THE V-QILAI EVALUATIVE CONSTRUCTION IN CHINESE

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The V-qilai construction is a structure containing syntactic projections of pragmatically-relevant features: the Evaluative Phrase (i.e., EvaP) and the Evidential Phrase (i.e., EviP). The V-qilai sequence inside projects as QlP, which occurs in [Spec, EvaP]. The Eva head, endowed with the intrinsic feature [+speaker], checks the person feature of the (external) speaker and the subject NP of the V-qilai clause are the same person or not. This checking relation makes Eva able to determine the value of the evidential head Evi.

1. Introduction

According to Chao (1968, 251), Lü et al. (1980, 391-393) and many others, Chinese qilai can be used as a verb meaning ‘rise’, a directional particle with the meaning ‘up’, or an aspectual affix indicating inchoativity or completion, as shown by (1a-d), respectively.1

(1) a. Zhangsan qilai le. (verb meaning: rise)
Zhangsan rise SFP
‘Zhangsan has got up.’

b. Qing ni zhan-qilai. (directional particle: up)
Please you stand-up
‘Please stand up.’

c. Jingbaoqi turan xiang-qilai le. (aspectual affix: inchoative)
Alarm suddenly ring-qilai SFP
‘The alarm rang suddenly.’

d. Wo yijing ba hezi feng-qilai le. (aspectual affix: completion)
I already BA box seal-qilai SFP
‘I already have the box sealed.’

However, there still exists another interesting use, as shown by the -qilai in (2a-b).

(2) a. Zhe-jian yifu chuan-qilai hen haokan.
This-CL clothing wear-qilai very becoming
‘Based on my personal experience of wearing this article of clothing, I would say wearing this piece of clothing makes my

1 Abbreviations used in this paper include: ASP: aspect markers, CL: classifiers, DE: the modifying marker, ERG: the ergative case marker, and SFP: sentence final particles.

My aim in this working paper is modest and merely descriptive. I want to argue that the facts are more complicated than what the previous studies concluded. The proposal made here is tentative because I have no account for many properties shown by this construction yet.
make-up look pretty./The external speaker infers from his/her knowledge of this article of clothing that wearing this piece of clothing makes one’s make-up look pretty.’

b. Zhangsan chuan-qi zhe-jian yifu lai hen haokan. Zhangsan wear-qi this-CL clothing lai very pretty ‘The external speaker witnesses Zhangsan’s wearing this article of clothing, and says Zhangsan’s make-up looks pretty.’

Since this type of V-qilai construction implies the speaker’s evaluation on the event denoted by the V-qilai sequence, we shall call it the V-qilai evaluative construction.

The purpose of this paper is to argue that the V-qilai evaluative construction is a structure containing syntactic projections with pragmatically-relevant features: the Evaluative Phrase and the Evidential Phrase (cf. Cinque (1999) and Rizzi (1997, 2001 and 2003)). The organization of this paper is as follows. In section 2, we shall discuss the syntactic, semantic and pragmatic characteristics of the V-qilai evaluative construction, and have this discussion as preliminary for section 3, where two important previous studies are reviewed. Section 3 will end up with the questions that any analysis on the V-qilai evaluative construction has to account for. The proposal will be made in section 4. Section 5 is the conclusion.

2. Characteristics of the Evaluative V-qilai Construction

The V-qilai evaluative construction has the following prosodic, syntactic, semantic and pragmatic properties. First, although -qilai, as in (2a), looks like a single verbal suffix, in many cases -qilai can be split into -qi and -lai by having the object NP of the verb in-between, and this ‘split process is obligatory unless the object NP occurs as the topic, as shown by the contrast between (3a-b) and (4).

(3)  a. Zhangsan zuo-qi zhe-zhong shi lai tebie yongxin. Zhangsan do-qi this-kind matter lai especially attentive ‘The external speaker witnesses Zhangsan’s doing this kind of matter, and then says Zhangsan works attentively, especially for such kind of matter.’

b. Zhe-zhong shi, Zhangsan zuo-qilai tebie yongxin. This-kind matter Zhangsan do-qilai especially attentive ‘The external speaker witnesses Zhangsan’s doing this kind of matter and then says Zhangsan works attentively, especially for such kind of matter.’

(4) *Zhangsan zuo-qilai zhe-zhong shi tebie yongxin. Zhangsan do-qilai this-kind matter especially attentive

We shall argue that the contrast between (5a) and (5b) in formation of tone sandhi domains provides us a hint for answering why (4) is ungrammatical (the boundary of tone sandhi domain is marked by ¤, the number following
each syllable represents the tone of that syllable, and the sandhi tone is bracketed).²

(5)  
Dog bite small dog  
‘The dog bites the small dog.’  
Dog run qi lai very fast  

Behind the contrast above is the intuition that -qilai is a single morpheme (i.e., an immediate constituent) that cannot form a prosodic foot independently.

According to Shih (1986), in modern Chinese the standard (or default) prosodic foot is bi-syllabic, and the formation of tone sandhi domain in Chinese is subject to the Foot Formation Rules (cf. Chen (1979), McCarthy & Prince (1993), and Feng (1997)):

(6) Foot Formation Rules (FFR) (cf. Shih, 1986, 110))  
a.  Immediate Constituency: Link immediate constituents into disyllabic feet.  
b.  Duple Meter: Scanning from left to right, string together unpaired syllables into binary feet, unless they branch to the opposite direction.  
c.  Super-foot Construction: Join any left-over monosyllable to a neighboring binary foot according to the direction of syntactic branching.

We suggest that to avoid the immediate constituent -qilai from forming a foot independently, Chinese speakers unconsciously apply a PF-level rule to cases involving this verbal suffix: They allow the object NP of the verb of the V-qilai complex to be inserted between qi and lai if this object NP does not occur as the topic. as the contrast between (7a) and (7b) illustrates.

