# An Approximation to Secondary Predication Structure: A Case of V-qilai in Mandarin Chinese* 

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This study re-examines the widely studied V-qilai 'rise-come' construction in Mandarin Chinese. It first distinguishes V-qilai + predicate construction from the lexical verb qilai and -qilai as a lexical inchoative morpheme, which do not require an additional complement. In addition, three variations of the V-qilai + predicate pattern are identified according to the complement functions: namely (i) a descriptive complement, (ii) an object-oriented descriptive predicate, and (iii) a proposition clause (raising construction). These three variants are subsumed under and accounted for by the proposed uniformed secondary predication structure, while vary with their respective complement structures. In addition, the occurrences of V-qilai were drawn from Academia Sinica Corpus. Based on the above classification, it is shown that there is a far greater preponderance of canonical qilai usages over the V-qilai + complement ones, indicating that the latter patterns are still emerging in the language. In the course of the development, they utilize the secondary predication structure. Hence, the variations of the V-qilai construction should not be treated as being construction specific or idiosyncratic. Thus, the proposed analysis provides a natural and well-motivated account in terms of economy. Moreover, synchronic cline of grammaticality can be correlated with grammaticalization and subjectification, as evidenced by the occurrences drawn from corpora of Modern and Early Mandarin Chinese.

Key words: secondary predication, inchoative morpheme, descriptive complement, resultative complement, raising construction, grammaticalization, subjectification

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## 1. Introduction

The intransitive verb qi-lai in Mandarin is composed of two lexical verbs: $q i$ 'arise' and lai 'come', meaning 'arise', as shown in (1).
(1) Xiaoming qilai le.

Xiaoming rise.come Asp ${ }^{1}$
'Xiaoming has risen/gotten up.'
In addition to functioning as a lexical verb, qi-lai can be attached to another lexical verb to denote directional, inchoative or completive meanings, as shown in (2); see Chao (1968), Chang (1994), Huang \& Chang (1996), etc. The lexical meaning of rising up collocates with the action verb zhan 'stand' in (2a) to denote the event direction. Gradually this lexical directional meaning is broadened to denote an inchoative meaning as in (2b), and completive as in (2c) (Chang 1994:5):
(2) a. Xiaoming zhan-qilai le.

Xiaoming stand-rise.come Asp
'Xiaoming has stood up.'
b. Zhangsan tiao-qi wu-lai le/xiao-le qilai.

Zhangsan dance-QI dance-LAI Part/laugh-Asp QILAI
'Zhangsan starts dancing/laughing.'
c. Zhangsan jishi duo-qilai.

Zhangsan in.time hide-QILAI
'Zhangsan hid (successively) just in time.'
Qilai in the above sentences does not change the argument structure of the lexical verb. By contrast, there are three other types of V-qilai in which an extra complement is added when qilai is attached to the main verb. In the first type, termed as descriptive complement, the complement AP modifies the verb event, or attributes to the agent subject a consequent state initiated by the performing of the event. For example, sentence (3) does not primarily denote an inchoative event of laughing; rather, it describes a state (being loud hen dasheng) attributed to the agent subject when he starts laughing. Similarly, (4a) describes the state of Mary's being pretty brought about from her wearing this dress; and (4b) denotes that Mary sings very well, or the manner of Mary's singing is elegant.

[^1](3) Ta xiao-qilai hen dasheng.
he laugh-QILAI very loud
'He laughs loudly.'
(4) a. Mali chuan-qi zhejian yangzhuang-lai hen piaoliang.

Mary wear-QI this.CL dress-LAI very pretty
'Mary looks good by wearing this dress.'
b. Mali chang-qi-ge-lai hen haoting / hen youya. Mary sing-QI-song-LAI very pleasant / very elegant 'Mary sings songs so well/with elegant gestures.'

The second type refers to the object-oriented predication (OOP) case, in which the theme argument appears in the left periphery position, and is predicated with the complement phrase. The external agent role is either a null subject as in (5), or an overt one as in (6).
(5) Zhejian shi zuo-qilai hen rongyi.
this.CL matter do-QILAI very easy
'This matter, one can handles it easily.'
(6) a. Zhejian yangzhuang Mali chuan qilai hen piaoliang. this.CL dress Mary wear QILAI very pretty
'This dress, Mary looks good by wearing it.'
b. Zheshou ge Mali chang-qilai hen haoting.
this.CL song Mary sing-QILAI very good.hear
'This song was sung so well by Mary that it was pleasant to the ears.'
There exists a third type of -qilai which expresses the speaker's subjective evaluation based on direct or indirect evidence. The verbs that -qilai attaches to include perception verbs like kan 'see,' ting 'hear,' shuo 'say,' xiang 'think,' suan 'count' as shown in Cao (2004b). The speaker may infer the event based on his/her direct perception of the eventuality, as in (7a), or indirect inference that $\mathrm{s} /$ he does not directly see the eventuality as in (7b).
(7) a. Zhejian yangzhuang kan-qilai hen haokan. (direct observation) this.CL dress see-QILAI very pretty
'This dress looks pretty.'
b. Zhege anzi kan/ting-qilai bu danchun. ((in)direct perception) this.CL case see/hear-QILAI not simple
'This case doesn't sound simple.'

It has been widely studied that -qilai has undergone grammaticalization from pure lexical verbs ( $q i$ and lai) to functional morphemes (Chang 1994, Huang \& Chang 1996, Li 1999, Cao 2004b, Wang 2005a, Wang 2010, among many others). Despite the consensus about the semantic and diachronic development of -qilai, its syntactic representation is still largely debated. Several approaches have been proposed: treating -qilai as a "middle morpheme" (Sung 1994, Cao 2004b), as a "middle voice marker" (Cao 2004a, Li 1999), as a viewpoint aspectual marker (Wang 2005a). Moreover, various types of V-qilai constructions have been proposed: the middle construction (Sung 1994, Cao 2004b) or V-qilai as an unaccusative predicate (Wang 2005a) for sentences like in (5), as a raising predicate (Wang 2005b) for sensory evaluative (Lin 2008, Shyu \& Lin 2008) sentences like in (7), as a (subject) control predicate (Wang 2005b) or a conditional construction (Chang 1994) as those in (4).

Despite the various approaches that have identified the ambiguous status of V-qilai in Chinese grammar, a puzzle remains as to why there exist such idiosyncratic structures attributed solely to -qilai. As shown above, the conflation of -qilai with the verb in (1) and (2) does not affect the composition of the verb structure. It does so when a complement is composed into the verb structure, as those from (3) through (7). In consideration of the widely acknowledged grammaticalization process, it is reasonable to consider the latter types as newly emerged structures. Then a consequent question is whether this evolvement creates idiosyncratic structures or fits into the existing phrase structures in the language. ${ }^{2}$

The immediate question arises as to whether it is the V-qilai that serves as the main predicate (Secondary Predication Structure, SPS) or it is the predicate following V-qilai (Primary Predication Structure, PPS). In support for the latter approach, Gao et al. (1993) treats V-qilai as occurring in an adjunct clause (8) (cf. Liu 2007, and conditional V-qilai in Chang 1994), ${ }^{3}$ as in a sentential subject (9) or as lexicalized in a sentential subject (10).
${ }^{2}$ We do not take any a priori position with regards to whether the existing phrase structures encourage the emergence of new functions of V-qilai or whether the grammaticalized V-qilai finds its way to fit into the existing structures. We will leave this issue open here.
${ }^{3}$ Chang (1994) and Gao et al. (1993) consider (i) as conditional-qilai type. Presumably, some of Liu's (2007) examples e.g. (ii) fall into this category. We will discuss this type in detail in §3.4.
(i) Ta pao qi xinwen lai, yongqi ling ren zha-she. he run QI news LAI courage let people click-tongue 'When he covers news, the courage makes people surprised.' (Chang 1994:87)
(ii) Zuo-qi zhezhong shi lai, jushuo Zhangsan tebie yongxin. do-QI this.kind matter LAI allegedly Zhangsan especially attentive 'Once he starts doing things, Zhangsan is said to be very attentive.' (Liu 2007: \#12)
(8) Ta zuo qi shi lai hen renzhen.
he do QI thing LAI very serious
'When doing his jobs, he is very serious.' (Gao et al. 1993:108)
(9) Zheben shu mai qilai hen rongyi.
this.CL book sell QILAI very easy
'This book sells easily.' (Gao et al. 1993:112)
(10) Zhege zhuyi ting qilai hen bucuo.
this.CL idea hear QILAI very not.bad
'This idea sounds good.' (Gao et al. 1993:114)

This paper focuses on V-qilai sentences containing an additional complement predicate. While we acknowledge non-uniform structures of V-qilai sentences observed in the literature, this paper however aims to provide a principled account for these types under the approach of the Secondary Predication Structure (SPS). Specifically, the variant complements that are subcategorized for by the main predicate V-qilai include (i) a descriptive complement (as in (3), and (4), (ii) a complement predicated of the object as in (5) and (6), and (iii) a proposition clause as in (7). The paper is organized as follows. By re-examining the apparent counter-arguments against the SPS approach, §2 shows that they actually do not threaten our proposal. The proposed analysis is detailed in $\S 3$, followed by a discussion of contemporary corpus data in $\S 3.5$. Section 4 discusses a highly grammaticalized evidential use of kan-qilai 'see', which is regarded as a lexicalized evidential. Section 5 concludes our study.

