

THE SYNTAX AND SEMANTICS OF CHINESE IMPERSONAL V-*QILAI* CONSTRUCTION*

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ABSTRACT

This paper investigates the Chinese impersonal V-*qilai* construction. Drawing on the results of a number of syntactic tests and semantic conditions, we propose an analysis in which the post-V-*qilai* modification element is the main predicate and the V-*qilai* complex constitutes a frame-setting clausal modifier. This view is supported by arguments regarding obligatory modification, the distributional facts of preverbal markers, and the behavior of frequency adverbs. Moreover, we suggest that, within the clausal adjunct, *qilai* selects and incorporates with verbs in their stative version, which gives rise to the absence of agentivity and to the verbal restrictions noted in the impersonal V-*qilai* sentences.

Key words: V-*qilai* construction, impersonal, frame-setting modifiers, Chinese

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1. INTRODUCTION

Previous scholarship has pointed out that *qilai* ‘lit. *rise.come*’ in Mandarin Chinese has been undergoing a process of grammaticalization; therefore, *qilai* displays a range of distinct meanings and functions, from retaining its use as a lexical verb to acting in different ways like a pure functional morpheme as illustrated from (1) to (5) (cf. Chao 1968; Gao et al. 1993; Sung 1994; Huang and Chang 1996; Cao 2004; Wang 2005a, 2005b; Yin 2006; Liu 2007; Song 2008; Shyu et al. 2013; Xiong 2013; among others).

- (1) Zhangsan ganggang qilai le.
Zhangsan just QILAI ASP¹
‘Zhangsan has just got up.’
- (2) Zhangsan ganggang zhan qilai le.
Zhangsan just stand QILAI ASP
‘Zhangsan has just stood up.’
- (3) Zhangsan turan chang {ge qilai / qi ge lai} le.²
Zhangsan suddenly sing song QILAI QI song LAI ASP
‘He starts to sing a song suddenly.’
- (4) Zhangsan chang {ge qilai / qi ge lai} hen haoting.
Zhangsan sing song QILAI QI song LAI very melodious
‘Zhangsan’s singing is pleasant to hear.’

¹ For expository convenience, *qilai* is simply glossed as its capital form QILAI. The abbreviations used in this paper are ASP, aspect marker; CL, classifier; PASS, passive; LNK, linker; NEG, negation; FOC, focus marker.

² Following the wisdom of earlier works and by consulting with native speakers, we indicate two alternations in the ordering of V and *qilai* to be possible with the agentive V-*qilai* sentences, though some speakers might prefer one particular word order to the other.

- (5) zhe-ben shu du *qilai* *(hen youzuzhi).
 this-CL book read QILAI very organized
 Lit. ‘This book reads organized.’

In (1), for instance, *qilai* behaves as a main predicate with the lexical meaning of ‘get up’, while in (2) *qilai* denotes an ‘upward’ directional meaning. For these two cases, the literal meaning of *qilai* is largely maintained. Interestingly, *qilai* is often found in instances where the literal meaning is bleached. In (3), *qilai* is used to express a so-called ‘inchoative’ meaning such that it marks the initiation of the event denoted by the matrix predicate in the clause. The usage of *qilai* as in (4) further differs from that in (3) since (4) does not bear the inchoative denotation; rather, it is used to describe some common property of the action it modifies and to attribute such a property to some particular person (i.e., the agent DP *Zhangsan*). Furthermore, the V-*qilai* sentence in (5) also yields the property-describing interpretation, but in a way crucially different from (4), its external argument or logical subject is missing and the typical subject position is occupied by the internal argument (i.e., the theme DP). More importantly, the modification element in an impersonal sentence like (5) is absolutely indispensable. A number of previous works (e.g., Gao et al. 1993; Sung 1994; Wang 2005a) proposed different structures for (4) and (5), while some studies considered (4) and (5) to involve an essentially similar configuration. For instance, one possible way to assimilate (5) into (4) is to think of a sentence like (5) as necessarily involving a covert agent subject and that the internal argument serves as a topic phrase (cf. Shyu et al. 2013), as represented in (6). On this view, (4) and (5) are fundamentally the same in that some agent information is integrated in the structure.

- (6) [_{Topic} zhe-ben shu] *pro* du *qilai* hen youzuzhi.
 this-CL book read QILAI very organized

This idea appears to be plausible at first sight since Chinese is generally believed to freely drop almost any element in a sentence under appropriate discourse salience, and, admittedly, it is at times hard to tease apart whether some implied agent is implicated in a given sentence.

Nevertheless, we contend that several non-trivial distinctions could be made between the agentive *V-qilai* sentences like (4) and certain non-agentive, or impersonal *V-qilai* sentences, thus warranting them to receive different treatment.³

First of all, as a matter of empirical observation it is problematic to say that the analysis of (6) is necessarily applicable to the impersonal *V-qilai* sentences since the insertion of an agent subject in the structure is not always allowed. This is exemplified in (7) and (8). The degraded (b) clauses, in contrast to the acceptable agent-less (a) clauses, show that the agent role cannot be involved in these impersonal *V-qilai* sentences.

- (7) a. zhe-ben xiaoshuo du qilai hen xiaren.
 this-CL novel read QILAI very terrifying
 Lit. ‘This novel reads terrifyingly.’
 b. *zhe-ben xiaoshuo *Zhangsan* du qilai hen xiaren.
 this-CL novel Zhangsan read QILAI very terrifying
 Intended: ‘Zhangsan read this novel terrifyingly.’
- (8) a. zhihui shouji mai qilai hen gui.
 smart cell.phone buy QILAI very expensive
 Lit. ‘Smartphones buy expensively.’
 b. *zhihui shouji *Zhangsan* mai qilai hen gui.
 smart cell.phone Zhangsan buy QILAI very expensive
 Intended: ‘Zhangsan bought smartphones expensively.’

Moreover, the *pro* analysis as in (6) entails that whenever an overt subject is found to be allowed in a *V-qilai* sentence in question, its counterpart with a covert subject should be also possible, given appropriate discourse contexts. However, this prediction is not borne out as shown below.

³ More diagnostics on differentiating the two, including the lack of agents and the presence of verbal restrictions, will be offered in Section 2. Here we sort out the two constructions on empirical grounds first so as to motivate our concentrated investigation on the impersonal *V-qilai* sentences in this work. Section 4.4 also discusses other potential challenges for a structure like (6).

- (9) a. zhe-shou ge Zhangsan chang qilai hen youzixin.
 this-CL song Zhangsan sing QILAI very confident
 ‘Zhangsan sang this song confidently.’
 b. *zhe-shou ge chang qilai hen youzixin.
 this-CL song sing QILAI very confident

Additionally, as illustrated in (10), in Chinese the topic phrase and subject can entertain a certain flexibility in terms of word order so that the topic phrase is allowed to either precede or follow the subject when the discourse permits. Now, if the theme DP in the impersonal V-*qilai* clause were indeed a topic, we should expect it to exhibit a similar freedom in its ordering; however, the expectation is not met, as revealed by the contrast in (11). Therefore, the structure of (6) cannot capture the ordering restriction that manifests itself in impersonal V-*qilai* sentences.

