitly stated in the predicate. The atelic activity of letter-writing is said to have taken place, but this does not entail any final outcome.

⁸ There has been much debate as to how precisely to characterize the aspectual marker *le*; according to both Li and Thompson (1981) and Smith (1991), *le* indicates that the event described by the verb is being viewed as a single whole, with both initial and final boundaries. Klein et al. (1997) explain the function of *le* in terms of assertion: “The use of *le* marks an assertion for (a) the completion of the event (e.g. *wan* ‘finish’), (b) the qualitative characterisation of the target phase (e.g. *si* ‘die’, *po* ‘broken’), or (c) the locative specification, the target place (e.g., *shang* ‘up’, *xia* ‘down.’) Without *le*, it is not asserted that any of the target phases is actually realized.” (Klein et al, 1997:758)

- (43) Wo zoutian xie le yi feng xin keshi mei xie wan.
 I yesterday write PFV one CL letter but not-have write finish
 'I wrote/was writing a letter yesterday but didn't finish it.'
 (atelic) (RVC-telic)

- (44) Zhangsan zhao le ta-de shoubiao, keshi mei zhao - dao
 (Achievement)
 Zhangsan look-for-PFV he DE watch, but not [RVC look-for arrive]
 'Zhangsan looked for his watch, but he didn't find it.'
 (atelic) (RVC-telic)

Po-Ching and Rimmington also emphasize the resultative nature of the notional passive, stating that "the verb, particularly if it is monosyllabic, generally has to incorporate a complement of some kind, which indicates the relevant consequence of the action of the features attributable to the situation under discussion." (Po-Ching and Rimmington 2004:211)

But it isn't true that all Chinese unaccusatives involve RVCs:

- (45) a. Pingzi po le
 Bottle break PFV
 'The bottle broke.'
- b. Qiaokeli hua le
 chocolate melt PFV
 'The chocolate melted.'
- c. Chuangzi kai le
 window open PFV
 'The window opened.'

These verbs are monosyllabic, and so cannot be explained as lexicalized compounds like *chuban*. Is this construction a notional passive or something more like an English inchoative, as suggested by the English translations of (45a-c)?

Stative predicates in Chinese can be divided into two classes: transitive (e.g. *xihuan*, 'like') which tend to resemble statives in English, and intransitive. The intransitive statives are essentially

adjectives, and can function as such in an NP, but also function as stative predicates.

- (46) a. Ta pang yidian.
3sg fat a little
'S/he's a little fat.'

- (47) a. Po pingzi.
Bottle break
'Broken bottle'⁹

When coupled with the aspectual marker *le*, property-denoting stative predicates with one argument have an inchoative reading.

- (46) b. Ta pang le yidian.
3sg fat PFV a little
'S/he's gotten a little fat.'

- (47) b. Pingzi po le
Bottle break PFV
'The bottle broke.'

Although bare adjectives in English cannot be predicates (*'Her cheek red'—must have 'is'), a similar process of inchoativization transforms adjectives into change-of-state verbs ('Her cheek reddened) with the addition of the inchoative-denoting morpheme *-en* and perfective viewpoint.

So, in bare form property-denoting statives are intransitive and when marked with *le* are inchoatives. But these predicates can also appear in RVCs which make them transitive. In an RVC, these intransitive statives can appear in our notional passive construction.

- (48) a. *Zhangsan po le pingzi. (*Bare transitive)
Zhangsan break PFV bottle
- b. Zhangsan da po le pingzi. (RVC transitive)

⁹ Bare adjectives need a modifier like *hen* or *yidian* to act as a predicate, but not to be an NP. So, *pingzi po* would be ungrammatical here as a predicate but the bare form [po pingzi] could be an NP.

Zhangsan hit break PFV bottle
 'Zhangsan hit the bottle and as a result the bottle was broken.'

c. Pingzi da po le. (RVC middle)
 Bottle hit break PFV
 'The bottle was hit and as a result the glass was broken.'

The addition of an activity verb as the V1 of an RVC adds a process element to the change-of-state described by the inchoative stative+le form. This new process + achievement predicate corresponds to Dowty's accomplishment class, a change-of-state event that is durative rather than punctual (achievement). The derived inchoatives like (48c), then, appear to be achievements, since they are interpreted as instantaneously occurring events.