## 2. Secondary predication

In Huang's (1988) discussion of Mandarin V-de construction (descriptive in (11a) and resultative in (11b)), he argues for the secondary predication structure (also see Mei 1972, 1978, Paris 1979, Zhu 1982, Li 1990, Huang et al. 2009, etc.), which considers the first verb as the main predicate whereas the second predicate as the complement, in contrast with the primary predication structure (PPS) (proposed by Chao 1968, Dragunov 1952, and supported by Tai 1973, Tang 1977, Li \& Thompson 1981, etc.), which treats the second predicate as the main predicate of the clause.
(11) a. Wo pao de hen kuai. I run DE very fast 'I run very fast.'
b. Zhangsan ku de hen lei. Zhangsan cry DE very tired 'Zhangsan crided and became very tired.'

Previous studies on V-qilai can be correlated to the debate of the PPS and SPS approaches. Wang (2005b) has treated sentences like in (4) (her "control structure") and (7) (her "raising predicate") as construing SPS. By contrast, she analyzes (12) (her "event predicate") as involving primary predication, in which the V-qilai is treated as in a sentential subject that is predicated with the predicative adjective (equivalent to (9) in Gao et al. 1993), in contrast to the other two SPS types.
(12) Zhejian yangzhuang chuan-qilai hen mafan.
this.CL dress wear-QILAI very troublesome
'It is troublesome to wear this dress.' (Wang 2005b:323)
Liu (2007) further advocates the primary predication structure for all three types. The comparison of these approaches based on the current classification is summarized in Table 1.

Table 1: A comparison of three analyses of V-qilai

|  | Descriptive (3)-(4) | Object predication (5)-(6) | Raising (7) |
| :--- | :--- | :--- | :---: |
| Gao et al. (1993) | PPS (in an adjunct clause) | PPS (in an adjunct clause) | $?$ |
| Wang (2005b) | SPS (control structure) | SPS (control predicate) | SPS (raising) |
|  | PPS (event predicate (12)) |  |  |
| Liu (2007) | PPS | PPS | PPS |

### 2.1 Negation and A-not-A questions

One of Gao et al.'s (1993) and Liu's (2007) arguments for PPS comes from the placement of negation $b u$ and the formation of A-not-A alternative question possibly construed with the second predicate as shown in (13), but not with V1 as in (14), assuming that only main verbs can be negated by $b u$ and form A-not-A question (Chao 1968).
(13) a. Zhangsan zuo-qi shi lai bu yongxin.

Zhangsan do-QI matter LAI not attentive
'Zhangsan does not handle things attentively.'
b. Zhangsan zuo-qi shi lai yong-bu-yongxin?

Zhangsan do-QI matter LAI attentive-not-attentive
'Does Zhangsan handle things attentively?'
(14)

| a. * Zhangsan | bu-zuo-qi | shi | lai | hen | yongxin. |
| ---: | :--- | :--- | :--- | :--- | :--- |
| Zhangsan | not-do-QI | matter | LAI | very | attentive |
| b. * Zhangsan | zuo-bu-zuo-qi | shi | lai | hen | yongxin? |
| Zhangsan | do-not-do-QI | matter | LAI | very | attentive |

This contrast in V-qilai sentences is reminiscent of that in V-de sentences discussed in Huang (1988). Similar to (14), V1 in (15) is not negated by bu and does not form an A-not-A question, but V2 can, as shown in (16).
a. *Tamen [[bu-pao] de hen kuai].
they not-run
b. *Tamen [[pao-bu-pao] de hen kuai]? they run-not-run DE very fast
a. Tamen pao de bu kuai.
they run DE not fast
'They don't run fast.'
b. Tamen pao de kuai-bu-kuai?
they run DE fast-not-fast
'Do they run fast?'
The above assumption should be reconsidered. Consider the directional complement -qilai morpheme in (2a), repeated below. Undoubtedly, the main verb is zhan 'stand' in (2a) and (17). However, bu can immediately precede qilai instead of the main verb; (17a) is preferred over (17b).
(2)
a. Xiaoming zhan-qilai le.

Xiaoming stand-rise.come Asp
'Xiaoming has stood up.'
(17) a. Xiaoming zhan bu qilai.

Xiaoming stand not QILAI
'Xiaoming couldn't stand up.'
b.??Xiaoming bu zhan qilai.

Xiaoming not stand QILAI
'Xiaoming couldn't stand up.'

Even if one would allow (17b), it is actually interpreted as having volition or future meaning that is not overtly expressed, as shown in (18a). Instead of $b u$, perfective
negation is expressed by mei-you 'not have' as in (18b).
(18) a. Xiaoming bu-hui/yao zhan-qilai.

Xiaoming not-will/want stand-QILAI
'Xiaoming will not/doesn't want to stand up.'
b. Xiaoming mei-you zhan-qilai.

Xiaoming not-have stand-QILAI
'Xiaoming didn't stand up.'

Moreover, the main verb in (2a) does not support an A-not-A form, as shown in (19). Rather, A-not-A is formed with the modal yao-bu-yao (20a), the perfective negation you-mei-you (20b), or proposition negation shi-bu-shi (20c).
(19)?? Xiaoming zhan bu zhan qilai? ${ }^{4}$

Xiaoming stand not stand QILAI
'Does Xiaoming stand up or not?'
(20) a. Xiaoming yao-bu-yao zhan qilai?

Xiaoming want-not-want stand QILAI
'Does Xiaoming want to stand up or not?'
b. Xiaoming you-mei-you zhan qilai?

Xiaoming have-not-have stand QILAI
'Has Xiaoming stood up or not?'
c. Xiaoming shi-bu-shi zhan qilai le?

Xiaoming be-not-be stand QILAI Part
'Is it the case that Xiaoming has stood up?'

The above discussion on lexical verb suffixed by -qilai directional complement strongly casts doubt on the assumption that only main verb can be negated by $b u$ and form A-not-A question. ${ }^{5}$ Similarly, in V-de descriptives and resultatives, it is not that V1

[^2]cannot be negated by $b u$, but it is because that $b u$ should be formed with the element in INFL (Huang 1988). Therefore, the ungrammaticality of (15) is due to the fact that there is no element in INFL supporting the negator. When it is supported by an element in INFL, such as you 'have', shi 'be', hui 'will', negative sentences as in (21) and A-not-A sentences as in (22) become well-formed.
a. Ta mei-you pao de hen kuai. he not-have run $D E$ very fast 'He didn't run fast.'
b. Ta bu-hui pao de hen kuai. he not-will run DE very fast 'He will not run fast.'
c. Ta bu-shi pao de hen kuai. he not-be run $D E$ very fast 'It is not the case that he runs fast.'
a. Ta you-mei-you pao de hen kuai? he have-not-have run DE very fast 'Did he run fast or not?'
b. Ta hui-bu-hui pao de hen kuai? he will-not-will run DE very fast 'Will he run fast or not?'
c. Ta shi-bu-shi pao de hen kuai? he be-not-be run $D E$ very fast 'Is it the case that he runs fast?'

Now we turn back to the V-qilai complement constructions. The unacceptability of (14) is due to the fact that $b u$ should form an immediate construction with an element in INFL or T, rather than with V1. When the negation can form an immediate construction with an INFL element such as verbs you 'have' or shi 'be' in (23a-b), or a modal verb hui 'will' in (23c), negative sentences or A-not-A forms become possible.
(23) a. Ta mei-you zuo-qi shi lai hen yongxin
he not-have do-QI matter LAI not attentive
(i) Ni renwei [tamen hui-bu-hui lai]?
you think they will-not-will come
'Do you think that they will come or do you think they won't?' (Huang 1988:280)
b. Ta (shi-)bu-shi zuo-qi shi lai hen yongxin he (be-)not-be do-QI matter LAI very attentive 'It is not the case that he handles things attentively./Is it the case that...?'
c. Ta (hui-)bu-hui zuo-qi shi lai hen yongxin he (will-)not-will do-QI matter LAI very attentive 'He will not handle things attentively./Will he...?'