- (10) a. zhe fangzi, Zhangsan mai-le hen jiu.
 this house Zhangsan bought very long
 ‘Zhangsan has bought this house for quite some time.’
 b. Zhangsan, zhe fangzi mai-le hen jiu.
 Zhangsan this house bought very long
 ‘Zhangsan has bought this house for quite some time.’
- (11) a. beiduofen de quzi, Zhangsan yanzou qilai tebie touru.
 Beethoven LNK melody Zhangsan play QILAI specially devoted
 ‘Zhangsan played Beethoven’s music in an extremely devoted
 way.’
 b. ??Zhangsan, beiduofen de quzi yanzou qilai
 Zhangsan Beethoven LNK melody play QILAI
 tebie touru.
 Specially devoted
 Intended: ‘Zhangsan played Beethoven’s music in an extremely
 devoted way.’

Given these discrepancies, as well as other distinct properties that we will present later, the current study focuses only on the impersonal V-

qilai construction, and we believe that different derivations are involved in the two different types of *V-qilai* sentences.

Though there is a common view on its diachronic development in the literature, no consensus has been reached yet about the proper characterization of the impersonal *V-qilai* construction (Gao et al. 1993; Sung 1994; Wang 2005a, 2005b; Liu 2007; Shyu et al. 2013). In particular, a persistent controversy centers on various problems such as whether the conflation of *qilai* with the verb alters the argument structure and what is the syntactic status, and hence the resulting constituency structure, of the *V-qilai* sequence. In this paper, therefore, we focus on the impersonal *V-qilai* construction (henceforth IVQC), and investigate its syntactic as well as semantic properties. In particular, drawing on the results of a battery of syntactic tests and semantic conditions, we propose a syntactic analysis in which the post-*V-qilai* modification element is the main predicate which is predicated of the subject, whereas *V-qilai* acts as a frame-setting clausal modifier adjunct.⁴

The paper is organized as follows. Section 2 establishes the empirical basis of this study and examines the crucial, and some hitherto unnoticed, properties observed in the IVQC. Section 3 presents our analysis and provides the syntactic and semantic characterization of *V-qilai* sentences. Section 4 discusses the previous proposals and the possible challenges they face; Section 5 concludes the paper.

2. THE EMPIRICAL BASIS

We start with the discussion of some characteristics generalized from the *V-qilai* sentences. Three major properties associated with the IVQC

⁴ Note that the two ideas are not totally new respectively. The view that the modification is the main predicate is proposed in Gao et al. (1993) and Xiong (2013) (though see the difficulties of their analyses in Section 4); in addition, the idea that *V-qilai* serves as an adjunct is explored by Ji (1995), though little syntactic/semantic details were offered and no substantial evidence was given in her work. Our proposal is thus to resurrect and to combine the two analytic components; more importantly, we present various novel arguments in support of such a treatment.

are scrutinized: the absence of agents, verbal restrictions and frame-setting evaluative interpretations.

2.1 Absence of Agent

The first property we look into is the status of agents. As we summarize in (6) below, it has been acknowledged in the literature that a passive sentence has an implicit, suppressed agent while an unaccusative sentence starts out with no agent at all underlyingly (Baker, Johnson and Roberts 1989; Perlmutter 1978; among many others). In what follows, we show that the IVQC behaves on a par with unaccusative sentences with respect to the agentivity tests and thus there should be no agent role involved in the IVQC.

(12) *Agent status in different constructions:*

Actives (Transitive)	Passives	Unaccusatives
<i>Overt agent</i>	<i>Implicit agent</i>	<i>No agent</i>

The first test has to do with the use of purpose clauses. We can see from (13a) that only passives allow the occurrence of a purpose clause. On the other hand, the IVQC (13b) and unaccusative sentences (13c) do not license purpose clauses.

- (13) a. *weile ling baoxianjin, na-sao chuan bei* (Passive)
to collect insurance that-CL ship PASS
manmande kai-le yi tian.
slowly sail-ASP one day
‘In order to collect insurance, that ship was slowly sailed for one day.’
- b. **weile ling baoxianjin, na-sao chuan kai qilai* (V-*qilai*)
to collect insurance that-CL ship sail QILAI
hen man.
very slow
Intended: ‘*In order to collect insurance, that ship sails slowly.’
- c. **weile ling baoxianjin, na-sao chuan chen le.* (unaccusatives)
to collect insurance that-CL ship sink ASP
Intended: ‘*In order to collect insurance, that ship sank.’

Another test involves the use of agent-oriented modification. The results reveal that only passives allow the use of agent-oriented modification, but not the IVQC and unaccusative sentences.

- (14) a. *na-sao chuan bei keyi shao le.* (passives)
that-CL ship PASS intentionally burn ASP
‘That ship was burned intentionally.’
- b. **na-sao chuan shao qilai hen keyi.* (V-*qilai*)
that-CL ship burn QILAI very intentional
Intended: ‘*That ship burns intentionally.’
- c. **na-sao chuan keyi chen le.* (unaccusatives)
that-CL ship intentionally sink ASP
Intended: ‘*That ship intentionally sank.’

Assuming Manzini (1983), Baker, Johnson and Roberts (1989), Anagnostopoulou (2003) among others, we consider the fact that the understood subject of purpose clauses may be controlled and that agent-oriented adverbs may find an argument to modify both suggest the syntactic presence of a volitional agent argument. Depending on the above contrasts, it seems that in the IVQC, identical to the case of

unaccusative sentences, such a thematically-understood agent is not present and is not required to be syntactically represented in the structure.

2.2 Verbal Restriction

Next, we show that the IVQC is subject to verbal restrictions which regulate the types of verbs capable of undergoing the V-*qilai* formation. As illustrated in (15) and (16), the V-*qilai* formation in IVQC is fine when derived from transitive verbs, but impossible when derived from unaccusative verbs (see also Wang 2005a).⁵

- (15) a. na-dong fangzi dasao qilai hen kuai.
 that-CL house clean QILAI very quick
 Lit. ‘That house cleans quickly.’
 b. zhe-jian shi chuli qilai hen mafan.
 this-CL thing handle QILAI very troublesome
 Lit. ‘This thing handles troublesomely.’
- (16) a. *na-dong fangzi dao qilai hen kuai.
 that-CL house arrive QILAI very quick
 Intended: ‘*That house arrives quickly.’
 b. *zhe-jian shi fasheng qilai hen kuai.
 this-CL thing happen QILAI very quick
 Intended: ‘*This thing happens quickly.’