(7)  
a.  Gou3# yao-[2]-qi3# gou3 lai2# hen[2] hen3.#  
Dog bite qi dog lai very cruelly  
‘Based on his/her personal experience of watching dogs’ biting each other, the external speaker says that dogs always bite each other cruelly.’  
Dog bite qilai dog very cruelly

This kind of claim is not unreasonable. According to Yip (1980), a foot is a stress-foot: each stressed (i.e., tone-bearing) syllable constitutes a foot together with toneless syllables, if any, surrounding it. In other words, a prosodic foot must contain a prominent syllable. Hence, a bound morpheme like -qilai is not prominent enough to be the core part of a foot; therefore, it cannot form a foot independently. Example (8), in which a quadri-syllabic foot is found, provides further evidence in supporting of such a claim.

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² The Mandarin Chinese Third Tone Sandhi Rule is as follows: 3 → 2 / __3.
This-CL clothing wash-qilai hen[2] nao3-ren2#

‘Based on my personal experience of washing this piece of clothing, washing this article of clothing is bothersome. The external speaker infers from his/her knowledge of this article of clothing that washing this piece of clothing is bothersome.’

The second property shown by the V-qilai evaluative construction is that, as the semantic interpretation of (9a) indicates, what looks pretty is neither Zhangsan nor this article of clothing, but Zhangsan’s make-up. So, we suggest that (9a) has (9b) as its syntactic structure.

(9) a. Zhangsan chuan-qi zhe-jian yifu lai hen haokan.
   Zhangsan wear-qi this-CL clothing lai very pretty
   ‘The external speaker witnesses Zhangsan’s wearing this article of clothing, and then says Zhangsan’s make-up looks pretty.’
   b. [s Zhangsan chuan-qi zhe-jian yifu lai][s Pro hen haokan].

Generalizing still further, it is not implausible for us to say that (10a), in which the verb of the V-qilai complex is a perception verb, and (10b), in which the predicate behind the V-qilai sequence is one taking an event as subject, have (11a) and (11b) as their syntactic structure, respectively.

(10) a. Wo ting-qi zhe-shou quiz lai hen sufu. (perception verb)
   I listen-qi this-CL music lai very comfortable
   ‘Based on my personal experience of listening to this music, I say listening to this music makes me comfortable.’
   b. Zhangsan zuo-qi zhe-zhong shi lai hen feishi.(event predicate)
   Zhangsan do-qi this-CL matter lai very time-consuming
   ‘The external speaker witnesses Zhangsan’s doing such kind of matter, and then says it is time-consuming for Zhangsan to do such kind of matter.’

(11) a. [s Wo ting-qi zhe-shou qüzi lai][s Pro hen sufu].
   I listen-qi this-CL music lai very comfortable
   ‘Based on my personal experience of listening to this music, I say listening to this music makes me comfortable.’
   b. [s Zhangsan zuo-qi zhe-zhong shi lai][s Pro hen feishi].
   Zhangsan do-qi this-CL matter lai very time-consuming
   ‘The external speaker witnesses Zhangsan’s doing such kind of matter, and then says it is time-consuming for Zhangsan to do such kind of matter.’

This assumption gets further supporting evidence from the fact that evidential adverbs that occur higher than IP (e.g., jūshuo ‘allegedly’) can be inserted between the V-qilai sequence and the following part (cf. Cinque (1999)).
(12) Zuo-qi zhe-zhong shi lai, jūshuo Zhangsan
du-qi this-kind matter lai allegedly Zhangsan
etbie yongxin.
especially attentive
‘Zhangsan is alleged to be especially attentive in doing such kind
of matter.’

So, we suggest that the V-qilai evaluative construction consists of two
clauses: One is the X V-qilai clause, and the other is in the form of Y
predicate (Y often occurs as Pro). Neither of them can be deleted and the V-
qilai clause must precede the other clause; otherwise, the sentence will be
ungrammatical.

(13) a. Pro zuo-qi zhe-zhong shi lai, Zhangsan tebie maili.
Pro do-qi this-CL matter lai Zhangsan especially perspiringly
‘The external speaker witnesses Zhangsan’s doing such kind of
matter, and then says Zhangsan works perspiringly especially
for such kind of matter.’
b. *Zhangsan tebie maili. (with the meaning of (13a))
c. *Zhangsan tebie maili,
Zhangsan especially perspiringly
Zhangsan especially perspiringly
Pro zuo-qi zhe-zhong shi lai.
do-qi this-kind matter lai

Third, semantically the V-qilai clause denotes an event evaluated by the
external or internal speaker, while the other part the external or internal
speaker’s judgment of qualities of the evaluated event, as illustrated by
(14a-b), respectively.

(14) a. Zhangsan zuo-qi shi lai hen yongxin. (external speaker)
Zhangsan do-qi matter lai very attentive
‘The external speaker witnesses Zhangsan’s doing such kind of
matter, and then says Zhangsan works attentively especially for
such kind of matter.’
b. Lisi shuo [Zhangsan zuo-qi shi lai hen
Lisi say Zhangsan do-qi matter lai very
yongxin]. (internal speaker)
attentive
‘Lisi witnesses Zhangsan’s doing such kind of matter, and then
says Zhangsan works attentively especially for such kind of
matter.’

More significant is that in many languages a sentence that denotes the
(external) speaker’s judgment of qualities of some event or state always
contains an inflectional element (i.e., the evidential morpheme) to indicate
the nature of evidence based on which the (external) speaker evaluates the
event (or state), as shown by the following Tibetan examples (cf. Jacobson
(1986) and Delancey (1986)).