In short, the grammatical negative and A-not-A sentences in (23) lend further support to the proposed SPS analysis.

### 2.2 Predicate type and aspect le

V-qilai sentences can be comparable with V-de resultative/descriptive complement sentences with respect to the restriction of the main predicate. Namely, V1 does not allow accomplishment and achievement verb situations in both constructions, though stative verb is possible in V-de complement sentences:
a. Zhangsan xin-de hen jianding.
Zhangsan believe-DE very firm
'Zhangsan believes firmly.'
b. Zhangsan pao-de hen kuai. (activity)
Zhangsan run-DE very fast
'Zhangsan runs fast.'
c. *Zhangsan chi-wan-de hen kuai (accomplishment)
Zhangsan eat-finish-DE very fast
d. *Zhangsan fangzi gaihao-de hen kuai (achievement)
Zhangsan building build.finish-DE very fast

Liu (2007) notes that -qilai can only occur with an activity or an inchoative verb.
(25) a. *Zhangsan xiangxin-qi ni lai hen jianding (state)

Zhangsan believe-QI you LAI very firm
b. Zhangsan pao-qi bu lai hen kuai. (activity)

Zhangsan run-QI step LAI very fast
'Zhangsan runs fast.'
c. *Zhangsan chi-wan-qi fan lai hen kuai (accomplishment)

Zhangsan eat-finish-QI rice LAI very fast

$$
\begin{array}{rllllll}
\text { d. * Zhangsan } & \text { dao-qi } & \text { jia } & \text { lai } & \text { hen } & \text { kuai } & \text { (achievement) } \\
\text { Zhangsan } & \text { arrive-QI } & \text { home } & \text { LAI } & \text { very } & \text { fast } &
\end{array}
$$

Although the perfective aspect $l e$ affixation is often used to test verbhood and to denote a bounded event (Li \& Thompson 1981), Huang (1988) notes that the ungrammaticality of V-de in (26) is not ascribed to V1 being not the main predicate. Rather it is because that when the activity verb is followed by a descriptive/resultative complement, the verb itself does not denote a bounded event. The eventuality is contributed by the compositionality of the verb and the complement, resulting in the 'complex stative constructions'.

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(26) *Zhangsan pao-le de hen kuai
    Zhangsan run-Asp DE very fast
    'Zhangsan ran very fast.'
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Similarly, in (27), not only -lai has grammaticalized to function as a resultative morpheme, implicating a spatial end point (Liu 2012), -qi serves the similar function; hence the complex V-qilai has already denoted a change of state. The V-qilai + complement constitutes a complex stative construction without the need of the aspect $l e .{ }^{6}$

$$
\begin{array}{rlll}
\text { (27) } * \mathrm{Ta} & \text { ku-le-qilai } & \text { hen } & \text { chou } \\
\text { he } & \text { cry-Asp-QILAI } & \text { very } & \text { ugly }
\end{array}
$$

A detailed comparison between V-de and V-qilai is beyond the scope of this paper. What we want to emphasize here is that the evidence used to argue for PP is only apparent in both constructions; hence, they do not pose problems to the proposed SP approach.

## 3. The analysis

### 3.1 Descriptive complement

The first type concerns the descriptive complement as shown in (28) through (30), in which the complement phrase modifies the event. Example (28) describes the way that Zhangsan handles things being serious. In (29) Mary sings songs in a way that is pleasant to ears. Sentence (30) denotes the manner of Mary's speaking English being fluent.

[^3](28) Zhangsan zuo-qi-shi-lai hen renzhen.

Zhangsan do-QI-matter-LAI very serious
'Zhangsan handles things seriously./The way Zhangsan works is very serious.'
(29) Mali chang-qi-ge-lai hen haoting.

Mary sing-QI-song-LAI very pleasant
'Mary sings songs very well.'
(30) Mali shuo-qi-Yingwen-lai hen liuli.

Mary speak-QI-English-LAI very fluent
'Mary speaks English fluently.'

The object in (28) through (30) can be further topicalized, as illustrated in their respective counterpart from (31) through (33).
(31) Zhezhong shi, Zhangsan zuo-qilai hen renzhen. this.kind matter Zhangsan do-QILAI very serious 'This kind of things, Zhangsan handles them seriously.'
(32) Zheshou ge, Mali chang-qilai hen haoting. this.CL song Mary sing-QILAI very pleasant 'Mary sings this song very well.'
(33) Yingwen, Mali shuo-qilai hen liuli, (Fawen jiu buxing le). English Mary speak-QILAI very fluent French then cannot Part 'As for English, Mary speaks it fluently, (but not French).'

Consequently, the descriptive complement of (30) is represented as in structure (34).


We propose that the verb shuo 'speak' is raised from V to the $v$ to form a verbal complex V-qilai. It is because that -qilai has grammaticalized to a light verb that does not possess a full range of the verb properties (cf. Lin 2001). The object can be topicalized to the left peripheral Topic position as in (33). When the object stays in-situ, a split of $q i$ and lai is obligatory. As noted by Liu (2007), -qilai, as a single morpheme and not being prominent enough, cannot form a prosodic foot independently. In order to follow foot formation rule (e.g. Shih 1986), the split of qi and lai and suffixation to the verb and the object respectively is applied at PF-level, forming two prosodic foot units and each containing a content morpheme as the stressed syllable(s).

The proposed structure in (34) is well motivated, reminiscent of the descriptive Vde construction as proposed by Huang (1988), Huang et al. (2009), in which the verb merges with a descriptive AP. Instead of creating specific structures ascribing to V-qilai, the emergence of extended V-qilai sentences approximates their structures to those of their similar kin, such as the descriptive V-de here. This is evidenced by the parallel Vde sentences from (35) through (37), and the V-qilai ones from (31) through (33), respectively.
(35) Zhezhong shi, Zhangsan zuo-de hen renzhen. this.kind matter Zhangsan do-DE very serious 'This kind of things, Zhangsan handles them seriously.'
(36) Zheshou ge, Mali chang-de hen haoting. this.CL song Mary sing-DE very pleasant 'This song, Mary sings it pleasantly.'
(37) Yingwen, Mali shuo-de hen liuli, (Fawen jiu buxing le). English Mary speak-DE very fluent French then cannot Part 'As for English, Mary speaks it fluently, (but not French).'

The difference between the V-de and V-qilai + complement lies in the function of -de and -qilai. In the V -de manner sentences, the pure grammatical morpheme -de introduces a manner adverbial phrase. As for V-qilai sentences, due to the residual inchoative meaning of the grammaticalized -qilai, it denotes a meaning similar to get to; so (28) expresses the serious manner when Zhangsan gets to work. ${ }^{7}$

[^4]The structure in (34) can further accommodate cases that contain a null subject, as illustrated in (38) and (39). Sung (1994) has treated V-qilai as a middle predicate, in which the theme argument is raised to the subject position; also see Cao (2004b). However, if unaccusative V-qilai is the only analysis, one cannot explain the above descriptive complement cases, and (38) and (39), in which overt subjects are also possible.
(38) Zhetiao lu pro/wo/ta zou-qilai bufeili.
this.CL road /I/he walk-QILAI effortless
'Lit.: Someone/I/He walk(s) on this road effortlessly.'

| Zhejian | shi | pro/wo/ta | zuo-qilai | hen | qingsong. |
| :--- | :--- | :---: | :---: | :---: | :---: |
| this.CL | job | /I/he | do-QILAI | very | relaxedly |
| 'Anyone/I/He does/do things very relaxedly.' |  |  |  |  |  |

The proposed analysis can also account for Wu's (2005b) "event" V-qilai predicate, as in (12) and analyzed as in (40). Being troublesome describes the situation after someone's wearing this dress. Structure (34) allows a null subject as in (40), as well as an overt one as in (41).
(40) Zhejian yangzhuang pro chuan qilai hen mafan.
$=(12)$ this.CL dress wear QILAI very troublesome
a. Mali chuan-qi-yangzhuang-lai hen mafan.
Mary wear-QI-dress-LAI very troublesome
'The way that Mary wears dresses is troublesome.'
b. Zhejian yangzhuang, Mali chuan-qilai hen mafan. this.CL dress Mary wear-QILAI very troublesome

In addition, structure (34) correctly predicts that the temporal adverb tongchang 'usually' occurs in positions higher than $\nu \mathrm{P}$, as illustrated in (42a) whereas the
(ii) ??Mali shuo Yingwen shuo-qilai hen liuli.