Previous works have paid little attention to these facts; a satisfactory account of the IVQC is thus needed to capture and provide explanations for these restrictions.⁶

⁵ The IVQC is impossible with unergative verbs and the reason is straightforward. The IVQC needs to have a verb’s internal argument (*i.e.*, theme or patient) to serve as its surface subject; however, unergative verbs, by definition, do not have any internal argument to begin with. Therefore, it follows that unergative verbs are not found in the IVQC.

⁶ It has come to our attention that among the transitive verbs, stative verbs (*cf.* Vendler 1967) appear to be somehow limited in their compatibility with the IVQC, compared to other verb types. However, a search on the internet gives quite a number of example sentences where *qilai* conflates with stative verbs such as *yongyou* ‘own’, *renshi* ‘know’,

2.3 Stativity and Frame-setting Interpretations

Semantically, the IVQC in general is used to describe situations that display some particular property denoted by the predicate and further ascribes this disposition to the subject. For a sentence like (17), it states a generalization over a particular dress, where the dispositional quality *shufu* ‘comfortable’ can sensibly apply to the understood target *zhe-jian yifu* ‘this dress’. In this sense, the IVQC does not emphasize the existence of a particular event that takes place with respect to a given dress, but rather characterizes an attributive property of the dress.

zhidao ‘know’ and *xiangxin* ‘believe’, as provided below, and we concurred on the acceptability of these sentences. Due to limits of space, we only give one example for each verb here. Therefore, it can be said that, in principle, stative verbs are able to occur in the IVQC, though, for some unclear reasons, they are not as productive as other verbs, which requires further investigation. Note also that, though here we use internet data to illustrate the point, this way of data elicitation should be treated with caution as there has been substantial discussion on the reliability of different methods of data collection in syntax (see in particular Gibson and Fedorenko 2013 as well as methods Sprouse and Almeida 2013). Thanks to one reviewer for urging us to clarify this point.

- (i) ruci qieyi-qinsong de chufang xiuxian shenghuo yongyou
such carefree LNK kitchen leisure life own
qilai ye bingbu kunnan.
QILAI too by.no.means hard
Lit. ‘Such a carefree and leisurely life in the kitchen owns not so difficultly.’
[<http://tech.hexun.com.tw/2012-06-27/142906069.html>]
- (ii) shishi de zhenxiang renshi qilai hai bushi name rongyi.
fact LNK truth know QILAI yet NEG that easy
Lit. ‘The truth of facts does not know that easily.’
[<http://www.ylib.com/author/mengxianshi/interview.htm>]
- (iii) yiqie zhidao qilai hen jian dan de shiqing, zuo qilai
all know QILAI very simple LNK thing do QILAI
zhende mei name jian dan.
really NEG that simple
Lit. ‘Those things that know easily are those that do not do that easily.’
[http://blog.sina.com.cn/s/blog_63204c530100u5gy.html]
- (iv) zhe yi dian wuyongzhiyi, zhishi xiangxin qilai hen nan.
this one point beyond.doubt only believe QILAI very difficult
Lit. ‘This is beyond doubt, but it believes very difficultly.’
[http://manciyanluanfeideqiangguai.lofter.com/post/1d16e48f_643c8c8]

- (17) zhe-jian yifu chuan qilai hen shufu.
 this-CL dress wear QILAI very comfortable
 ‘The dress wears very comfortably.’

Earlier, in Section 2.1, we demonstrated that the agent role is not implicated in the IVQC; next we show the property-denoting IVQC clearly displays characteristics of stativity. As suggested by Dowty (1979), only non-statives occur in the progressive⁷ and only non-statives can be found compatible with manner-adverbs. The fact that (18) and (19) are unacceptable clearly indicates the construal of stativity in the IVQC.

- (18) *zhe-jian yifu zheng zai chuan qilai hen shufu.
 this-CL dress right ASP wear QILAI very comfortable
 Intended: ‘The dress is wearing very comfortably.’

- (19) *zhe-jian yifu xiaoxinyiyide chuan qilai hen shufu.
 this-CL dress carefully wear QILAI very comfortable
 Intended: ‘The dress carefully wears very comfortably.’

Furthermore, the following interesting, yet little-studied, feature of the interpretation generated by the IVQC and concerning its characterizing nature is especially noteworthy and calls for structural explanations.

First of all, consider the difference between (17) and (20):

- (20) zhe-jian yifu hen shufu.
 this-CL dress very comfortable
 ‘This dress is comfortable.’

Without the addition of V-*qilai*, (20) means that the dress in question produces an effect of pleasant relaxation in a general sense or in terms of every possible aspect of evaluation; on the other hand, with V-*qilai* being added to the sentence, (17) denotes what this particular dress makes people feel if they put it on. Although, undeniably, the semantic

⁷ See more discussion on the complications of using the progressive aspect as a criterion of verb types in Vlach (1981) and Bach (1981).

content of this proposition overlaps largely with what is expressed by (20), presumably because the most usual way in which people would evaluate a dress has to do with its impression that is made on a wearer, nonetheless the difference between the two propositions can be demonstrated as follows.

- (21) *suiran mo qilai hen shufu, dan zhe-jian yifu chuan*
though touch QILAI very comfortable yet this-CL dress wear
qilai butai shufu.
QILAI not.very comfortable
Lit. 'Though this dress touches very comfortably, yet it wears not
very comfortably.'
- (22) #*suiran mo qilai hen shufu, dan zhe-jian yifu*
though touch QILAI very comfortable yet this-CL dress
butai shufu.
not.very comfortable
Lit. 'Though this dress touches very comfortably, yet it is not
very comfortable.'

In (21), the first clause asserts that if one feels the dress by touching it, s/he may find the dress to be comfortable; nevertheless, it is possible to have an IVQC with an antonymous predicate to follow and no contradiction will result. In other words, the first clause of (21) expresses the asserted proposition in terms of the tactile sense whereas, by the use of *chuan-qilai* 'wear-QILAI', the second clause restricts the domain of the evaluation and communicates the judgement from a wearer's viewpoint. In contrast, such a domain-restriction function is not available in the second clause of (22), which, therefore, leads to the contradiction to its preceding clause. The sentence (23) is another illustrative example. The two clauses of (23) ascribe polar dispositions (i.e., firm vs. soft) to the same entity and yet the whole sentence is acceptable. This is possible since *V-qilai* is used to specify the particular perspective in which the relevant assessment should be checked respectively.

- (23)

suiran	ta	qilai	yingyingde,	dan	zhe	tatami
though	tread	QILAI	firm	yet	this	tatami
tang	qilai	ruanruande.				
lie	QILAI	soft				

 Lit. 'Though this tatami mat treads firmly, yet it lies softly.'