(15) a. K’ong gis yi-ge bri-pa-red. (Tibetan)
S/he ERG write-Perf-Evid
‘S/He wrote a letter (it seems).’
b.  K’ong gis yi-ge bri-pa-song. (Tibetan)
S/He ERG write-Perf-Evid
‘S/he wrote a letter (I saw it happen).’

At this point, one might ask the question of whether there exist(s) any mechanism(s) in the Chinese V-qilai evaluative construction to indicate the nature (or source) of evidence based on which the (external) speaker evaluates the event denoted by the V-qilai clause.

Fourth, the nature (or source) of evidence based on which the (external) speaker evaluates the event denoted by the V-qilai clause can be expressed by the following two strategies. The first one is use semantically defined but structurally heterogeneous evidential categories such as epistemic modals or evidential adverbs to express the evidential mood, as shown by (16a-b), respectively.

Zhangsan do-qi matter lai allegedly not too reliable
‘Zhangsan is alleged to be not so reliable when he is doing such kind of matter.’

b.  Zhangsan zuo-qi shi lai, Pro yinggai hen kekao.
Zhangsan do-qi matter lai should very reliable
‘It must be quite reliable for Zhangsan to do this kind of matter.’

Example (16a) with the hearsay evidential expressed by the adverb jüshuo ‘allegedly’ conveys that the evidence was acquired in some context other than the current discourse context. According to Kratzer (1991), an epistemic modal not only expresses pure necessity, but also indicates that the relevant modal base for an inference of necessity is not just internal personal experience or observation. So, in (16b) the epistemic modal yinggai ‘should’ functions to provide the ‘source of information’ based on which the external speaker evaluates the event denoted by the V-qilai clause.

The person feature of the subject NP of the V-qilai clause provides the other way for the V-qilai evaluative construction to express the evidential mood. For instance, if the subject NP of the V-qilai clause is the first person pronoun, as in (17), the sentence will convey that the speaker evaluates the event denoted by the V-qilai clause simply based on his/her unique ‘internal’ experience (or personal experience evidential).

(17)   Wo zou-qi zhe-duan lu lai, Pro hen chili.
I walk-qi this-distance road lai very strenuous
‘Based on my personal experience of walking this distance, I would say this distance walks me off my feet.’

Namely, the speaker here expresses self-knowledge or attitudes de se. On another hand, if the subject NP of the V-qilai clause is the second person pronoun or a third person pronoun (or NP), the external speaker evaluates the event denoted by the V-qilai clause simply based on his or her sensory data such as seeing or hearing because the event (or action) witnessed personally by the external speaker occurs in the same deictic sphere as the location of the speaker (i.e., direct evidence), as (18) illustrates.

(18)   Ni/Ta zou-qi zhe-duan lu lai, Pro hen chili.
You/S/He walk-qi this-distance road lai very strenuous
‘The external speaker witnesses your/his/her walking this distance, and says this distance walks you/him/her off your/his/her feet.’

On the other hand, if the subject NP of the V-qilai clause appears as an empty pronominal, the sentence is ambiguous, as (19) shows.

(19) Zhe-ke zuanjie [Pro kan-qilai] [Pro hen zhiqian].
    This-CL diamond-ring look-qilai very precious

a. ‘Based on my personal experience of looking at this diamond ring, I would say this diamond ring is precious.’

b. ‘The external speaker infers from his/her knowledge of this diamond ring that this diamond ring is precious.’

More precisely, when the Pro subject of the V-qilai clause is interpreted as the external speaker, we get the ‘direct perception’ reading for (19). However, when the Pro subject of the V-qilai clause is interpreted as someone that cannot be identified as any individual in the current deictic sphere, (19) denotes the reading: The external speaker has neither personal experience nor direct (i.e., sensory data) evidence of the evaluated event. Under such a circumstance, the external speaker believes his/her judgment of the evaluated event to be true simply based on some inference.

More interestingly here, if an epistemic modal or an evidential adverb occurs in the clause denoting the (external) speaker’s judgment of qualities of the evaluated event, the person feature of the subject NP of the V-qilai clause will lose the ability of determining the evidentiality, as (20a-c) illustrate.

(20) a. Wo zou-qi zhe-duan lu lai, Pro hui/yiding hen chili.
    I walk-qi this-distance road lai will/must very strenuous
    ‘It must be very strenuous for me to walk this distance.’

b. Ni/Ta zou-qi zhe-duan lu lai, Pro hui/yiding
    You/S/He walk-qi this-distance road lai will/must hen chili.
    very strenuous
    ‘It must be very strenuous for you/him to walk this distance.’

c. Zhe-duan lu, Pro zou-qilai, Pro hui/yiding
    This-distance road walk-qilai will/must hen chili.
    very strenuous
    ‘It must be very strenuous for one to walk this distance.’

Thus, the ways that the V-qilai evaluative construction uses to express the evidential mood immediately bring us the following three questions: How is the person feature related to evidentiality? Why does the second way of expressing evidentiality only allow three evidential categories (i.e., personal experience, direct (or sensory) evidence, and indirect evidence)? Why does occurrence of epistemic modals and evidential adverbs in the clause denoting the (external) speaker’s judgment of qualities of the evaluated event make the subject NP of the V-qilai clause lose the ability of determining evidentiality?

Fifth, an evaluation process is possible only if the evaluated event is (virtually) realized (or initiated). If the V-qilai sequence appears in the A-
not-A form, it would be unclear to the (external) speaker whether the event evaluated is (virtually) initiated or not. So, the V-qilai clause cannot take the A-not-A form. This is shown by the ungrammaticality of (21).