Mary speak English speak-QI LAI very fluent
In V-de sentences, -de originates from the post-verbal adverbial complement and has to fuse with the verb, according to Huang et al. (2009). However, [V-de] cannot move together because they do not form a structural constituent (p.89), as indicated in (ia). After the verb raises to $v$, there should be no object blocking its fusion with -de; hence, verb copying is called for By contrast, unlike -de being originated in the complement phrase, -qilai is originated in $v$. When the object stays post-verbally, after the merger, the V-qi object-lai form two prosodic foot units as mentioned above (Liu 2007) and shown by the boundary "\#" signs in ( $30^{\prime}$ ). Hence, the parallelism between V-qilai and V-de still obtains.
(30') Mali\# shuo-qi\# Yingwei-lai\# hen liuli\#
Mary speak-QI English-LAI very fluent
evidential adverb xianran 'evidently' may occur in pre-VP positions as in (42b). This contrast is parallel with cases in V-de sentences in (43). ${ }^{8}$
(42) a. (Tongchang) zhezhong shi, (tongchang) Zhangsan usually this.kind matter Zhangsan (tongchang) zuo-qilai ??(tongchang) hen renzhen. do-QILAI very serious
'This kind of things, Zhangsan usually handles them seriously.'
b. (Xianran) zhezhong shi, (xianran) Zhangsan (xianran) zuo-qilai evidently this.kind matter Zhangsan do-QILAI (xianran) hen renzhen. very serious
'This kind of things, Zhangsan usually handles them seriously.'
(43) a. (Tongchang) Mali (tongchang) pao-de *?(tongchang) hen kuai. usually Mary run-DE very fast 'Mary usually runs fast.'
b. (Xianran) Mali (xianran) pao-de (xianran) hen kuai. evidently Mary run-DE very fast 'Evidently Mary runs very fast.'

### 3.2 Object-oriented descriptive (OOD) complement

In the previous section, we have shown that the descriptive complement in V-qilai

[^5](i) Zhangsan zuo-qi shi-lai jüshuo/yinggai bu tai kekao. Zhangsan do-QI matter-LAI allegedly/should not too reliable 'Zhangsan is said/seems to be not so reliable when he is handling things.'
Note that jüshuo or yinggai may also occur after V-de provided by a pause between V-de and its complement, expressing added information to soften speaker's stance.
(ii) Ta pao-de yinggai/jüshuo bu tai kuai.
he run-DE should/allegedly not too fast
'It is said/It seems that he doesn't run fast.'
Likewise, there is a pause between V-qilai and the remaining elements. This suggests that evidential adverbs may target lower positions in Chinese, when pragmatic contexts permit, e.g., xianran 'apparently' in (iii).
(iii) Ta pao-de xianran bu gou kuai [htp://www.my285.com/yq/m/mengluo/gxfx/19.htm](htp://www.my285.com/yq/m/mengluo/gxfx/19.htm) she run-DE evidently not enough fast 'Apparently she doesn't run fast enough.'
sentences modifies the whole predicate, hence it is predicated of the subject as in (29), and the object may be topicalized resulting in (32) represented as in (32'), repeated below.
(29) Mali chang-qi-ge-lai hen haoting. Mary sing-QI-song-LAI very pleasant
(32) Zheshou ge, Mali/pro chang-qilai hen haoting. this.CL song Mary sing-QILAI very pleasant 'Mary sings this song very well.'
(32') Zheshou ge e , Mali/pro chang-qilai $\mathrm{t}_{\mathrm{i}}$ hen haoting.
In addition to this reading, sentence (32) may be interpreted as the complement hen haoting predicated of the object zheshou ge 'this song', rendering as Mary sings this song so well that it is pleasant to hear. ${ }^{9}$ Consequently, we propose the second structure for the object predication reading of (44), as represented in (45), in which the verb selects a small clause containing a pro co-indexed with the matrix object, and an adjectival phrase. Furthermore, the object is topicalized.
(44) Zheshou $\mathrm{ge}_{\mathrm{i}}$ Mali chang-qilai $\mathrm{t}_{\mathrm{i}} \quad$ [pro $\mathrm{o}_{\mathrm{i}}$ hen haoting]. this.CL song Mary sing-QILAI very pleasant 'This song, Mary sings (it) so well that it is pleasant to the ears.'


[^6]Sentence (46) illustrates another example of the OOD case, in which the subject may be overt or null; the aromatic fragrance is attributed to the topicalized object zheduo hua 'this flower', not the agent subject. A manner adverb hen zixi 'very carefully' thus is not appropriate here, unless it is intended to describe the manner of Zhangsan's smelling the flower.
(46) Zheduo hua ${ }_{i}$ pro/Zhangsan wen-qilai $t_{i}$ [pro ${ }_{i}$ hen xiang] /*[hen zixi]. this.CL flower Zhangsan smell-QILAI very aromatic/ very carefully 'This flower (Zhangsan) smells good/*carefully.'

This account naturally explains the OOD reading in (5), in which rongyi 'easy' is predicated of the object zhejian shi 'this matter,' as shown below.
(47) Zhejian shi $_{\mathrm{j}} \quad$ pro $_{\mathrm{i}}$ zuo-qilai [pro** ${ }_{\mathrm{i} j}$ hen rongyi].
this.CL matter do-QILAI very easy
'This matter, one can handle it easily.'
A piece of evidence for the topicalized object is drawn from (48), in which the quantifier dou 'all' quantifies over the preposed object zhexie ge 'these songs.'
(48) Zhexie ge $\mathrm{i}_{\mathrm{i}}$ Mali dou chang-qilai $\mathrm{t}_{\mathrm{i}} \quad$ [pro $\mathrm{i}_{\mathrm{i}}$ hen haoting]. these song Mary all sing- QILAI very pleasant 'Mary sings these songs so well that they are all pleasant to ears.'

It is further suggested that the object pre-posing is required to derive the intended object predication. In contrast with (46), sentence (49) is unacceptable when the object remains in situ.
(49)?? Zhangsan wen-qi zhexie huaa - lai $\quad\left[\right.$ pro $_{i}$ hen xiang]. Cf. (46) Zhangsan smell-QI these flower-LAI very aromatic

We have shown in §3.1 that an in situ object is suffixed with -lai morpheme in order to form an independent prosodic foot unit. Although the object-lai complies with the prosodic rule, it becomes a non-canonical referential DP. For an object to be predicated with the complement AP, it needs to be referential (e.g. Huang 2006) here or as a 'force recipient' (e.g. adopting Rappaport Hovav \& Levin 2001 in Huang 2006). Consequently, in order to function as a fully referential DP, the object is pre-posed to the left peripheral position to function as a topic for the following clause to elaborate on. ${ }^{10}$

[^7]In short, the proposed structures of (34) and (45) are schematized respectively as in (50) and (51).
(50) a. Subj + V-qi Obj.-lai +AP
b. Obj. + Subj. + V-qilai +AP
(51) a. \#Subj + V-qi Obj. ${ }_{\mathrm{i}}$ lai + [sc pro $_{\mathrm{i}} \mathrm{AP}$ ]
b. $\mathrm{Obj}_{\cdot \mathrm{i}}+$ Subj. +V -qilai $\mathrm{t}_{\mathrm{i}}+\left[\begin{array}{l}\left.\text { sc } \text { pro }_{\mathrm{i}} \mathrm{AP}\right]\end{array}\right.$

The former corresponds to the descriptive complement discussed in §3.1. The complement AP either describes the manner of the subject's performing of the event, or a situation

It is widely known that Chinese allows subject and object V-de resultative readings, as shown by the ambiguous readings in (ia) and (ib).
(i) Zhangsan qi-ma qi-de pro hen lei. Zhangsan ride-horse ride-DE very tired
'(a) Zhangsan rode a horse (and became) tired.' (subject result)
'(b) Zhangsan rode a horse and got the horse tired.' (object result)
The reading of (ia), on the one hand, has been observed (e.g. Huang 2006) to violate Simpson's (1983) Direct Object Restriction (DOR), which states that the result is predicated of an object in (iia), not the subject (iib).
(ii) a. John hammered the metal flat.
b. * John hammered the metal tired. (under the resultative reading)