Interestingly, the behavior of the V-*qilai* string is reminiscent of what have been described in the literature as *framing-modifiers* (Maienborn 2001). The adjunct *standing on the chair* in (24) is an illustrating example of a framing-modifier, which, according to Maienborn, is “not part of what is properly asserted but restrict the speaker’s claim.” This point can be illustrated by its inferential behavior. As shown in (25), being a framing device, the omission of *standing on the chair* does not necessarily preserve the truth since the truth conditions of the asserted proposition need to be calculated under the frame set up by this phrase. In particular, one needs to interpret (24) with the adjunct *standing on the chair* as providing a restrictor, which in most cases would correspond to a *when*-clause or an *if*-clause: “When/if John stands on the chair, he can reach the ceiling” (see also Quirk et al. 1985; Stump 1985 for the analysis of framing-modifiers).

(24) *Standing on the chair*, John can reach the ceiling.

(25) Standing on the chair, John can reach the ceiling.
 ↗ John can reach the ceiling.

We propose that similar things can be said about the V-*qilai* structure as well. Just as we demonstrated in the case of (21)-(23), the use of V-*qilai* contributes to the singling out of a particular domain for which the speaker wants to make a claim. Note also that its inferential property is identical to what has been observed in the case of the use of framing modifiers.

- (26) suiran ta qilai yingyingde, dan zhe tatami
 though tread QILAI firm yet this tatami
 tang qilai ruanruande.
 lie QILAI soft
 Lit. ‘Though this tatami mat treads firmly, yet it lies softly.’
 ↗ zhe tatami yingyingde dan ruanruande
 this tatami firm yet soft

More intriguingly, similar to the case of (24), V-*qilai* behaves like a sentence-level adjunct which, though it does not have an overt logical connective linking it to the main clause, roughly corresponds to an *if/when*-clause, providing a domain restrictor (cf. Haiman 1978). A possible paraphrase of (26) would look something like: “When being trod, this tatami mat feels firm, but when being lain on, it feels soft.”

Based on these semantic/pragmatic properties, we suggest that the V-*qilai* sequence is a framing adjunct, which functions as a restrictive device that sets the domain of relevance for the proposition expressed by the rest of the sentence. In particular, when uttering an IVQC sentence, the speaker claims that the proposition holds true with respect to a given topic or region specified by the V-*qilai* sequence. One prediction immediately follows. Given that V-*qilai*, as a device that restricts the speaker’s source or belief of a given proposition, we expect that it does not fall under the scope of sentential negation because sentential negation should only apply within the range delimited by the given frame. The expectation is indeed met as shown in (27):

- (27) zhe-ben shu buhui du qilai kuzaofawei.
 this-CL book NEG read QILAI dull
 Lit. ‘This book won’t read dully.’

As the English translation shows above, the sentential negation *buhui* ‘won’t’ is not used to negate the action denoted by the verb *du* ‘read’ of V-*qilai*, namely negating the event of reading. Instead, (27) can only be interpreted as having the scope of negation over the modification part *kuzaofawei* ‘dull’.

To recapitulate, in addition to the obligatory presence of post-V-*qilai* modification, we have discussed three notable properties of the IVQC. In particular, we demonstrated that no agent resides in the structure of IVQC since, parallel to typical unaccusative sentences, purpose clauses and agent-oriented adverbs cannot appear in the IVQC. We also showed that the V-*qilai* formation is subject to restrictions such that unaccusative verbs are incompatible in this construction. Lastly, we argued that stativity is observed with the IVQC; moreover, V-*qilai* in the IVQC generates the so-called framing-setting interpretation by singling out a particular domain about which the speaker makes a statement.⁸ In what follows, we present our proposal that serves to incorporate these crucial properties in the syntactic and semantic structures.

3. ANALYSIS

The syntactic structure we propose for the IVQC is represented in (28):

- (28) [Subj zhe-jian yifu] [adjunct ~~zhe-jian yifu~~ chuan_k-qilai [t_k t_i]]
 this-CL dress wear QILAI
 [Pred hen shufu]
 very comfortable
 ‘The dress wears very comfortably.’

⁸ Admittedly, the Mandarin IVQC bears a certain resemblance to the middles in English (Fagan 1988, Condoravdi 1989, Stroik 1992, Ackema and Schoorlemmer 2006, Marelj 2004). Nevertheless, in the current discussion we do not readily refer to the IVQC as the Mandarin middle construction (see Sung 1994; Cao 2004 for middle treatment) because it exhibits some clear distinctions from English middles. As will be revealed later in Section 3, the IVQC involves a subject which in turn is modified by the following modification part that serves as the main predicate. In contrast, in an English middle like ‘the meat cuts easily’, the modification element always appears as an adverb, which cannot be the main predicate of the entire clause. Therefore, due to mismatches like this, we do not call the IVQC the Mandarin counterpart of middles, and we leave the cross-linguistic comparison for further inquiry.

Briefly, the modification element, *hen shufu* ‘very comfortable’ in the case of (28), predicated of the subject *zhe-jian yifu* ‘this dress’, is the main predicate of the entire sentence, and the *V-qilai* string is a sentence-level adjunct without an overt logical connective to the clause. In particular, the *V-qilai* string functions as a frame-setting modifier, just as the adjunct in the English example (24), that restricts the domain for evaluating the proposition expressed by the main clause. Within this adjunct, moreover, *qilai* selects a VP whose verbal head it later conflates with is the (derived) stative version of this verb by eliminating the agent role (cf. J. Lin 2002).⁹ The subject of this adjunct is then deleted due to the Coreferential Identity Deletion rule (Grinder 1976) which works to delete the coreferential subject under syntactic identity, as is commonly seen with adjunct modifiers (see (24) for instance).

There are two essential components in the current analysis: first, the modification part is the main predicate of the entire clause and, second, *V-qilai* is a framing adjunct clause in which certain grammatical processes, including agent deletion, take place. In what follows we provide details and evidence for the two major parts, respectively, and we will first present the arguments for treating the modification part as the main predicate.

3.1 Modification as Matrix Predicate

First of all, if the modification element is the matrix predicate, we expect it to be indispensable because a predicate is a necessary component of every sentence. Thus our analysis explains why the modification is obligatory in the IVQC in a straightforward manner.

- (29) *zhe-liang che kai qilai *(hen shunshou).*
 this-CL car drive QILAI very smooth
 Lit. ‘This car drives *(very smoothly).’

⁹ *Qilai* has been argued to be the head of AspP in Dai (1997) as well as in Xiao and McEnery (2004). In particular, they treat *qilai* as a viewpoint aspect marker and we refer readers to the detailed arguments in their works. Note however that our proposed structure would be compatible with whatever identity or labeling the *qilai* projection is given.