(21) *Zhangsan zuo-bu-zuo-qi shi lai hen yongxin?
    Zhangsan do-not-do-qi matter lai very attentive

Sixth, the verbal suffix -qilai in the V-qilai evaluative construction shows some aspectual meaning because it only occurs with an activity or an inchoative verb, as examples in (22) show.

(22) a. *[Zhangsan xiangxin-qi ni lai] [Pro hen jianding]. (state)
    Zhangsan believe-qi you lai very confirmed
    ‘The external speaker witnesses Zhangsan’s running, and then says that Zhangsan runs fast.’

   b. *[Zhangsan pao-qi bu lai] [Pro hen kuai]. (activity)
    Zhangsan run-qi step lai very fast
    ‘Based on my personal experience of driving this car today, this car drives smoothly.’

    c. *[Zhangsan chi-wan-qi fan lai] [Pro hen kuai]. (accomplishment)
    Zhangsan eat-finish-qi rice lai very fast

    d. *[Zhangsan dao-qi jia lai] [Pro hen kuai]. (achievement)
    Zhangsan arrive-qi home lai very fast

Example (22c) further implies that -qilai demands the (basic) compound verb cannot focus on the ending points semantically. So, the morpheme -qilai, as Wang (2005a. 33) argues, also functions as an inchoative imperfective viewpoint aspect that focus on the internal stages of a situation. We further suggest that the inchoative sense of -qilai in fact has as an origin the evaluation function denoted by -qilai because evaluation will be impossible unless the event evaluated is (virtually) initiated.

Seventh, the V-qilai construction, as Wang (2005b, 317) points out, allows the eventive reading, as (23) illustrates.

(23) Zhe-bu che jintian kai-qilai shun duo le.
    This-CL car today drive-qilai smoothly more SFP
    ‘Based on my personal experience of driving this car today, this car drives smoothly.’

Thus far, the syntactic, prosodic, semantic and pragmatic properties of the V-qilai evaluative construction can be summarized as follows: First, -qilai is a single morpheme that functions as an evaluation marker, and the inchoative sense shown by it is implied by its evaluation function. Second, given prosodic reasons, -qilai has a split variant in the V-qilai form. Third, the V-qilai evaluative construction consists of two clauses: One denotes the event evaluated by the (external) speaker, and the other the (external) speaker’s comments on the event evaluated. Fourth, the evidential mood of the V-qilai evaluative construction is determined by the evidential adverb/epistemic modal occurring in the clause denoting the (external) speaker’s judgment, or the person feature of the subject NP of the V-qilai clause denoting the evaluated event. Fifth, occurrence of evidential adverbs/epistemic modals makes the person feature of the subject NP of the V-qilai clause lose the ability of determining the evidential mood. Sixth, only three evidential categories are available to the way of expressing evidentiality by the person feature of the subject NP of the V-qilai clause.
3. Previous Analyses

Having as preliminary the characteristics that we just pointed out, in this section we shall briefly discuss two previous studies on the Chinese V-qilai construction, and then point out their loose ends.3

3.1 Gao et al. (1993)

Gao et al. (1993) suggest that -qilai in the V-qilai construction functions as a modal-like element commenting on the event denoted by the verb of the V-qilai complex.

(24) Zhe-ben shu du qilai hen rongyi.
   This-CL book read qilai very easy
   ‘This book is easy to read.

Depending on the type of ‘basic’ verb of the V-qilai complex, the V-qilai sequence in the V-qilai evaluative construction can be categorically identified as a sentential adverb or a verbal predicate. More precisely, when the verb is a perceptional one, the V-qilai sequence is considered a sentential adverb, but a verbal predicate if it is a non-perception verb.

(25) a. Zhe-ge zhuyi ting qilai hen bucuo. (lexicalized sentential adverb)
   This-CL idea sound qilai very not-bad
   ‘This idea sounds okay.’

b. Zhangsan zuo-qi shi lai hen yongxin. (adjunct clause)
   Zhangsan do-qi matter lai very attentive
   ‘When Zhangsan works, he is very attentive.’

c. Zhe-ben shu du qilai hen rongyi. (sentential subject)
   This-CL book read qilai very easy
   ‘This book is easy to read.’

Moreover, they claim that -qi and -lai are two different morphemes. The morpheme -qi is a verbal suffix that occurs in the Infl position and attaches itself to the verb by Infl lowering, while the morpheme -lai is a clitic or a phrasal affix that is attached to VP.

(26) [\[IP Zhangsan [\[\[\[Adjunct/Il Pro [\[\[\[I [\[\[\[I [\[\[\[I ti] [\[VP [\[\[\[v zuo-qi]] shi]]-lai]] [\[\[\[Infl [\[VP hen yongxin]]]]]]]

One implication of their analysis is that the part denoting the speaker’s judgment of qualities of the evaluated event, for example hen yongxin ‘very attentive’ in (26), is the main predicate.

However, Gao et al. (1993) is challenged by the following empirical and theoretical problems. First, for the clausal adjunct and the lexicalized sentential adverb cases, why is the V-qilai sequence obligatory (cf. (25a-b))?

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3 We cannot go through some previous studies on the Chinese V-qilai construction, for example, Cao (2004) and Wang (2005a, b), because of space limit. This does not mean they do not have any significant contribution on this construction.
Second, if the V-qilai complex which contains a perceptional verb is analyzed as a sentential adverb, why can the V-qilai complex in (27a), namely wen-qilai ‘smell-qilai’, take a subject? Needless to say, how to explain why (27b) is grammatical?

(27) a. Zhe-duo hua, wo wen-qilai hen sufu.  
This-CL flower I smell-qilai very comfortable  
‘Smelling this flower makes me comfortable.’

b. Wo wen-qi zhe-duo hua lai hen sufu.  
I smell-qi this-CL flower lai very comfortable  
‘Smelling this flower makes me comfortable.’