On the other hand, the reading of (ia) causes a problem for the Principle of Minimal Distance (PMD) (Rosenbaum 1967; or Generalized Control Rule (GCR) in Huang 1989), because the pro is controlled by the matrix subject, intervened by the object noun phrase, as PMD and GCR require the null element to be co-indexed with its closest antecedent.
Huang (2006) suggests that the DOR and PMD violations are alleviated when the object is not a fully referential argument or a 'force recipient' (adopted from Rappaport Hovav \& Levin 2001), e.g., as a bare noun in (i). When the object is a definite referential argument as in (iii) and a topicalized one as in (iv), object resultative V -de is rendered. In (iii) and (iv), the referential object that horse qualifies as a force recipient: what Zhangsan did to it was making it become tired.
(iii) Zhangsan qi-de $\left[\begin{array}{ll}\text { neipi } & \mathrm{ma}\end{array}{ }_{\mathrm{i}}\right.$ pro $_{\mathrm{i}}$ hen lei. Zhangsan ride-DE that.CL horse very tired
(iv) Neipi mai, Zhangsan qi-de $\mathrm{t}_{\mathrm{i}} \quad \operatorname{pro}_{\mathrm{i}}$ hen lei. that.CL horse Zhangsan ride-DE very tired
In this paper, we assume that the PMD and DOR problems caused by the subject resultative structure do not arise in V-qilai. It is because that the AP either expresses the manner of the subject's performing of the event, or describes a situation that has been initiated, denoted by the verb and the inchoative meaning of -qilai. These two situations can be represented by the proposed (34), in contrast with V-de, which requires descriptive V-de and subject resultative structures. Also see §3.2.1. We owe this clarification to one of the anonymous reviewers.
that has been initiated by the subject, denoted by the verb and the inchoative meaning of -qilai. Topicalizing the object does not affect the interpretation. The schema in (51) represents the object predication cases, and implicates a preference for object topicalization, which further disambiguates it from (50b). It has been shown that the matrix subject may be a null pronoun due to the fact that the pronoun agent is possible to recover in these two constructions. In §3.3, we will present the third type, which cannot recover the agent null pronoun and the V-qilai is grammaticalized into an ergative-like predicate.

### 3.2.1 Subject predication

Before turning to the evidential V-qilai, a note should be made with respect to the unavailability of subject predication in (45). In the previous section, we mainly concern about the object predication V-qilai cases. One might wonder if subject predication is also possible, seeing that V-de resultatives may be ambiguous between subject and object result readings as in (52); also see fn. 10 .
(52) Zhangsan qi-ma qi-de hen lei. --resultative V-de Zhangsan ride-horse ride-DE very tired
'(a) Zhangsan rode a horse (and became) tired.' (subject result)
'(b) Zhangsan rode a horse and got the horse tired.' (object result)

As for V-de manner complement, the manner complement only modifies the event attributed to the agent.
(53) Zhangsan qi ma qi-de hen kuai. --manner V-de Zhangsan ride horse ride-DE very fast
'Zhangsan rides horses very fast.'

It is suggested that structure (34) accommodates the subject predication V-qilai sentences, in contrast with V-de, which utilizes manner and resultative constructions. It is because that the morpheme -qilai intrinsically denotes inchoativity, implying that the event denoted by the verb has been initiated. Hence, the adverbial can be used to modify the verb action or the situation that has been initiated. The former use may be patterned with the manner modifier, and the latter use may be likened to the (subject-oriented) resultative phrase in the sense that it modifies an inchoative event. Consequently, the V-de subject resultative structure is not applied to V-qilai.

The lack of the structure likened to V-de subject resultative in V-qilai is further supported by the lack of the causative resultative structure in V-qilai. As noted by

Huang (1988), Huang et al. (2009) among many others, the thematic object in a V-de subject resultative as in (54) can be raised to the subject position functioning as a grammatical subject in (55). The thematic subject of the main verb then becomes the causee (grammatical object of the main verb) that is further predicated with the resultative complement. This is possible when the main verb is raised to merge with a CAUSE light verb, which in turn feeds the raising of the thematic object to the grammatical subject position.
(54) $\mathrm{Wo}_{i}$ chang ge chang-de [proi luo-le lei]. --subject resultative I sing song sing-DE shed-Asp tear 'Singing that song made me shed tears.'
(55) Na-shou ge $\mathrm{j}_{\mathrm{j}}$ chang-de $t_{\mathrm{j}} \mathrm{wo}_{\mathrm{i}}\left[\right.$ pro $_{\mathrm{i}}$ luo-le lei]. that.CL song sing-DE I shed-Asp tear 'Singing that song made me shed tears.' (Huang et al. 2009:72)

As for V-qilai sentences shown above, the verb raising to form a causative predicate is not employed; hence, it does not give rise to the above causative resultative counterpart.

| (56) * Na-shou | ge | chang-qilai | wo | luo-le | lei. |
| :---: | :--- | :--- | :--- | :--- | :--- |
| that.CL | song | sing-QILAI | I | shed-Asp | tear |

### 3.3 Evidential V-qilai

In addition to the above two types of V-qilai, there exists another structure that is termed as evidential V-qilai. Examples in (57) denote speaker's subjective evaluation of situations that are inferred from direct or indirect evidence drawn from speaker's perception, and they are usually expressed by the sensory verbs such as seeing or hearing. It is proposed that -qilai has been grammaticalized into a pure functional morpheme, and its conflation with the perception (transitive) verb (kan 'see', ting 'hear', shuo 'say', xiang 'think', suan 'count' in Cao 2004b) has coerced a reanalyzed complex verb that is deprived of its canonical functions of assigning external theta role and Accusative Case (e.g., Li 1990). Consequently, it falls into the so-called raising predicate (Chomsky 1981). Take (57a) for an example: the complement predicate hen gui 'very expensive' cannot be meant to modify the action of seeing. Moreover, the theme argument attributed to by the AP property is not derived from the initiation of the main verb action. Namely, the dress being expensive is not a consequent state of someone's looking at it, in contrast with the cases in §3.2. Rather, (57a) denotes speaker's subjective evaluation of the dress from direct sources in context. Similar to the English translation: 'this dress
looks expensive,' kan-qilai may pattern with English raising predicate look or sound in (58) in the sense that the theme (object) argument of the main predicate is obliterated. Rather, what is perceived or evaluated is a proposition, denoted by the embedded clause.
(57)
a. Zhejian yangzhuang kan-qilai hen gui.
this.CL dress see-QILAI very expensive
'This dress looks expensive.'
b. Zhege zhuyi ting-qilai bucuo.
this.CL idea listen-QILAI not.bad
'This idea sounds O.K.' (Gao et al. 1993:107-108)
(58) a. This dress looks pretty.
b. The story sounds interesting.

Adapting from the raising analysis to the evaluative V-qilai from Wang (2005b) and Shyu \& Lin (2008), we propose the structure in (59) for (57a), in which the evaluative V-qilai has been grammaticalized to a one-place predicate that takes a proposition argument, and the embedded subject is raised to the matrix subject. Structure (59) differs from previous two types of V-qilai in that the conflated evaluative V-qilai here desists from the syntactic V-to-v raising. It is lexically formed and requires a proposition complement.
(59) [TP [Zhejian yangzhuang] $]_{j}$ kan-qilai $\left[{ }_{\text {TP }} t_{j}\right.$ hen gui]].

The subject of the embedded clause in (59) is optionally raised to the subject of the main predicate; compare ( $57 \mathrm{a}-\mathrm{b}$ ) with ( $60 \mathrm{a}-\mathrm{b}$ ) respectively. This optionality may be due to the weak EPP feature that does not require the subject to be checked (e.g., Chomsky 1995) or the lack of $\phi$-feature agreement to be checked (Lin 2011).
(60)
a. Kan-qilai [zhejian yangzhuang] hen gui.
see-QILAI this.CL dress very expensive
b. Ting-qilai [zhege zhuyi] bucuo.
listen-QILAI this.CL idea not.bad

Evidential V-qilai as lexically conflated verb is further supported by the impossibility of inserting an object between -qi and -lai, vs. cases in §3.1.

| (61) * Kan-qi | zhejian | yangzhuang-lai | hen | gui. |
| ---: | :--- | :--- | :--- | :--- |
| see-QI | this.CL | dress-LAI | very | expensive |

One distinction between (59) from (45) is that in the former there is no external argument projected, whereas in the latter types the external argument may be a null pronoun or an overt agent subject. Hence, when the complement AP is able to be predicated of the object and serve as a consequent state that has been derived by the main verb, a sentence like (62) is ambiguous. The reading of (62a) corresponds to (45), referring to the state of being pretty is perceived after the subject's looking at the dress. The main verb in (45)=(62a) still maintains its thematic argument assigning functions, and the complement predicate is a consequent state of the action that has been done to the theme argument by a null agent subject. ${ }^{11}$ However, the evidential reading of (62b) does not make any specific reference to the looking event by a subject agent; rather, it simply denotes the speaker's evaluation of this dress being pretty.

$$
\begin{array}{lllll}
\text { Zhejian } & \text { yangzhuang } & \text { kan-qilai } & \text { hen } & \text { piaoliang. }  \tag{62}\\
\text { this-CL } & \text { dress } & \text { see-QILAI } & \text { very } & \text { pretty }
\end{array}
$$

a. Zhejian yangzhuang ${ }_{i}$ pro kan-qilai $\mathrm{t}_{\mathrm{i}}\left[\right.$ pro $_{\mathrm{i}}$ hen piaoliang]. $=(45)$
'This dress, people look at it and think it pretty.'
b. Zhejian yangzhuang ${ }_{i}$ kan-qilai [ $\mathrm{t}_{\mathrm{i}}$ hen piaoliang]. $=(59)$
'This dress looks pretty.'
Previous middle construction that only allows the subject-hood of the theme argument fails to account for cases where the agent subject can still be recovered. Besides, the middle construction approach is oblivious to descriptive verbal modification function of the complement phrase. On account for these factors, the proposed three-way distinctions are justified.