The predicate status of the modification element in the IVQC can also be shown by the facts of its distribution in relation to some typical preverbal modifiers. The sentences in (30) demonstrate that sentence modifiers such as temporal and locational adverbials are required to precede the main predicates in run-of-the-mill declarative sentences. In particular, (30a) and (30b) show that the matrix predicate needs to be preceded by the focus marker, modals or *also* and it is fine for these markers to precede these sentence adjuncts as long as their precedence to the main predicate is also respected. Crucially, it is impossible for these markers to be preceded by the main verb.¹⁰

- (30) a. Mali mingtian/zai-zheli { **shi** / **hui** / **ye** } *nian* zhe-ben shu.
 Mary tomorrow/at-here FOC will also read this-CL book
 ‘Mary { will READ / will read / will also read } this book tomorrow/here.’
 b. Mali { **shi** / **hui** / **ye** } mingtian/zai-zheli *nian* zhe-ben shu.
 Mary FOC will also tomorrow/at-here read this-CL book
 c. *Mali mingtian/zai-zheli *nian* { **shi** / **hui** / **ye** } zhe-ben shu.
 Mary tomorrow/at-here read FOC will also this-CL book

¹⁰ Manner adverbials are widely assumed to be located at a much lower position (presumably delineating the domain of VP) than the sentence-level temporal/locational adverbials, as evidenced by the contrast between (i) and (ii).

(i) Zhangsan meitian xiaoxinyiyidi kai che.
 Zhangsan everyday carefully drive car
 ‘Everyday Zhangsan drives carefully.’

(ii) *Zhangsan xiaoxinyiyidi meitian kai che.
 Zhangsan carefully everyday drive car

Also, manner adverbials are also known not to be allowed to precede modals like *hui* ‘will’ and *dou* ‘all’.

(iii) Zhangsan hui/dou xiaoxinyiyidi kai che.
 Zhangsan will/all carefully drive car
 ‘Zhangsan will/always drive(s) carefully.’

(iv) *Zhangsan xiaoxinyiyidi hui/dou kai che. (cf. (30a), (32a))
 Zhangsan carefully will/all drive car

Therefore, in case of unnecessary interfering factors, we only use sentence adverbs which are independently shown to be able to precede these preverbal elements so as to demonstrate the relevant linear relations in the discussion here.

With these patterns in mind, we will now consider the sentences in (31). The grammaticality of (31a) and (31b) shows that V-*qilai* cannot be the matrix predicate; otherwise (31a) should be ill-formed since these typical preverbal markers are preceded by the V-*qilai* string (cf. (30c)).

- (31) a. zhe-ben shu *nian* *qilai* { **shi** / **hui** / **ye** } hen man.
 this-CL book read QILAI FOC will also very slow
 Lit. ‘This book { READS / will read / also reads } slowly.’
 b. zhe-ben shu { **shi** / **hui** / **ye** } *nian* *qilai* hen man.
 this-CL book FOC will also read QILAI very slow

Similar observations can be made when we put the IVQC in the well-known *lian...dou* ‘even...also’ construction. The marker *dou* is acknowledged to always occur in the preverbal position (cf. Shyu 1995) as shown in (32); thus the fact in (33) that *dou* can be preceded by V-*qilai* shows that V-*qilai* cannot be the main predicate (in particular compare (32c) and (33a)). As a result, all of these distributional facts lend support to the main predicate status of the modification element.

- (32) a. **lian** Mali zai-wu-dian **dou** likai bangongshi le.
 even Mary at-five-o’clock also leave office ASP
 ‘Even Mary also left the office at five.’
 b. **lian** Mali **dou** zai-wu-dian likai bangongshi le.
 even Mary also at-five-o’clock leave office ASP
 c. ***lian** Mali zai-wu-dian likai **dou** bangongshi le.
 even Mary at-five-o’clock leave also office ASP
- (33) a. **lian** zhe-jian yifu chuan qilai **dou** hen shufu.
 even this-CL dress wear QILAI also very comfortable
 Lit. ‘Even this dress also wears very comfortably.’
 b. **lian** zhe-jian yifu **dou** chuan qilai hen shufu.
 even this-CL dress also wear QILAI very comfortable

Data concerning frequency adverbs also substantiate our claim that the modification part, rather than V-*qilai*, is the matrix predicate of the IVQC. Consider (34):

- (34) Lulu *congbu* *chuan* *gaogengxie*, *yinwei* *gaogengxie* *zongshi*
 Lulu never wear high-heels since high-heels always
chuan qilai *hen* *bushufu*.
 wear QILAI very uncomfortable
 ‘Lulu never wears high heels since high heels always wear
 uncomfortably.’
- (35) #Lulu *congbu* *chuan* *gaogengxie*, *yinwei* *ta* *zongshi*
 Lulu never wear high-heels since she always
 (*hen* *bushufudi*) *chuan* *gaogengxie*.
 very uncomfortably wear high-heels
 Lit. ‘Lulu never wears high heels since she always wears high heels
 (uncomfortably).’

Note that there are two frequency adverbs in (34), with *congbu* ‘never’ occurring in the first clause and *zongshi* ‘always’ in the second, but, nevertheless (34) is a perfectly acceptable sentence. Now, if *chuan-qilai* ‘wear-QILAI’ were the main predicate in the IVQC clause, we would expect (34) to be unacceptable, just as in (35) where *chuan* clearly serves as the main predicate in both clauses, since it involves two frequency adverbs with opposed denotations quantifying over the same event, i.e., wearing.¹¹ On the other hand, the acceptability of (34) is well-expected under the current analysis since, in our view, the adverb *zongshi* ‘always’ in (34) necessarily modifies the modification part *hen bushufu* ‘very uncomfortable’, whereas *congbu* ‘never’ modifies the verb *chuan* ‘wear’ in the first clause. As a result, there would be no contradiction ensuing in (34) because the two frequency adverbs have totally different targets in their scope.

To summarize, in this subsection we have presented arguments, including the obligatory presence of modification, the distributional facts

¹¹ Though the adverb *zongshi* ‘always’ can be relational and sometimes be taken to quantify over a pre-identified set of elements, this possibility is blocked here since we use *congbu* ‘never’ in the other conjunct, which generates an empty set of Lulu’s high-heels-wearing occasions so that nothing can be quantified over by *zongshi* either. As a result we can be sure that it is the contradictory meanings of *congbu* and *zongsi* that cause the unacceptability of (35).

concerning preverbal markers, and the behavior of sentential negation and frequency adverbs, all of which give countenance to our main predicate treatment of the modification element in the IVQC.¹²

3.2 V-*qilai* Adjunct and its Structure

Earlier in Section 2.3, we demonstrated the semantic contribution of the V-*qilai* string and referred to V-*qilai* as a frame-setting modifier. In particular, we pointed out that V-*qilai* behaves as a sentential adjunct that restricts a speaker's claim. (Quirk et al. 1985; Stump 1985). Given these facts, we suggest that sentence (36a) has the semantic representation of (36b), as a characterization of this idea.

- (36) a. zhe-jian yifu chuan qilai hen shufu.
 this-CL dress wear QILAI very comfortable
 'The dress wears very comfortably.'
 b. $\forall t$ [this dress gets worn at t] (this dress is comfortable at t)

In this sense, for an IVQC like (36), it says that for every time t such that this dress gets worn at t , this dress is comfortable at t . By this way we are able to capture the fact that the IVQC denotes the general dispositional quality of the subject, and the comprehension of such a disposition needs to be done in tandem with the framework established by the V-*qilai* string.