Third, if -qi and -lai are two different morphemes, Gao et al. (1993) need to identify the function that each of them plays.

Fourth, assuming that (28a) has a syntactic structure like (28b), Gao et al. (1993) fails to derive the interpretation of (28a) correctly because what looks pretty is Zhangsan’s make-up rather than Zhangsan.

(28) a. Zhangsan chuan-qi zhe-jian yifu lai hen haokan.  
Zhangsan wear-qi this-CL clothing lai very pretty  
‘The external speaker witnesses Zhangsan’s wearing this article of clothing, and then says Zhangsan’s make-up looks pretty.’

b. [IP Zhangsan [i AdjunctIP [i [i ti] [vp [vp [v chuan-qi] zhe-jian yifu]] lai]] [i [Infl [vp haokan]]]]

Fifth, Gao et al. (1993) also fails to explain why the adjunct clause Pro chuan-qi zhe-jian yifu lai ‘Pro wear-qi this-CL clothing lai’, as in (28b), cannot be preposed to the initial position, as the ungrammaticality of (29) shows.

(29) *Chuan-qi zhe-jian yifu lai, Zhangsan hen haokan.  
Wear-qi this-CL clothing lai Zhangsan very pretty

3.2 Sung (1994): The Middle Construction Approach

Sung (1994), following Stroik’s (1992) analysis of the English middle construction, proposes that the V-qilai construction like (30a) has a deep structure like (30b), in which the implicit agent occurs as an enclitic (i.e., ∅) attached to the verb, and the subject NP zhe-jian yifu ‘this-CL clothing’ raises from the embedded subject position to the matrix subject position for Case-checking, as (30c) shows.

(30) a. Zhe-jian yifu chuan-qilai hen haokan.  
This-CL clothing wear-qilai very pretty  
‘Based on my personal experience of wearing this article of clothing, I would say my make-up looks pretty./The external speaker infers from his/her knowledge of this article of clothing that, after wearing this article of clothing, one’s make-up will look pretty.’

b. [ip [vp ∅-chuan-qilai [ip [sp zhe-jian yifu] [hen haokan]]]]

c. [ip [sp zhe-jian yifu], [vp ∅-chuan-qilai [ip [sp ti] [hen haokan]]]
Sung’s (1994) Middle Construction Analysis will encounter the following problems. First, if (30a) is analyzed as a middle construction with a deep structure like (30b), then we would incorrectly predict what looks pretty is this piece of clothing.

Second, as (31b) indicates, movement of zhe-jian yifu ‘this-CL clothing’ will violate the Left Branch Condition; however, (31a) is grammatical.

(31) a. Zhe-jian yifu kan-qilai xiuizi chang-le dianer.
    This-CL clothing look-qilai sleeve long-ASP a-little
    ‘Based on my personal experience of looking at this article of clothing, I would say the sleeves of this piece of clothing are a little bit longer.
    The external speaker infers from his/her knowledge of this article of clothing that the sleeves of this piece of clothing are a little bit longer.’

b. [IP [zhe-jian yifu] [VP ∅-chuan-qilai [IP [NP ti-xiuizi] [hen haokan]]]]

Third, the middle analysis is further challenged by the fact that the V-qilai evaluative construction allows the event reading (cf. Wang (2005b, 317)).

(32) Zhe-liang che zuotian kai-qilai hen shun.
    This-CL car yesterday drive-qilai very smoothly
    ‘Based on my personal experience of driving this car yesterday, this car drove smoothly yesterday.’

Hence, before proposing an analysis, we want to point out all the questions that any analysis on the Chinese V-qilai evaluative construction has to account for. First, if the V-qilai clause is not an adjunct clause, what is the syntactic relationship between it and the clause denoting the (external) speaker’s judgment of the evaluated event? Second, as we have pointed out, the evidentiality of the (external) speaker’s judgment of qualities of the evaluated event can be determined by the person feature of the subject NP of the V-qilai clause. If so, how is the person feature related to evidentiality? Third, why are only three evidential categories available to the way of using the person feature of the subject NP of the V-qilai clause to determine the evidentiality? Fourth, why does occurrence of epistemic modals/evidential adverbs in the clause denoting the (external) speaker’s evaluation on the evaluated event make the person feature of the subject NP of the V-qilai clause lose the ability of determining the evidential mood?

4. Proposal

4.1 Syntactic Projections with Pragmatically Relevant Features

Syntactically, the V-qilai clause occurs higher than adverbs of epistemological mood (e.g., mingxian-de ‘obviously’) that are higher than epistemic modals but locally c-commanded by adverbs of evidential mood such as jüshuo ‘allegedly’.
Zuo-qi zhe-zhong shi lai, jūshuo Zhangsan Do-qi this-kind matter lai allegedly Zhangsan
hen-mingxian-de hui san-xin-liang-yi.
very-obviously will three-mind-two-idea
‘The external speaker witnesses Zhangsan’s doing this kind of
matter, and then says that it is quite obvious that Zhangsan is
indecisive.’

The syntactic hierarchy shown by (33) immediately reminds us of Cinque’s (1999) theory of syntactic projections bearing pragmatically relevant features.

(34) [Speech Act [Evaluative Mood [Evidential Mood [Epistemological Mode]]]]

Furthermore, in the V-qilai evaluative construction, a topic NP might occur in the initial position and c-command the clause denoting the evaluated event.

(35) Zhe-jian yifu, [[Zhangsan chuan-qilai]
This-CL clothing Zhangsan wear-qilai
[jūshuo [Pro jùedui hui yinqi zhengyi]]].
allegedly absolutely will arouse controversy
‘It is alleged Zhangsan’s wearing this article of clothing will arouse controversy.’