This analysis is in line with our previous SPS analysis in the sense that V-qilai functions as the matrix predicate. It can be negated for questioned by an A-not-A form when there is an available INFL/T element.
(63) [Zhejian yangzhuang $]_{i}$ mei-you/(shi-)bu-shi kan-qilai hen haokan./? this.CL dress not-have/(be-)not-be see-QILAI very pretty
'This dress doesn't look pretty./Does this dress look pretty?'

The speaker's inference in the evidential V-qilai can be drawn from direct observation, such as (64a), in which the speaker judges the hearer to be sick by looking

[^8]at his complexion. In (64b), the selling of the book is not necessarily witnessed by one's own eye, e.g., directly observing all the instances of book-selling events; rather, the speaker may draw the inference from various contextual indirect sources, e.g. hearsay or being out of stock at bookstores. Similarly, in (64c) the speaker judges someone else's innocence based either on direct appeal from that person, on other sources or hearsay.
a. Kan-qilai ni shengbing le. look-QILAI you sick Part 'You look sick.'
b. Kan-qilai shu mai-de hen hao.
look-QILAI book sell-DE very good
'It seems that the books sold well.'
c. Ting-qilai ta shi wugu-de.
hear-QILAI he be innocent
'Lit: (It) sounds that he is innocent.'

Furthermore, among the perception verbs, the verb of seeing kan is particularly singled out to serve typical properties of evidentiality. ${ }^{12}$ Evidentiality, termed by Jakobson (1957; see the summary of development of the term by W. Jacobsen 1986), is known as stating the "existence of a source of evidence for some information; this includes stating that there is some evidence, and also specifying what type of evidence there is" (Aikhenvald 2003:1). The evidence obtained is generally categorized into two types: evidence from direct sources or indirect inference; see Anderson (1986), Palmer (1986, 2001), etc. The use of verb kan 'see', to which -qilai is suffixed, is intended to establish credibility of the evaluation by implicated direct or indirect evidence. We will return to this point in §4.

In short, we have identified three sub-types of V-qilai + complement that are subsumed under the secondary predication structure. They emerge from the canonical intransitive directional verbs $q i$ and lai, and the inchoative use of the $\mathrm{V}+q i l a i$. Moreover, we show that the emergence of the V-qilai + complement pattern does not proliferate new structures; rather, it approximates to the existing structures in the grammar. As the

[^9]V-de + complement structure is prevalent in Chinese, it is plausible that V-qilai adjusts itself to approximate structures; namely the SP (Secondary Predication) structure. In the following section, we demonstrate that the so-called non-matrix V-qilai should not be confused with the V-qilai + complement discussed here.

### 3.4 Conditional V-qilai?

As mentioned in section one, in addition to the V-qilai + complement pattern, there exist other two types that do not take a complement phrase: directional and its derived inchoative uses of V-qilai as in (1) and (2) respectively. In this section we demonstrate that the so-called non-matrix V-qilai (conditional in Gao et al. 1993, Chang 1994, adverbial clause Liu 2007) can be subsumed under the inchoative function of -qilai as in (2); hence, they should be separated from the V-qilai + complement structures in discussion. In other words, the directional and inchoative V-qilai sentences do not require a complement if the lexical verbs are unergative verbs. This view is further empirically supported by the data collected from Academia Sinica Corpus to be discussed in turn.

Sentence (65) illustrates the inchoative use of -qilai: mang-qilai meaning became busy. Note that while the addition of qilai brings a more vivid image of the inchoativity than that without, it does not affect the argument structure of the lexical mang 'busy' predicate. There is no additional complement; hence, it is possible to omit -qilai.
(65) Laoshi yisheng ling xia, dajia jiu kaishi mang-le qilai, teacher one.sound order command everyone then begin busy-Part QILAI youde qu chantu, youde ban tukuai.\& ${ }^{13}$ some go shovel.dirt some move brick 'After Teacher commanded the order, everyone got busy; some shoveled dirt, and some moved bricks.'

In (66) and (67), the inchoative mang-qilai occurs in a subordinate clause. Likewise, -qilai does not affect the argument structure of mang, and it can be omitted, e.g. (66b) and (67). Sentence (67) is introduced by an overt temporal adjunct complementizer de shihou 'at the time of'.
(66) a. Ta mang-qilai, lian fan ye keyi bu chi.\& he busy-QILAI even rice also can not eat. 'When he gets busy, he doesn't even eat meals.'

[^10]b. Daren yi mang(-qilai) jiu hen rongyi hulue (yao xijiaomanyan). \& adult one busy-QILAI then very easy ignore (need chew.slowly) 'Once adults get busy, (they) tend to forget to chew foods carefully.'
(67) Dayu... mang(-qilai) de shihou, lu-guo ziji de jia-men, Dayu busy-QILAI DE time pass-Exp self Gen home dou bu ken jin-qu.\&8
all not will enter
'Dayu... when he was busy and passed by his house, he didn't enter it.'
Consider the inchoative use of V-qilai in (68) and (69). The matrix verb xiang 'think, remember' selects a DP object, and the use of -qilai emphasizes the coercion process. The inchoative xiang-qilai in (69a) occurs in a subordinate clause meaning 'when I think of it.' The subordination structure is not resulted form the attachment of -qilai to the verb, because the structure does not alter when -qilai is replaced with another resultative morpheme such as dao 'arrive' to form a resultative compound as in (69b). Therefore, we will treat this type as a case of the inchoative use of V-qilai.

| (wo) xiang-qilai | wo | yiqian | de | shihou.28 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| I think-QILAI I past Gen | moment |  |  |  |
| 'I start to remember my past moments.' |  |  |  |  |

$\begin{array}{lllll}\text { a. } & \text { Xianzai } & \text { xiang-qilai } & \text { haishi } & \text { hen } \\ \text { now } & \text { kepa. } \mathscr{~} \\ \text { think-QILAI } & \text { still } & \text { very } & \text { scared }\end{array}$ 'When I think of (it) now, I still feel scared.'
b. Xianzai xiang-dao haishi hen kepa. now think-arrive still very scared 'When I think of (it) now, I still feel scared.'

In short, the so-called conditional V-qilai (in Gao et al. 1993) is actually subsumed under the existing subordination structure in the language without proliferating a distinct structure solely ascribed to the "conditional V-qilai".

### 3.5 Corpus data

The section presents the occurrences of V-qilai collected from the written Academia Sinica Corpus. Among the total 1494 tokens found, they were categorized into five types: (i) lexical, as in (70), (ii) inchoative -qilai in the matrix clause in (71) and in the subordinate clause in (72)-(74), (iii) descriptive complement, as in (75), (iv) objectoriented descriptive (OOD) complement, as in (76), and (v) evidential, as in (77). As
demonstrated in Table 2, type (ii) accounts for the majority of the total occurrences ( $84.4 \%$ ), $75 \%$ of which were found in the matrix clauses whereas $9.4 \%$ of which in the subordinate clauses.