It is well-known that the V2 of an RVC must be a stative predicate. The V1 can be one of two things: most commonly, it is an activity-denoting predicate which contributes a process reading to the compound, but the V1 may also be another stative predicate. In the latter case, the interpretation is that of a punctual change of state, with a property of the first state somehow promoting the occurrence of the second state as a subevent (Lin 2004). Cheng and Huang (1994) point out that RVCs of the activity-state type undergo transitive/unergative alternation and those of the state-state type undergo causative/ergative alternation. Only activity-state RVCs occur with the middle construction, which upholds the cross-linguistic observation that middles are typically formed with transitive verbs and encode a semantically present (but syntactically absent) agent which ergative forms lack (Keyser and Roeper 1984, Fagan 1992, Cheng and Huang 1994, Ackema and Schoorlemmer 1994/1995, Ting 2006).

5.4 Agentivity and Semantic roles

If middles are indeed underlyingly transitive, like passives, they should have an implicit subject/agent, as demonstrated by the following sentences:

- (49) a. The car was sold. (Passive) Implied agent.
 b. Foreign cars sell easily. (Middle) Implied agent.
 c. The milk was spilled. (Passive) Implied agent.
 d. The milk spilled. (Ergative) No implied agent.
 e. The tomato was ripened. (Passive) Implied agent.
 f. The tomato ripened. (Ergative) No implied agent.

(From Fiengo (1980), cited in Keyser and Roeper (1984)).

According to Keyser and Roeper (1984), the ergative can appear with the phrase “all by itself” but the

middles cannot, demonstrating that the middle has an implicit agent but the ergative does not.

- (50) a. The boat sank all by itself.
 b. *Bureaucrats bribe easily all by themselves. (Keyser and Roeper 1984:405)

The same behavior is observed in middle (unaccusative with an activity-state RVC) and ergative (unaccusative with state-state RVC) constructions in Chinese:

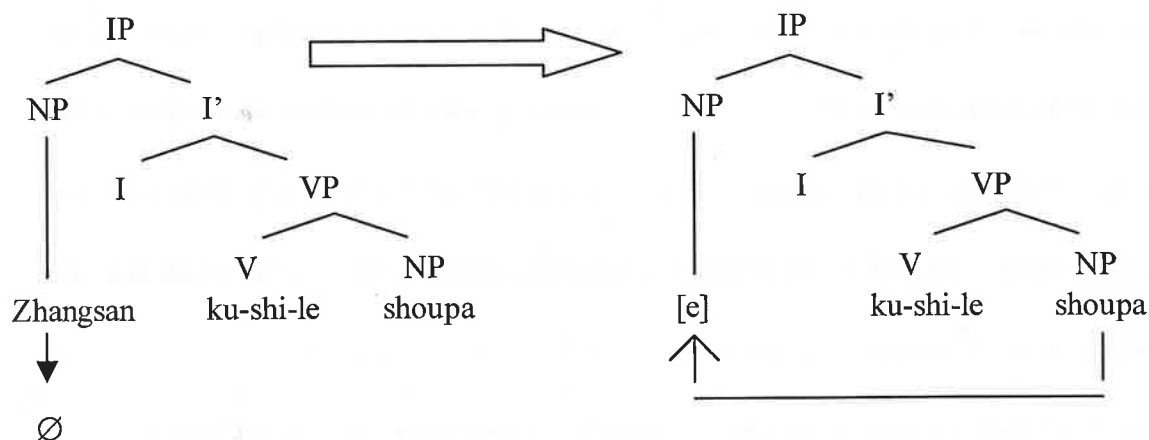
- (51) a. mianbao (*ziji) qie wan le
 bread RFL cut finish PFV
 ‘The bread was cut (*by itself).’
 b. beizi (ziji) da-po le.
 glass RFL hit-broken PFV
 ‘The glass broke (by itself).’