This syntactic phenomenon is reminiscent of Rizzi’s (1997, 2003) theory of left periphery, under which the whole of Cinque’s (1999) hierarchy is included under the Mod(ifier).

(36) Force Top* Int(errogative) Top* Foc Mod* Top* Fin IP

So, we suggest that the Chinese V-qilai evaluative construction has a structure like (37a), which contains syntactic projections with pragmatically relevant features (i.e., the Evaluative Phrase and the Evidential Phrase). The V-qilai clause occurs as QlP, headed by Q̃, in [Spec, EviP], as shown by (37b).4

(37) a. [Top ... [Evap [QIP ... V-qilai] [Eva' [Eva Eva] [EviP [Evi' [Evi Eva]]]]][IP ...]]
b. [QIP ... [Q̃ [Q̃ Q̃] [VP ... [V V-qilai] ...]]]

Under the syntactic structure as shown by (37a), between the V-qilai clause (i.e., QIP) and the clause denoting the (external) speaker’s judgment of qualities of the evaluated event (i.e., IP), there exists an intermediate projection, namely the Evidential Phrase (henceforth EviP). Unlike languages such as Tibetan and Makah, Chinese does not have any overt evidential morpheme. So, we immediately encounter the question: How to determine the value of the evidential head Evi? As we have pointed out, the

4 Assuming Chomsky (1995), we suggest that in (37b) the V-qilai, for example zuo-qilai ‘do-qilai’, is selected as an inflected form from Numeration, and the covert head Q̃, dominates a bundle of features.
evidential mood of the V-qilai evaluative construction can be expressed by epistemic modals/evidential adverbs, or the person feature of the subject NP of the V-qilai clause (i.e., QIP). In the following, we shall claim: Evidential morphemes are person agreement morphemes, and determination of evidential mood in the V-qilai evaluative construction must conform to the Earliness Principle (cf. Pesetsky (1995)).

4.2 Evidential Morphemes Are Person Agreement Morphemes

Since the V-qilai evaluative construction implies the (external) speaker’s evaluation on the event denoted by QIP, we suggest the head of Evaluative Phrase (henceforth EvaP), namely Eva, intrinsically bears the feature [+speaker] (i.e., the first person feature) (cf. (39)). In the V-qilai clause (i.e., QIP) the predication relation between the subject NP and the V-qilai predicate makes the head of QIP carry the person feature of the subject NP, which in fact spells out one of the nodes in configuration (38), more precisely the node [+speaker], [-speaker], and [+participant] (cf. Harley & Ritter (2002) and Speas (2002)).

Configuration (38) encodes a paradigmatic opposition between a modal base that consists of information within the current deictic sphere and other information, and between the speaker’s internal epistemic state and other information within the deictic sphere (cf. Speas (2002)). Furthermore, in the V-qilai evaluative construction, the evaluative head Eva ‘checks’ the person feature of the head Q to see whether the evaluator (i.e., the (external) speaker) and the subject NP of the V-qilai clause (i.e., QIP) are the same person, or different persons in the same deictic sphere. It is this checking relation that makes the evaluative head Eva involve a ‘source of information’.

Now, let us take the following examples as illustration: First, in (39) the subject NP of the V-qilai clause is the overt first person singular pronoun (i.e., wo ‘I’) with the feature [+speaker]. The person feature checking between the [+speaker] feature of Eva and the [+speaker] feature of the head Q implies that the evaluator and the subject NP of the V-qilai clause are the same person in the current deictic sphere.

This implies that the (external) speaker evaluates the event denoted by QIP simply based on his/her unique ‘internal’ experience (or personal experience evidential). Namely, the modal base specified is knowledge which can be known only by the (external) speaker; in other words, the speaker expresses self-knowledge or attitudes de se (cf. Chierchia (1989)). We further suggest that in cases like (39) the head Eva agrees with the head of Evidential Phrase (i.e., Evi) in ‘the source of information’ (i.e., personal experience); that is, the value of the evidential head Evi is determined by the ‘source of information’ feature of Eva. The head Evi then agrees with the world argument in [Spec, EviP] in the ‘source of information’ to make the
proposition expressed by the sentence evaluated in the appropriate possible world. This assumption gets cross-linguistically supporting evidence from Flemish, a language, in which the head of the CP agrees with the head (and the specifier) of its complement IP (cf. (40a-b)).

\[(40)\]
\[\begin{align*}
a. \quad & \ldots [CP \{C \text{ da} \{IP \text{ den inspekteur da boek gelezen eet}\}\}] \\
& \quad \quad \ldots \quad \text{that the inspector that book read has}
& \quad \quad \quad \quad \quad \quad \quad \text{‘that the inspector has read that book;}
\end{align*}\]
\[\ldots \quad \text{‘that the inspectors have read that book’}\]

b. \ldots [CP \{C \text{- dan} \{IP \text{ d’inspekteurs da boek gelezen een}\}\}].
\ldots \quad \text{that the inspectors that book read have}
\ldots \quad \text{‘that the inspectors have read that book’}\]

Moreover, according to Speas (2004), evidential agreement distinguishes among sets of worlds relevant to the discourse context. So, we further suggest that in [Spec, EviP] occurs a world argument that agrees with the head of EviP (cf. (39)).