In Section 3.1, we offered syntactic evidence showing that the V-*qilai* string cannot be analyzed as the main predicate, but rather it behaves as an adjunct. After having determined its external relations to the other clausal parts, next we will present the internal syntax of this V-*qilai* adjunct. In particular, we provide explanations of the facts that we noted earlier, including the lack of an agent (Section 2.1) and the verbal restrictions (Section 2.2), as detailed in the following.

¹² Given our main predicate analysis of the modification part, it follows that this modification element is an adjective rather than an adverb. This prediction is indeed borne out. As will be shown in Section 4.1, the modification part itself can participate in forming A-not-A questions, suggesting that they are predicative adjectives, instead of adverbs that cannot form A-not-A questions.

First of all, it is important to point out that the suppression of the agent theta role that is usually linked to a given predicate is not unique to the construction that we are currently investigating. For instance, as has been observed in previous studies (Pan 1996; T. Lin 2001; J. Lin 2002), certain aspectual markers in Mandarin such as *-zhe* in constructions such as locative inversion appear to trigger a morpho-syntactic operation which eliminates the agent role, making the resulting argument structure similar to that of an unaccusative verb. Examples are like (37):

- (37) a. Zhangsan zai zhuozi-shang fang-le yi-ben shu.
 Zhangsan on table-top put-ASP one-CL book
 ‘Zhangsan put a book on the table.’
 b. zhuozi-shang fang-**zhe** yi-ben shu.
 table-top put-ASP one-CL book
 ‘There is a book put on the table.’

For a transitive verb like *fang* ‘put’, it has the argument structure <agent, theme, location> as evidenced by (37a), but it allows locative inversion as (37b), which seems to suggest that its argument structure has been altered so that the agent role is suppressed syntactically. In light of this, J. Lin (2002)¹³ argues that it is actually not the presence of *-zhe* that initiates the change of argument structure (cf. Pan 1996), but rather that there is a general agent deletion rule in the grammar of Mandarin that does not rely on any particular morpheme.¹⁴

Following J. Lin’s insight, we suggest that this mechanism is also what happens in the IVQC and it is this mechanism that leads to the agent suppression effect in the IVQC. The lexical rule involved, adapted from J. Lin (2002), would look like (38):

¹³ T. Lin (2001) also points out that it is not the existence of *-zhe* that triggers the change of a verb’s argument structure, though he differs from J. Lin (2002) in his solution to solving Pan’s problems.

¹⁴ It is worth emphasizing that a lexical rule like (38) is not uncommon in natural languages. Many lexical items, such as quantifiers, must receive a similar treatment. The readers are referred to Heim and Kratzer (1998) as well as to J. Lin (2002) for more details on such matters.

- (38) For every lexical item δ_1 with a meaning of type $\langle e, \langle e, \langle s, t \rangle \rangle \rangle$, there is a (homophonous) item δ_2 with the following meaning of type $\langle e, \langle s, t \rangle \rangle$:

$$[[\delta_2]] = \lambda x \lambda s \exists y \exists e_s [\delta_1(x)(y)(e) \ \& \ s = f_{\text{result}}(e)]^{15}$$

(adapted from J. Lin 2002:279)

On this view, this agent deletion rule can be triggered as long as the verb in question conforms to the proper argument structure as described in the formulation. Therefore, for the stative counterpart (δ_2) of a transitive dynamic verb (δ_1), the agent role can get saturated through existential closure in the lexicon. Due to this reason, the number of the arguments to be saturated for δ_2 is one less than that of δ_1 . Moreover, we assume that the morpheme *qilai* in the IVQC needs to merge and conflate with the (derived) stative version of a given verb by deleting the agent role. This is how the suppression of agent role in the IVQC can be structurally captured. In this way, our account is similar to J. Lin's proposal in assuming that there is a general agent deletion rule in Mandarin grammar, and it is an idiosyncratic property of certain morphemes, such as the impersonal *qilai* of the IVQC in our case, that they need to combine with a verb of a particular argument structure. Moreover, by incorporating the agent deletion rule into our account, we can also capture the verbal restriction noted in Section 2.2 that unaccusative verbs are not allowed in the IVQC. Under the current view, this restriction arises because unaccusatives are not equipped with the right argument structure such that the agent deletion rule is not allowed to apply. In plain words, one cannot unaccusativize an unaccusative verb.

In summary, drawing on data concerning obligatory modification, the distributional facts of preverbal markers, and the behavior of sentential negation and frequency adverbs, we have shown that the modification element of the IVQC is the main predicate of the clause, whereas the V-*qilai* complex constitutes a sentential adjunct. Moreover, we suggest that within this adjunct, *qilai* selects and merges with a verb of its stative

¹⁵ We use the symbols as in J. Lin's original formulation: *e* and *s* are variables for events and states. The subscript *s* is the semantic type of eventuality. *f_{result}* is intended to be a function which when applied to an event yields the result state of that event (cf. Parsons 1990).

version via the application of an agent deletion rule, thus giving rise to the lack of an agent and the noted prohibition of incorporating unaccusative verbs with *qilai* in the IVQC.

4. PREVIOUS ANALYSIS

In this section we review a few generative analyses advocated in the literature and point out the challenges that they might face. The works to be discussed in the following include Gao et al. (1993), Sung (1994), Wang (2005a), and Shyu et al. (2013).

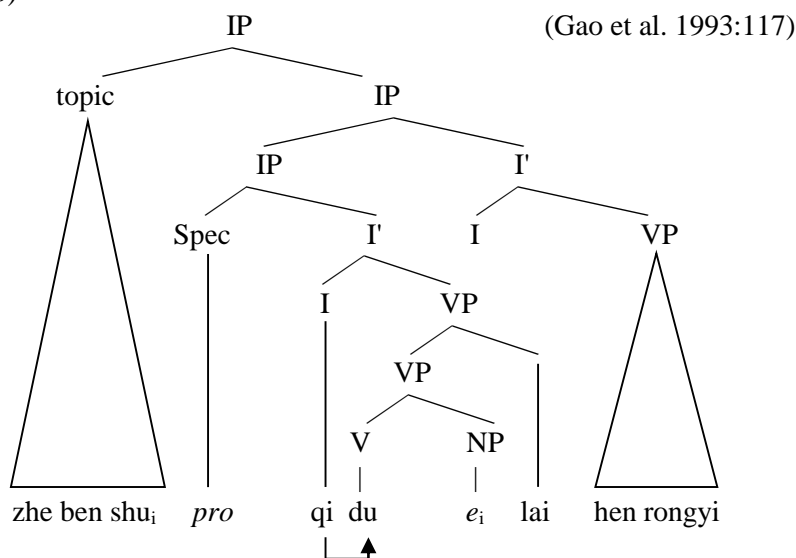
4.1 Gao et al. (1993)

For an impersonal V-*qilai* sentence like (39), Gao et al. (1993) suggest that the modification part, *hen rongyi* ‘very easy’, is the main predicate of the sentence and that the rest is the subject in the disguise of a sentence (i.e., a sentential subject). The derivation is represented in (40):¹⁶

- (39) zhe-ben shu du qilai *(hen rongyi).
 this-CL book read QILAI very easy
 ‘This book reads very easily.’