Because (51b) is grammatical with *ziji/zidong*, adverbs which would conflict with an implied agent, (as shown in (51a)) it follows that this is an ergative verb which patterns with causatives like “The baseball broke the glass.” Ergative verbs are defined cross-linguistically as change-of-state-denoting verbs which, when appearing in an intransitive sentence (the inchoative) has no implied external argument. That is, an ergative verb subcategorizes for a direct object but does not assign a subject

theta-role. Audrey Li argues that case theory is also involved here: “Since ergative verbs do not assign a theta-role to their subject and do not assign Case to their object, the object can move to subject position.” (Li 1991:135)

Based on the evidence of an implied agent in the middle, Cheng and Huang (1994) follow Keyser and Roeper (1984) in proposing that the middle is derived from a transitive sentence in the D-structure, with the patient argument moved to subject position via NP-movement.

Diagram 2: Syntactic account (Cheng and Huang, 1994):



- (52) Shoupa ku-shi le.
 Handkerchief cry-wet ASP
 ‘The handkerchief was wet from someone’s crying.’

But the precise nature of the covert agent in the middle is still highly debated. Fagan (1992) and Ting (2006) argue for presyntactic approaches to middle formation in English, German, and French, and Chinese, respectively, rejecting the syntactic movement analysis on the grounds that the middle’s agent is not syntactically active, as would be predicted under a syntactic movement

account. Ting (2006) argues that the Chinese middle cannot license agent-oriented adverbs like *guyi* ‘deliberately,’ despite what the movement account would predict.

- (53) ? mianbao guyi qie wan le
 bread deliberately cut finish PFV
 ‘The bread was cut deliberately.’

Ting’s evidence against the licensing of agent-oriented adverbs involve complex multi-clause constructions and the predicates *hushi* ‘ignore’ and *ti* ‘kick’, which are neither RVCs nor verbs which seem correspond to the activity-state (Accomplishment) event type required by the middle. In the case of the *hushi* sentence, Ting does not even employ the use of an aspectual marker. According to Carlota Smith’s (1991) work on aspect in Chinese, even occurring with the inchoative-marking *le* bare predicates cannot encode telicity (see section 5.3 and sentences (43) and (44) above). If the middle is indeed a telic construction—entailed by its status as a resultative construction—Ting’s data does not involve true middle verbs. Therefore I argue that Ting’s evidence is inconclusive.

Sentence (53) fulfills the criteria for Chinese middles established so far. Five Chinese speakers were polled on its grammaticality: they reported that the sentence was “odd” and deemed the presence of *guyi* “surprising” and “unnatural”, but hesitated to call the sentence outright ungrammatical. Some attributed the oddness to a violation of the typical usage: they noted that the corresponding *Bei* passive would not only be perfectly grammatical but strongly preferred because the construction always entails an agent. The ‘unnatural’ interpretation of (53) is predicted by my account of semantic differences between *Bei* passives and middles/notional passives discussed in section 4.0: the middle construction is distinguished as a passive-like form which does not explicitly imply an agent. Therefore, implicating an agent in (53) with an agent-oriented adverb seems

the first part of her article), or sentences (54a,b) must be acknowledged as problematic for her assertion that middles never demonstrate a syntactically-active agent.

Cheng & Huang (1994) and Ting (2006) similarly distinguish ergatives, middles, and passives in Chinese through different levels of implied agentivity: “Middles have an implicit logical subject only at some presyntactic level while short *bei* passives have a syntactically active logical subject and ergatives do not have an understood subject at any level.” (Ting 2006:20) But the uncertain status of middles’ ability to license agent-oriented adverbs¹⁰ throws Ting’s strong claim into question; therefore I argue that Cheng and Huang’s (1994) syntactic analysis of middle formation is still a potentially viable one.¹¹

5.5 Inherent semantic components and protoagentivity

Although I do not wish to rule out a syntactic account of middle formation, we have seen that the strength of agentivity reading appears to vary in Chinese middles, despite similarity in the composite structure of the middle verb compound (all are strictly activity-state RVCs with accusative counterparts). A syntactic account of middle formation cannot alone account for such variation.

Rapoport (1999) explains similar variation among English middle constructions on the basis of the presence or absence of a semantic component of Instrument/Manner (I/M). Rapoport proposes the presence of I/M in verbs which prohibit non-agentive adverbs like those in (56):

- (55) a. This kind of glass breaks easily (all by itself).