Second, when the subject NP of the V-qilai clause, as in (41), is the second person pronoun or a third person pronoun/NP, the head Eva, which bears the features [+speaker], checks the person feature of the head that carries the feature [-speaker] and establishes the relationship: the evaluator (i.e., the (external) speaker) and the subject NP of the V-qilai clause, though not the same person, are in the same deictic sphere currently (cf. (38)).

\[(41)\]
\[\begin{align*}
\text{\ldots \ldots [EvaP \{QlP Ni/Ta[-speaker] chuan-qi zhe-jian yifu lai\} [Eva \{Eva Eva\} \{EviP w \{Evi \{Evi Evi\} \{IP Pro hen haokan\}\}\}\}} \\
\ldots \ldots \text{Under such kind of context, although the evaluator does not have the unique ‘internal’ experience (or personal experience evidential), s/he evaluates the event simply based on her/his direct evidence (i.e., sensory data such as seeing or hearing) because the event (or action) witnessed personally by the external speaker occurs in the same deictic sphere as the location of the speaker (i.e., direct evidence).}
\end{align*}\]

Third, if the subject NP of the V-qilai clause (i.e., QIP) occurs as an empty pronomial (i.e., Pro), the Pro subject NP can either be semantically controlled by the external speaker implied by the V-qilai evaluative construction or be interpreted as an arbitrary Pro, as the ambiguity of (42) shows.

\[(42)\]
\[\begin{align*}
\text{\ldots \ldots [EvaP \{QIP Pro kan-qilai\} [Eva \{Eva Eva\} \{EviP w \{Evi \{Evi Evi\} \{Pro hen zhiqian\}\}\}\}} \\
\ldots \ldots \text{This-CL diamond-ring look-qilai very precious}
\end{align*}\]

a. ‘Based on my personal experience of looking at this diamond ring, I would say this diamond ring is precious.’

b. ‘The external speaker infers from his/her knowledge of this diamond ring that this diamond ring is precious.’

5 The world argument denotes a set of possible worlds within which the proposition expressed by a sentence is to be evaluated. In this sense, its denotation is similar to Karttunen (1974) and Heim (1992) call a ‘context’ or ‘context set’. The context set is a subset of the worlds within which a proposition might actually be true.
On the one hand, when the agentive Pro subject of the V-qilai clause (i.e., QIP) is interpreted as the external speaker, the evaluator (i.e., the (external) speaker) has his/her unique ‘internal’ or personal experience as evidence for the truth of judgment of qualities or values of the evaluated event. Namely, the speaker expresses self-knowledge or attitudes de se. On the other hand, when the Pro subject of the V-qilai clause is interpreted as an arbitrary Pro, neither personal experience nor direct (i.e., sensory) evidence is possible because this arbitrary Pro subject cannot be identified as any individual in the current deictic sphere. The external speaker is the evaluator but someone unidentifiable in the current deictic context is the agent (or perceiver) of the event denoted by QIP. This unidentifiable person in the current deictic sphere in fact can be considered a ‘virtual’ participant (i.e., the spell-out of the node [+participant] in configuration (38)). In other words, the evaluator (i.e., the (external) speaker) believes his/her judgment of the evaluated event to be true simply based on some inference. So, we can say that the evidential information based on which the evaluator evaluates the event is an indirect evidence (or inference). For example, (42) is felicitous under the situation: The evaluator is a lapidariist. S/He, not having the chance to see the diamond ring, makes an inference on the value of the diamond ring simply based on his/her knowledge of this diamond ring perhaps learnt from newspaper.

One of the most important implications of the inferential reading is that the evaluated event denoted by QIP (i.e., the seeing event) does not really happen. The ‘virtual’ realization of the seeing event in (42) makes speakers, in addition to having the sense that no one actually sees the diamond ring, evaluate the event simply based on some inference (or mental process).

Moreover, the ‘virtual’ realization of the evaluated event acts as the key factor that not only leads Gao et al. (1993, 107) to analyze as a sentential adverb the V-qilai complex in which the verb is a perception one, but also pushes Wang (2005b, 222) to assume that kan-qilai ‘see-qilai’, as in (42), as a whole functions as a raising predicate like seem in English by saying that the verb kan ‘see’ of the kan-qilai ‘see-qilai’ complex does not s-select a subject.

More importantly here, the parallelism between the feature geometry of pronominal agreement that distinguishes among individuals within the discourse context and that of evidential agreement that distinguishes among sets of worlds relevant to the discourse further leads us to suggest that evidential morphemes are ‘person’ agreement morphemes (cf. Harley & Ritter (2002, 508), (38) and (43)).

(43)  

\[
\text{speaker} \quad \text{participant} \quad \text{addressee} \\
\text{referring expression (pronoun)} \quad \text{individuation}
\]

Now, let us go back the question of why the evaluative head Eva loses the ability of determining the value of evidential head Evi once if epistemic modals or evidential adverbs occur inside, as illustrated by examples in (44).

4.3 Epistemic Modals, Evidential Adverbs and the Earliness Principle
Evidentiality shown by the Chinese V-\textit{qilai} evaluative construction, as we have pointed out, still can be determined by evidential adverbs or epistemic modals that occur in the clause denoting the (external) speaker’s judgment of the evaluated event.