Table 2: Occurrences of V-qilai from the Academia Sinica Corpus

| V-qilai | (i) lexical | (ii) inchoative | (iii) descriptive <br> complement | (iv) OOD | (v) evidential | Total |
| :--- | :--- | :--- | :---: | :---: | :---: | :---: |
| Token | 145 | 1120 (Matrix) | 42 | 18 | 27 | 1493 |
|  |  | 141 (Subordinate) |  |  |  |  |
|  | $9.7 \%$ | $75 \% / 9.4 \%(84.4 \%)$ | $2.8 \%$ | $1.2 \%$ | $1.8 \%$ | $100 \%$ |

--Type (i) lexical qilai verb:
(70) Wo meitian liudianzhong qilai.月8

I everyday six-o'clock rise.come
'I get up at six o'clock everyday.'
--Type (ii) directional/inchoative in the matrix clause:
(71) a. Ting-le wo de wen-hua, ta ... tiao-le qilai.\& listen-Asp I Gen question he jump-Asp QILAI 'Upon hearing my questioning, he jumped up.'
b. Meimiao de yinyue ... xinli ... ye ... yukuai-qilai.\& beautiful Gen music heart also joyful-QILAI 'Listening to the beautiful, I become joyful.'
--Type (ii) directional/inchoative in the subordinate clause:
(72) a. ...ni yu ta yi tan-qilai, cai zhidao ta naojin xin-de-hen. \& you and she one talk-QILAI then know she brain very new 'When you talk to her, you then know that she is up-to-date.'
b. Ta yi fa-qi piqi-lai po-wei fengkuang.\& he one stir-QI temper-LAI slightly crazy. 'When he gets angry, he becomes crazy.'

Among the 141 subordinate V-qilai, there are 56 cases of bi(jiao)-qilai 'compare'.
(73) Gen tamen bi-qilai, wo shizai tai xingfu le. $\neq$ with them compare-QILAI I really too blessed Part 'Compared to them, I am very blessed.'
-Qilai in this type may be omitted in cases where they denote after. It can also be followed by yihou, zhihou 'after', as shown in (74). Thus, previous analysis of labeling a distinct conditional/subordinate V-qilai construction would aim at the wrong direction. It is not -qilai that contributes the subordination. Rather, this type of -qilai functions as its canonical inchoative morpheme that occurs in subordinate clauses, like other lexical verbs do.
(74) a. ...dajia da(-qilai) le zhihou, ...ta jiu ganjing lai quanjia.\& fight hit-QILAI Asp after he then quickly come stop 'After they started fighting, he came to stop them immediately.'
b. Kaizhang-qilai cai mai-chuqu liangsantiao kuyaodai.\& open-QILAI just sell-out two.three.CL pant-belt 'After (he) opened the store, he only sold two or three pants belts.'
--Type (iii): V-qilai + descriptive complement:
(75) a. Zhihui gao de ren du-qi shu-lai bijiao qinsong. \& wisdom high Gen person read-QI book-LAI relatively easy 'Intelligent people read books relatively easily.'
b. (Ta) zuo-qi shi-lai xixin you you jihua. $\neq$ she do-QI matter-LAI careful and have plan 'She handles things carefully and in an organized way.'
--Type (iv): object-oriented descriptive predicate:
(76) a. (Nage dongxi)... shiyong-qilai bei-gan qingshuang-shushi. At that.CL thing use-QILAI double-feel fresh-comfortable 'Using that thing makes one feel fresh.'
b. (Nage huazhuangpin) shiyong-qilai qingshuang, bu nianni.\& that.CL cosmetics apply-QILAI fresh not sticky 'That cosmetics is fresh.'
--Type (v) evidential V-qilai:
(77) a. Shishi duanju kan-qilai yijing shi zongyijiemu zhuliu.\& news event show see-QILAI already be variety.show mainstream 'It seems that news event shows have become the mainstream of the variety shows.'
b. Lixiang zhuiqiu ting-qilai hen yaoyuan. $\mathscr{H}$
ideal pursuit hear-QILAI very far
'Pursuing the ideal sounds very far.'
In short, Table 2 has demonstrated that the lexical inchoative -qilai has dominated the usage. On the contrary, the extended usage V-qilai + complement structures are far less frequent. In addition, we further surveyed the written texts in Early Chinese particularly in Min and Qin periods (from $17^{\text {th }}$ century) from the Academia Sinica Tagged Corpus of Early Mandarin Chinese. Among the 3690 occurrences of qilai, the great majority still falls into the lexical qilai or inchoative -qilai, whereas only 44 of them (1\%) pertain to the extended usages, which mainly consist of kanqilai 'see-qilai' (18 tokens) and shuoqilai 'say-qilai' ( 25 tokens). There are only 7 tokens containing the complement, as shown in (78) and (79), and the rest of the extended usages ( 37 out of 44 tokens) fall into the evidential V-qilai, as illustrated in (80).
(78) Na Bao-yatou... kan-qilai guoran bucuo. $\mathscr{A} \mathscr{A}^{14}$
that Bao-girl see-QILAI really not.bad
'That Bao girl looks really good.'
(Hong Lou Meng [Dream of the Red Chamber], Ch. 66)
(79) a. ...shuo-qilai zhenzhen ke ren-nao.\&\&\& say-QILAI really then people-angry 'Speaking of that it really makes people annoying.' (Hong Lou Meng, Ch. 101)
b. Shuo-qilai qie-shi jing-ren.\&ை\& say-QILAI just-be shock.people 'Speaking of that, it is shocking.' (Ping Yao Zhuan [Subjugation of Demons], Ch. 31)
(80) a. Zheme kan-qilai jingshi si-huo bu-ding le.\&\&\& this see-QILAI surprisingly death-life not-sure Part 'It looks that we cannot be sure if he can live or not.' (Hong Lou Meng, Ch. 85)
b. Zheme shuo-qilai ren dou you ge dingshu de le. $\& \mathscr{H}$ this say-QILAI people all have CL set-number Part Part 'It seems that people all have their destiny.'
(Hong Lou Meng, Ch. 114)

[^11]It clearly shows that the V-qilai + complement structure was not prevalent at least before the twentieth century. If adopting the notion of grammaticalization continuum (from purely lexical to purely functional), the current survey may suggest that V-qilai forms in the functional polar are less used in Modern Mandarin. There may be two reasons for that. It may be because they are the recent developments. Another reason may be ascribed to the written data that were surveyed, whereas the recently emerging extended uses may be more productive in spoken data. We will leave this issue for further research.

## 4. More on evidential kan-qilai

The types of V-qilai sentences discussed above witness a synchronic cline of grammaticality in terms of the degrees of fusion. A typical schematic example has been established in Bybee et al. (1994:40) as in (81).
(81) phrase or word -- non-bound gram -- bound gram

As Traugott (2010) notes, the degree of fusion found in the synchronic cline in (81) is often derived from the outcome of the diachronic changes known as grammaticalization, as schematized in (82).
(82) lexical item $>$ grammatical item $>$ more grammatical item (Traugott 2010)

In her series of works, Traugott (1989, 1995, 2003) has further linked grammaticalization with the semantic change of the degrees of "subjectivity", which is characterized by Lyons (1982) as referring to the way "in which natural languages... provide for the locutionary agent's expression of himself and his own attitudes and beliefs (p.102)". Later, the term "subjectification" is coined by Langacker (1985, 1998) to characterize "a gradual process of progressive attention", in which "an objective relationship fades away, leaving behind a subjective relationship that was originally immanent in it" (1998:75). But for Traugott, she is more concerned with the semantic change that reflects subjectification, considered as "the mechanism whereby meanings come over time to encode or externalize SP[speaker]/W[writer]'s perspectives and attitudes" (2003:126). Taking the diachronic development of English modals as an example, Traugott (1989) has demonstrated the meaning change path: from meanings based on the external described situation $>$ (changing to) meanings based on the internal (evaluative/perceptual/cognitive) described situation $>$ meanings based on the textual and metalinguistic situation > meanings increasingly based on the speaker's subjective belief state/attitude toward the proposition. The meaning change may be coupled with
categorical change, such as main verbs (*sculan, *willan, *motan) changing to deontic verbs then to strong epistemic modal verbs (e.g., shall, will, must).

If we follow this subjectification path, we might propose a four-stage cline. Namely, qilai in the first stage functions as a lexical main verb, and in the second stage as a directional or inchoative morpheme suffixed to the main verb. In these two stages, it expresses meaning based on the objective external described situation, and there is no additional complement following V-qilai. By contrast, the conflated V-qilai in Stage 3 (those discussed in §3.1 and §3.2) and Stage 4 (§3.3) takes an additional complement, a predicate or a clause. In Stage 3, modifications of the main predicate have coming into play, evaluated by objective situations or speaker's weak subjective evaluation. In Stage 4, the evidential V-qilai expresses a higher degree of subjectivity toward the proposition.

Stage 1: as a lexical verb
Stage 2: as a directional/inchoative morpheme suffixed to the main verb
Stage 3: V-qilai takes an additional complement and expresses speaker's weak subjective stance.
Stage 4: V-qilai functions as a raising predicate expressing speaker's high subjective evaluation.