¹⁶ Even though the focus is on evidential/perception V-*qilai* sentences, Song (2008) proposes a very similar structure as Gao et al. (1993). In particular, both assume a sentential-subject structure with a null agentive *pro* in it and that the theme argument undergoes illicit topicalization from within the sentential-subject, which constitutes a syntactic island, to the left periphery. Given such resemblance, the counterarguments presented in this subsection should also apply to Song’s proposal as well.

(40)



They provide arguments for treating the modification part as the main predicate of the IVQC. For instance, the modification part itself is able to participate in the formation of *A-not-A* questions, suggesting that it is likely to be (predicative) adjectives, instead of adverbs that cannot form *A-not-A* question. This pattern is shown in (41), which is taken from Gao et al. (1993:113):

- (41) a. zhe-ben shu fanyi-qilai rong(yi)-bu-rongyi?
 this-CL book translate-QILAI easy-NEG-easy
 ‘Does this book translate easily (or not easily)?’
 b. *ta qingsong-bu-qingsong(-di) yingde bisai?
 3SG easily-NEG-easily-ADV win game
 Intended: ‘Does he win the game easily (or not easily)?’

Our proposal is partially similar to Gao et al.’s analysis in that both accounts treat the modification part as the main predicate; however, the two approaches differ in several important aspects and their analysis faces some problems stated as follows. To begin with, illicit movement

is necessarily involved in their derivation, where the theme argument moves out of a subject island. Second, in Gao et al. there is no principled account provided for the verbal restrictions noted earlier. Moreover, they assume the existence of a typical null *pro*. If such were really the case, one should expect to see such sentences exhibit the full degree of agentivity, in a way parallel to transitive active sentences. Unfortunately, this is contrary to the fact (cf. Section 2.1). Lastly, Gao et al.'s view also fails to account for certain ordering facts. For instance, as in (42), the sentential negation *buhui* can occur between the theme argument and V-*qilai*. Under their proposed structure, the negation could either precede the null *pro* of the sentential subject or occur in the inflection domain as the sentential negation of the sentential subject. For the former option, the negation would precede the (sentential) subject, but the pre-subject occurrence is never allowed in Mandarin, as exemplified in (43). For the latter possibility, the negation could only negate the action denoted by the verb *chuan* 'wear' of V-*qilai* under their analysis, even though the interpretation reveals the opposite (recall Section 3.1). Thus, this alternative is equally untenable. Thus, overall, the analysis of Gao et al. is flawed in several critical aspects.

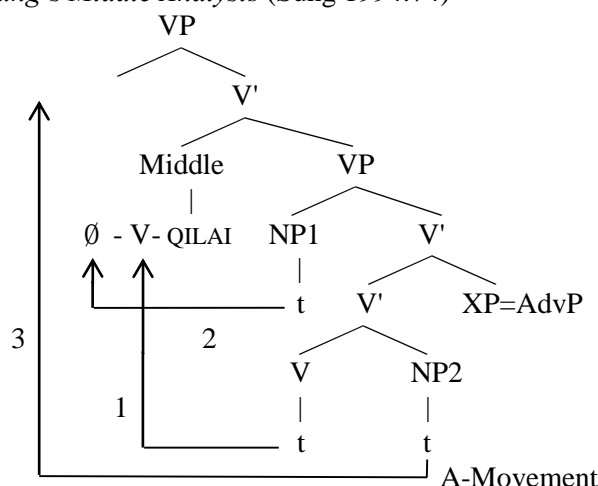
- (42) zhe-jian yifu *buhui* chuan qilai hen bushufu.
 this-CL dress NEG wear QILAI very uncomfortable
 'It's not the case that this dress wears very uncomfortably.'

- (43) (**buhui*) Lisi (*buhui*) yao chi mian.
 NEG Lisi NEG want eat noodles
 'Lisi doesn't want to eat noodles.'

4.2 Sung (1994)

Following Keyser and Roeper (1984), Sung proposes an analysis of IVQC that is akin to that of English middles as in (44):

(44) *Sung's Middle Analysis* (Sung 1994:74)



As diagrammed above, Sung's analysis is built upon three syntactic operations. First, the verb has to raise to some higher projection so as to incorporate and become a single lexical unit with the presumed middle morpheme *qilai*. Second, the external argument, merged in the VP-internal position (Kuroda 1988; Kitagawa 1986; Koopman and Sportiche 1991; among others), also incorporates with the V-*qilai* complex, an operation which absorbs Case from the verb. Third, the internal argument, which fails to get case assigned from the verb, undergoes movement to the surface subject position [Spec, IP] to receive nominative Case.

Note crucially that in this system, the modification element is analyzed as an adverb and is right-adjoined as an adjunct to the V' node. This assumption is seriously flawed since, as we have shown, the presence of the modification element is obligatory and the modification itself behaves as the main predicate of the clause, whereas for Sung, the modification is a V' adjunct, which is presumably optional. Moreover, Sung's approach would consider V-*qilai* to be the main predicate of the sentence. Given this, it predicts that (45) with the negation following V-*qilai* would be ungrammatical since, owing to lack of long verb movement, negation never follows the main predicate in Mandarin.

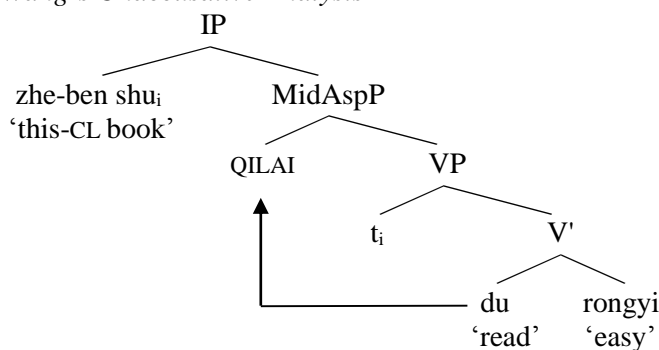
Unfortunately, this prediction is not met since (45) is perfectly grammatical.

- (45) zhe-ben shu du-qilai *meiyou* hen rongyi.
 this-CL book read-QILAI NEG very easy
 ‘This book doesn’t read very easily.’

4.3 Wang (2005a)

Wang (2005a)¹⁷ proposes that the verb in the IVQC is unaccusative so that the internal argument should raise to the surface subject position, which is typical of unaccusativity. The proposed structure is provided below.