¹⁰ The acceptability of (54a,b) potentially presents a problem for my own account, since I hold that *Bei* passives should be the natural choice for expressing passive events with a strong agent role and predict that middles should therefore sound less natural with agent-oriented adverbs. With more time, I would ask language informants to rate how natural (54a,b) were compared with their *Bei* equivalents, and compared with other middle/*Bei* pairings.

¹¹ Determining whether the middle is syntactically or lexically formed is beyond the scope of this work and warrants further research. The data I have presented herein does not conclusively uphold either approach.

- b. This kind of chocolate melts easily (all by itself).
- c. This kind of window opens easily (all by itself).

- (56) a. This kind of bread cuts easily (*all by itself).
 b. This kind of wood carves easily (*all by itself).
 c. This kind of ice crushes easily (*all by itself).

As discussed above, Keyser and Roeper (1984) and Cheng and Huang (1994) characterize the verbs in (55) as ergatives, which are underlying intransitive, and those in (56) as ‘middle verbs’ which are underlyingly transitive.

- (57) a. The glass broke.
 b. The chocolate melted.
 c. The window opened.

- (58) a. *The bread cut.
 b. *The wood carved.
 c. *The ice crushed.

As we have seen, the pattern of unagentive/agentive verbs in English middles corresponds with Chinese ergative/transitive counterparts:

- (59) a. beizi (ziji) po le.
 glass self break PFV
 ‘The glass broke (by itself).’
 b. qiaokeli (ziji) hua le
 chocolate self melt PFV
 ‘The chocolate melted by itself.’
 c. chuangzi (zidong) kai le
 window automatically open PFV
 ‘The window (automatically) opened.’

- (60) a. mianbao (*ziji) qie le
 bread RFL cut PFV
 ‘The bread was cut (*by itself).’
 b. mutou (*ziji) ke le
 wood RFL carved PFV

‘The wood was carved (*by itself).’

- c. bing (**ziji*)da-sui le
 ice RFL hit-piece PFV
 ‘The ice was crushed (*by itself).

Here the reflexive marker *ziji*, is operating as an adjective meaning ‘all by itself.’ As we have discussed previously, *ziji* must be licensed by an antecedent agent though this agent need not be overt. Rapoport accounts for the agentivity effect of these verbs in English middle construction by positing an ‘Instrument/Manner’ component to these verbs, which necessarily implies a protoagent even without a syntactically active agent. According to Rapoport, proagents are capable of license agent-denoting phrases just independent agents are. Just like their English counterparts, the Chinese verbs for *cut*, *carve*, and *crush* are only allowed in the transitive/middle alternation, and cannot be unergatives, ergatives, or causatives. The implied protoagent also rules out the possibility of a causative interpretation, since the agent role is dominant on the theta-hierarchy, a causative interpretation will not be selected.

Cheng and Huang (1994) acknowledge that two-way division of RVCs into activity-state and state-state types cannot account for a large range of properties, including the transitivity of the compound, whether the object is selected by V1 or semantically unrelated, and whether V2 predicates on the subject or object. Considering semantic components active within predicates may shed light on some of these still-mysterious properties of RVCs, furthering our understanding of the Chinese middle and complex predicates in general.

6.0 Conclusion

The notional passive in Chinese appears to be best classified as an instance of the middle

construction. I have demonstrated that the construction is inherently telic and therefore resultative in Chinese, due to the atelic nature of Chinese monomorphemic predicates. Middle formation may occur with any activity-state resultative compound, categorizing it as an Accomplishment in terms of Vendler's verb classification system. Though the middle is an unaccusative with no overt agent NP, it demonstrates a level of implied agentivity that differentiates it from strictly un-agentive ergatives and strongly agentive *Bei* passive constructions. The characteristics of middles do not conclusively uphold either a syntactic or lexical account of its formation: the enormously complex range of features displayed by RVCs suggest that the interplay of semantic components play a large role in determining the behavior of the compounded predicate. I have therefore considered the possibility that the agentive interpretation of the middle is dependent upon the presence or absence of an Instrument/Manner (I/M) component within the activity-denoting V1.

This sketch of the semantic and syntactic characteristics of the Chinese middle has further demonstrated the construction's consistency cross-linguistically, supporting such an intermediate voice category as a universal feature of language.

Language informants

The following native speakers of Mandarin Chinese assisted me by providing interpretations of sentences and helping me generate sentences for this study:

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