According to our collected frequency data in $\S 3.5$ from the some Early Chinese texts in Min, Qin dynasties and post Qin period, the lexical and inchoative meanings of -qilai (Stages $1 \& 2$ ) have a compelling preponderance over the three extended variants of Vqilai discussed in §§3.1-3 ( 3690 vs. 44). This indicates that Stages 3 and 4 are latter evolvement. Semantically, V-qilai in Stage 4 expresses a higher degree of speaker's subjective evaluation than V-qilai in Stage 3. However, our survey may not clearly reflect that Stage 4 evolved latter than Stage 3, given the fact that evidential V-qilai (Stage 4) tokens, 37/44, outnumbered the occurrences of V-qilai in Stage 3. This amounts to saying that the development path may not perfectly reflect the subjectification path; despite that, the general tendency may still be upheld: from more objective axis to more subjective axis. This is a topic worth future research. ${ }^{15}$

The above discussion of subjectification considers the evidential V-qilai in Stage 4 as expressing a higher degree of subjectivity than other types. Moreover, the use of perception verbs, like kan 'see', ting 'hear', to which -qilai is suffixed, is intended to establish credibility of the evaluation. As mentioned in §3.3, among the perception verbs, the verb of seeing kan is particularly singled out to serve typical properties of evidentiality. Recent studies further uphold an independent grammatical category of

[^12]evidentiality (Aikhenvald 2004, Grunow-Hårsta 2012, etc.). It seems that Mandarin kan-qilai lends further support to this view in the sense that kan-qilai is emerging to become an independent form (cf. Shyu \& Lin 2008). In sentence (83a), kan-qilai preceded by a locative + pronoun has become lexicalized meaning from someone's viewpoint, and cannot be replaced by other verbs, as indicated in (84a) or be separated by a noun phrase as in (84b). And in (83b) kan-qilai is modified by adverbs like biaomianshang 'on the surface' and longtong 'in general'.
(83) a. Zai wo kan-qilai zhe shuzi mei-you shuo renhe hua.\& at I see-QILAI this number not-have say any word 'In my view, this number doesn't say anything.'
b. Biaomian shang/longtong kan-qilai zhexie dou shi surface up /general see-QILAI these all be guanli-xitong chu-le wenti.\& management system produce.Asp problem 'On the surface/In general, these are caused by the management system problems.'
a. * Zai ta xiang/chang/du-qilai,...
at he think/taste/read-QILAI
b. *Zai ta kan-qi najian shi-lai,... at he look-QI that matter-LAI

This evidential kan-qilai reveals speaker's subjective evaluation of the proposition with evidence, yet with an intention of softening the tone.

## 5. Conclusion

Among various types of qilai, we have articulated that V-qilai + complement pattern should be distinguished from the lexical verb qi-lai and lexical inchoative -qilai morphemes, which do not require an additional complement. In addition, three variations of the V-qilai + complement pattern are identified according to the complement types: namely (i) descriptive complement, (ii) object-oriented descriptive complement, and (iii) a proposition clause. It is argued that these three variants are subsumed under and better accounted for by the uniformed secondary predication structure, while varying with their respective complement structures. The corpus data further show a far greater preponderance of canonical qi-lai usages over the V-qilai + complement ones. It indicates that the latter ones are still emerging. In the course of the development, it is likely that the construction approximates itself to similar constructions, such as V-de and raising
structures. Consequently, this account is well motivated and welcome on account of the notion of economy, rather than proliferating specific structures in the grammar. Lastly, synchronic cline of grammaticality can be coupled with grammaticalization and subjectification, as evidenced by the occurrences drawn from corpora of Modern Chinese and Early Chinese. In conclusion, the variations of the V-qilai construction should not be treated as being construction specific or idiosyncratic. Rather, considerations of the existing phrase structures and synchronic corpus data provide us with a holistic view pertaining to this construction.

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# 近似次级謂語結構：以漢語「V－起來」赤例 

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本研究重新考察漢語中廣被探討的「V－起來」結構。本文首先将「V－起來＋諹語」的結構與動詞「起來」並作爲啓動詞素「－起來」加以區別，乃因後兩者並無選擇補語。之後依照「V－起來」所選擇之補語歸納出三種「V－起來＋謂語」句型：（一）描述性補語（二）（ 賓語取向的撗述謂語•（三）子句 （提升結講），並提出統一的次級謂唔結構來總括此三類補語。再者，本文榆視台灣中央研究院現代漢語平衡語料庫，與近代漢語標記語料庫所出現的「 V－起來」，依㨡上述加以分類。結果顯示，典型動詞或啠動詞素「－起來」的出現頻率遠大於「V－起來＋謂語」。此現象表示，此三類謂語不應視瓜特殊的結構，而爲正在形成的結構。而此語法化的過程，因經濟原則，探用了漢語現成的次級謂語結構。本文的分析也佐證了歷時演進之語法化與主觀化現象。

關鍵詞：次級謂語，啓動詞素，描述性補語，結果補語，提升結構，語法化，主觀化


[^0]:    * An earlier preliminary study was presented at the $11^{\text {th }}$ International Symposium on Chinese Languages and Linguistics (IsCLL-11). The previous analysis has been largely revised in this version. We would like to thank Chen-sheng Luther Liu for his detailed comments on our previous version, and also the two anonymous reviewers for their valuable comments, which have led us to achieve at a much more systematic account.

[^1]:    ${ }^{1}$ Abbreviations used in this paper include: Asp: aspectual marker, CL: classifiers, DE: the modifying marker in resultative and descriptive phrases, Part: sentence final particle.

[^2]:    ${ }^{4}$ This sentence is improved when the resultative $-d e$ is attached to the main verb rendering a resultative -de construction.
    (i) Xiaoming zhan bu zhan-de qilai? Xiaoming stand not stand-DE QILAI
    'Can Xiaoming stand up or not?'
    ${ }^{5}$ In support for the SPS analysis, Huang (1988) has refuted this assumption: the verb that takes the A-not-A form in an alternative question is the main verb of that question. As illustrated in a direct A-not-A question in (i), the A-not-A form occurs in the embedded auxiliary verb.

[^3]:    ${ }^{6}$ Note that $l e$ is possible when there is no complement in V-qilai, as in (2) denoting an inchoative event.

[^4]:    ${ }^{7}$ One might wonder why verb copying is obligatory in V-de sentences when the object occurs post-verbally as in (i), but no verb copying is required in V-qilai, as in (33) and (ii).
    (i) a. Mali shuo Yingwen shuo [AP de hen liuli]]. Mary speak English speak DE very fluent
    b. *Mali shuo-de Yingwen hen liuli. Mary speak-DE English very fluent

[^5]:    ${ }^{8}$ Liu (2007) notes that the evaluative adverb jüshuo 'it is said' can occur in between V-qilai and the complement in support of his PP analysis.

[^6]:    ${ }^{9}$ This ambiguity is pointed out by one of the anonymous reviewers.

[^7]:    ${ }^{10}$ The structure in (45) mimics the V-de (object) resultative construction in Huang et al. (2009).

[^8]:    ${ }^{11}$ The main verbs in (i), chuan-qilai 'wear' and gua-qilai 'hang' still convey the lexical action meaning; hence they are analyzed as the structure in (45).
    (i) Zhejian yangzhuang pro chuan-qilai/gua-qilai hen piaoliang. this.CL dress wear-QILAI/hang-QILAI very pretty

[^9]:    ${ }^{12}$ Other evidential expressions containing kan include kan-lai 'look-come', kan-shang-qu 'look-up-go' (Liang 2011, Ch. 5), for the reason that they have lost their full lexical functions. Liang (2011) treats them parallel with haoxing, sixu 'likely.' We thank one of the anonymous reviewers for bringing our attention to the evidentiality of kan-shang-qu.
    (i) Zhejian yangzhuang kan-shangqu/kan-lai hen piaoliang. this.CL dress look-up.go/look-come very pretty
    'This dress looks very pretty.'

[^10]:    ${ }^{13}$ Sentences marked with "み" are drawn from the Academia Sinica Corpus.

[^11]:    ${ }^{14}$ "भ $\mathscr{夕}^{\prime}$ " indicates examples from the Academia Sinica Tagged Corpus of Early Mandarin Chinese: http://app.sinica.edu.tw/cgi-bin/kiwi/pkiwi/pkiwi.sh.

[^12]:    15 Another reason for the indeterminate path is due to the small number of occurrences of Stages 3 and 4. More research is needed to verify this point.

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