(46) Wang’s Unaccusative Analysis



As previously discussed, this analysis, like Sung (1994), predicts that negation cannot occur between V-*qilai* and the modification part since negation is never allowed to be preceded by the main predicate in Mandarin. Furthermore, the unaccusative view fails to capture the fact that the modification part is obligatory; it also fails to account for the

¹⁷ Later in Wang (2005b:328), she suggests that the IVQC should be analyzed as involving a sentential subject. That is, the modification, or AP in her terms, is (part of) the main predicate selected by a VP. Given the similarity, her analysis is subject to the same limitations we noted in Gao et al.’s proposal. See Section 4.1 for details.

verbal restrictions and semantic/pragmatic characteristics that we noted earlier in Section 2 and Section 3.

4.4 Shyu et al. (2013)

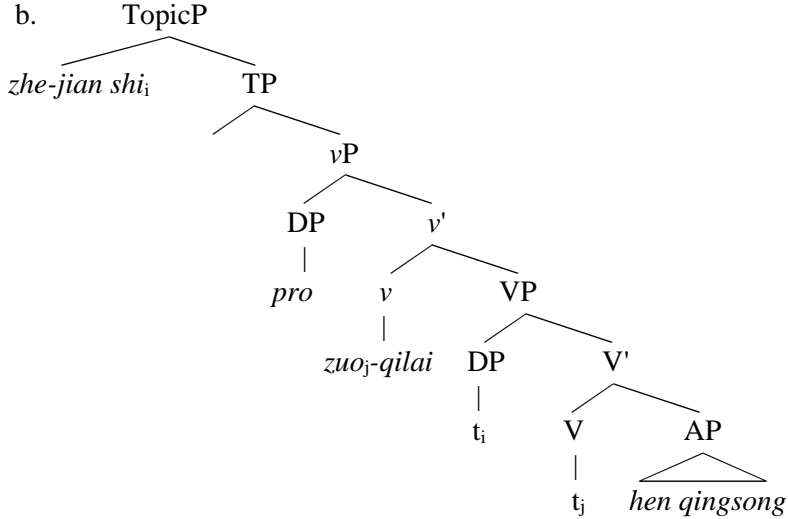
Shyu et al. (2013)¹⁸ propose a mono-clausal structure where the verb raises to the little *v* so as to derive the *V-qilai* complex, which they consider to be the main predicate of the whole sentence. The modification, on the other hand, is merged as an AP complement to the V head.¹⁹ For an IVQC sentence like (47a), they postulate the existence of a null *pro* representing the agent and suggest that the theme argument has undergone topicalization to the left periphery. The structure is provided in (47b), which is taken from Shyu et al. (2013:714):²⁰

¹⁸ As noted earlier, Shyu et al. attempt to unify different *V-qilai* sentences under one configuration. In the following discussion we only focus on the evaluation of their proposal regarding the IVQC.

¹⁹ In addition to the AP complement (i.e., their descriptive complement) that we discuss here, there is another type of complement structure in their analysis in which the complement to the V head is a small clause (i.e., their object-oriented descriptive complement). This particular type of *V-qilai* is to account for what they name as an object-oriented descriptive reading. In this analysis, the small clause subject is a null *pro*, co-indexing with the logical object of the verb. As such, the modification can only be predicated of the logical object. Since the two types are both built on the same set of assumptions (i.e., *V-qilai* as the main predicate, a topicalized theme, and a null agentive *pro*), the following discussion will focus only on the AP-complement type but note that the counterarguments should carry over to the small-clause alternative as well.

²⁰ In dealing with the IVQC, Xiong (2013) suggests that the *V-qilai* complex is the main predicate and that it takes as its complement an AP which hosts the modification. Moreover, there are two kinds of APs in her analysis: one is a simplex AP that is filled with only the modification adjective (Xiong 2013:88); the other is a complex one that can host a null *pro* (Xiong 2013:89). In this sense, it is similar to the analysis of Shyu et al. (2013) in assuming two kinds of complement structures (see also footnote 19). However, her analysis differs from Shyu et al. in that she considers *V-qilai* to be an unergative predicate, which amounts to saying that the surface subject is actually the underlying subject of the *V-qilai* predicate. In other words, there is no unaccusativity involved. For the present purpose, note that her analysis suffers from the same challenges we raise for Shyu et al. since both treat *V-qilai* as the main predicate of the sentence that can take the same complement structures.

- (47) a. [zhe-jian shi]_i [*pro* zuo-qilai *t_i* hen qingsong].
 this-CL thing do-QILAI very relaxed
 ‘Anyone does this thing very relaxedly.’



Again, this analysis is not without its problems. First of all, it fails to provide a proper characterization of how and why the IVQC is subject to verb-type restrictions, and there is no principled account of the incompatibility of purposive clauses and agent-oriented adverbs in the IVQC if there were an agentive *pro* in the structure. Moreover, as previously discussed, the main predicate status of the verb in the V-*qilai* complex is easily falsified since elements (e.g., sentential negation *meiyou*, the focus marker *shi*, and *ye* ‘also’) that are strictly pre-verbal in Mandarin can nevertheless follow V-*qilai*, as exemplified in (48). As such, the proposed analysis is accordingly problematic.

- (48) zhe-jian shi zuo-qilai { **meiyou** / **shi** / **ye** } hen qingsong
 this-CL thing do-QILAI NEG FOC also very breezy
 ‘This thing { doesn’t do / DOES / also does } breezily.’

To summarize, in this section we discussed other alternative analyses proposed in the generative literature and demonstrated that these analyses each exhibited a number of limitations.

5. CONCLUSION

In this paper, building on arguments from obligatory modification, the distributional facts of preverbal markers, and the behavior of frequency adverbs, we have shown that the modification of the IVQC is the main predicate of the whole sentence and that the V-*qilai* complex constitutes a frame-setting clausal modifier adjunct. Moreover, within the clausal adjunct, *qilai* is incorporated with a verb of its stative version via the application of an agent deletion rule, which gives rise to the absence of agentivity and the verbal restrictions noted in the IVQC.

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漢語非人稱「V-起來」結構之句法與語意探討

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本研究以句法及語意角度探討漢語之非人稱「V-起來」結構。從一系列句法及語意的測試出發，我們主張此類句型中出現在「V-起來」後的修飾成分乃為句子的主要謂語，而「V-起來」此結構成分本身則是子句型態之修飾語，在語意上提供詮釋全句命題之框架背景設定。此一分析獲得來自修飾成分之不可省略特性及動前標記成分與頻率副詞之分布狀況等方面的支持。此外，我們同時提出，在非人稱「V-起來」子句型態修飾成分內，「起來」與衍生成之靜態動詞相結合，如此一來，便可解釋為何此類結構不具施事性及其所呈現之動詞選擇限制。

關鍵字：非人稱結構、「V-起來」、框架設定修飾語、漢語