More interestingly is the fact that once if epistemic modals or evidential adverbs occur inside, the evaluative head Eva will lose the ability of determining the value of the evidential head Evi and only the inferential reading is possible, as shown by examples in (44) (cf. (34)).

\begin{center}
\textbf{(44)}
\end{center}

\begin{enumerate}
\item a. \hfill
\begin{tabular}{l}
\texttt{\[ \text{ToP} \cdots \text{EvaP} \{\text{QIP Wo chuan-qi zhe-jian yifu lai}\} \{\text{Eva Eva}\} \]
\texttt{\quad I \text{wear-qi} \text{this-CL clothing lai}}
\texttt{\quad \{EpiP \{Evi' \{Evi Evi\} \{EpiP \text{Pro yiding hen haokan]\}\}\}\]
\texttt{\quad \text{must} \text{very pretty}}
\texttt{\quad \text{‘It must be very pretty for me to wear this article of clothing.’}}
\end{tabular}
\item b. \hfill
\begin{tabular}{l}
\texttt{\[ \text{ToP} \cdots \text{EvaP} \{\text{QIP Ni/Ta chuan-qi zhe-jian yifu lai}\} \{\text{Eva Eva}\} \]
\texttt{\quad \text{You/S/He \text{wear-qi} \text{this-CL clothing lai}}
\texttt{\quad \text{Eva}}
\texttt{\quad \{EpiP \{Evi' \{Evi Evi\} \{EpiP \text{Pro yiding hen haokan]\}\}\}\]
\texttt{\quad \text{must} \text{very pretty}}
\texttt{\quad \text{‘It must be very pretty for you/him/her to wear this article of clothing.’}}
\end{tabular}
\item c. \hfill
\begin{tabular}{l}
\texttt{\[ \text{ToP Zhe-jian yifu} \{\text{EvaP} \{\text{QIP Pro chuan-qilai}\} \{\text{Eva Eva}\} \{\text{EviP}\} \]
\texttt{\quad \text{This-CL clothing \text{wear-qilai}}
\texttt{\quad \text{Evi'}}
\texttt{\quad \{Evi Evi\} \{EpiP \text{Pro kending hen haokan]\}\}\]
\texttt{\quad \text{must} \text{very pretty}}
\texttt{\quad \text{‘It must be very pretty for one to wear this article of clothing.’}}
\end{tabular}
\end{enumerate}

According to Kratzer (1991), we can use an epistemic modal not simply to express pure necessity, but to indicate that the relevant modal base for an inference of necessity is not just internal personal experience or obvious observation. So, (45a) is an assertion weaker than (45b) because its interpretation includes a modal base and an inference of necessity about the relationship between the modal base and the proposition.

\begin{center}
\textbf{(45)}
\end{center}

\begin{enumerate}
\item a. Harry must be the victim.
\item b. Harry is the victim.
\end{enumerate}

Given this characteristic of epistemic modals, we suggest that before the syntactic computation of the Chinese V-\textit{qilai} evaluative construction, as shown by (44a-c), reaches the projection of EvaP, at the stage of EviP, the evidential head Evi agrees with the epistemic head in the feature of ‘indirect evidence’ if there occurs an epistemic modal or an evidential adverb inside. In contrast, if neither epistemic modals nor evidential adverbs appear in domain of EpiP, the value of the evidential head Evi can only be determined until the computation reaches the projection of EvaP. This implies that determination of the value of the evidential head Evi in the Chinese V-\textit{qilai} evaluative construction must confirm to the Earliness Principle: linguistic operations must apply as early in a derivation as possible (cf. Pesetsky (1995)).

Under our analysis, the following questions raised by the V-\textit{qilai} evaluative construction are accounted for well: First, the structure in (37a) immediately explains the question of why QIP is obligatory because it does not make sense for an evaluative construction not to have the target of evaluation.
(46) a. [Pro zuo-qi shi lai], Zhangsan hen yongxin.
   Do-qi matter lai Zhangsan very attentive
   ‘The external speaker witnesses Zhangsan’s doing this matter, and then says Zhangsan works attentively.’
b. *Zhangsan hen yongxin. (with the meaning of (46a))
   Zhangsan very attentive

Second, the fact that QIP must precede and c-command the clause denoting the (external) speaker’s judgment of qualities of the evaluated event is also naturally derived.

(47) a. [Zhangsan zuo-qi shi lai] [Pro hen yongxin].
   Zhangsan do-qi matter lai very attentive
   ‘The external speaker witnesses Zhangsan’s doing this matter, and then says Zhangsan works attentively.’
b. [Pro zuo-qi shi lai], [Zhangsan hen yongxin].
   Do-qi matter lai Zhangsan very attentive
   ‘The external speaker witnesses Zhangsan’s doing this matter, and then says Zhangsan works attentively.’
c. *[Zhangsan hen yongxin], [Pro zuo-qi shi lai].
   Zhangsan very attentive do-qi matter lai

Third, the fact that the topic NP always c-commands and precedes the V-qilai clause and the clause denoting the (external) speaker’s judgment is captured, too.

(48) a. Zhe-jian yifu, Zhangsan chuan-qilai, Pro hen haokan.
   This-CL clothing Zhangsan wear-qilai very pretty
   ‘The external speaker witnesses Zhangsan’s wearing this article of clothing, and then says Zhangsan’s make-up looks pretty.’
b. Zhe-jian yifu, Pro chuan-qilai, Pro hen haokan.
   This-CL clothing wear-qilai very pretty
   ‘Based on my personal experience of wearing this article of clothing, wearing this piece of clothing makes my make-up look pretty./The external speaker infers from his/her knowledge of this article of clothing that it is pretty for one to wear this article of clothing.’
   Pro wear-qilai this-CL clothing very pretty

5. Concluding Remarks

The V-qilai evaluative construction is a structure containing syntactic projections of pragmatically-relevant features: the Evaluative Phrase and the Evidential Phrase. The V-qilai sequence inside projects as QIP, which occurs in [Spec, EvaP]. The Eva head, endowed with the intrinsic feature [+speaker], checks the person feature of the Q head to see whether the evaluator (i.e., the (external) speaker) and the subject NP of the V-qilai clause are the same person. This checking makes the head Eva involve a ‘source of information’; therefore, Eva can determine the value of the evidential head Evi through agreeing with it in the feature of ‘source of information’. Given this, the evidential head Evi can be regarded as a covert
evidential morpheme which agrees with the world argument in [Spec, EviP] to determine the evidential mood of the V-qilai evaluative construction.

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