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 Ql head to see whether the evaluator (i.e., 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

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[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) a. Gou[2] yao3# xiao[2] gou3.
         Dog   bite   small   dog
         'The dog bites the small dog.'
     b. *Gou[2] pao3# qi3 lai2# hen3 kuai4.
         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.'
     b. *Gou[2] yao3# qi3-lai2# gou[2] hen[2] hen3#
         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: $3 \rightarrow 2 / \_\_3$.

(8)   Zhe4-jian4# yi1-fu2# qing1-xi[2] qi3-lai2#
     This-CL clothing wash-*qilai*
     hen[2] nao3-ren2#.
     very   bothersome
     '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].
     Zhangsan wear-qi this-CL clothing lai   very pretty

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]$_i$ [$_S$ Pro$_i$ 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., *jüshuo* 'allegedly') can be inserted between the V-*qilai* sequence and the following part (cf. Cinque (1999)).

(12)   Zuo-qi   zhe-zhong shi   lai,   jüshuo   Zhangsan
              Do-qi   this-kind matter   lai   allegedly Zhangsan
               tebie   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))
          Zhangsan especially perspiringly
      c. *Zhangsan tebie   maili,
          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. Zhangsna 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.

(16)   a.   Zhangsan$_i$ zuo-qi shi   lai, jüshuo   Pro$_i$ bu   tai kekao.
            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$_i$ zuo-qi shi   lai, Pro$_i$ 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 evidentialtiy 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
       b. [Zhangsan pao-qi bu lai] [Pro hen   kuai].   (activity)
             Zhangsan run-qi step lai   very   fast
             'The external speaker witnesses Zhangsan's running, and then
               says that Zhangsan runs fast.'
       c. *[Zhangan 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/the 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
            This-CL idea   sound qilai very
             bucuo.   (lexicalized sentential adverb)
             not-bad
            'This idea sounds okay.'
        b. Zhangsan zuo-qi shi   lai hen   renzhen. (adjunct clause)
            Zhangsan do-qi   matter lai very serious
            'When Zhangsan works, he is very serious.'
        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 [$_{I'}$ [$_{Adjunct/IP}$ Pro [$_{I'}$ [$_{I}$ t$_i$] [$_{VP}$ [$_{VP}$ [$_{v'}$ [$_{V}$ zuo-qi$_i$] shi]]-
        lai]]] [$_{I'}$ [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 [$_{I'}$ [$_{Adjunct/IP}$ Pro [$_{I'}$ [$_{I}$ t$_i$] [$_{VP}$ [$_{VP}$ [$_{v'}$ [$_{v}$ chuan-qi$_i$] zhe-
        jian yifu]] lai]]] [$_{I'}$ [Infl] [$_{VP}$ hen 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., $\varnothing$) 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. [$_{IP}$ ___ [$_{VP}$ $\varnothing$-chuan-qilai [$_{IP}$ [$_{NP}$ zhe-jian yifu] [hen haokan]]]
     c. [$_{IP}$ [$_{NP}$ zhe-jian yifu]$_i$ [$_{VP}$ $\varnothing$-chuan-qilai [$_{IP}$ [$_{NP}$ t$_i$] [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 xiuzhi 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]i [VP ∅-chuan-qilai [IP [NP ti-xiuzi] [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'.

(33)   Zuo-qi zhe-zhong shi   lai, jüshuo   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
         [jüshuo [Pro jüedui   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 Ql, in [Spec, EviP], as shown by (37b).[4]

(37)   a. [ToP … [EvaP [QlP … V-*qilai*] [Eva' [Eva Eva] [EviP [Evi' [Evi Evi]
           [IP …]]]]]]]
        b. [QlP … [Ql' [Ql Ql] [VP … [V' [V V-*qilai*] …]]]]]

Under the syntactic structure as shown by (37a), between the V-*qilai* clause (i.e., QlP) 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

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[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 Ql 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., QlP). 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 QlP, 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., QlP) the predication relation between the subject NP and the V-*qilai* predicate makes the head of QlP 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)).

(38)   +participant
              modal base ⟨
                           -participant

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 Ql to see whether the evaluator (i.e., the (external) speaker) and the subject NP of the V-*qilai* clause (i.e., QlP) 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 Ql implies that the evaluator and the subject NP of the V-*qilai* clause are the same person in the current deictic sphere.

(39)   [$_{ToP}$ … [$_{EvaP}$ [$_{QlP}$ Wo$_{[+speaker]}$ chuan-qi zhe-jian yifu lai] [$_{Eva'}$ [$_{Eva}$
            Eva$_{[+speaker]}$] [$_{EviP}$ w [$_{Evi'}$ [$_{Evi}$ Evi] [$_{IP}$ Pro hen haokan]]]]]]

This implies that the (external) speaker evaluates the event denoted by QlP 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.[5] 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) a. … [$_{CP}$ [$_{C'}$ *da* [$_{IP}$ den inspekteur da boek gelezen *eet*]]]
         …   that the inspector that book read   has
       'that the inspector has read that book;
      b. … [$_{CP}$ [$_{C'}$ *dan* [$_{IP}$ d'inspekteurs da   boek gelezen *een*]]].
         …   that   the inspectors that book read   have
       '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 QI 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)   [$_{ToP}$ … [$_{EvaP}$ [$_{QIP}$ Ni/Ta$_{[-speaker]}$ chuan-qi zhe-jian yifu lai] [$_{Eva'}$ [$_{Eva}$ Eva$_{[+speaker]}$] [$_{EviP}$ *w* [$_{Evi'}$ [$_{Evi}$ Evi] [$_{IP}$ Pro hen haokan]]]]]]]

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).

   Third, if the subject NP of the V-*qilai* clause (i.e., QIP) occurs as an empty pronominal (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)   [$_{ToP}$ Zhe-ke zuanjie [$_{EvaP}$ [$_{QIP}$ Pro kan-qilai] [$_{Eva'}$ [$_{Eva}$ Eva] [$_{EviP}$ *w* [$_{Evi}$
          This-CL diamond-ring   look-qilai
          [$_{Evi}$ Evi] [Pro hen   zhiqian]]]]]].
                         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.'

On the one hand, when the agentive Pro subject of the V-*qilai* clause (i.e., QlP) 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 QlP. 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 lapidarist. S/He, not having the chance to see the diamond ring, makes an inference on the value of the diamond ring simply based on her/his 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 QlP (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)   speaker
                                        participant ⟨
         referring expression (pronoun) ⟨   addressee
                                        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-*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)).

(44)   a. [$_{ToP}$ … [$_{EvaP}$ [$_{QIP}$ Wo chuan-qi zhe-jian yifu   lai] [$_{Eva'}$ [$_{Eva}$ Eva]
                   I   wear-qi this-CL clothing lai
         [$_{EpiP}$ [$_{Evi'}$ [$_{Evi}$ Evi] [$_{EpiP}$ Pro yiding hen haokan]]]]]]
                           must   very pretty
        'It must be very pretty for me to wear this article of clothing.'

      b. [$_{ToP}$ … [$_{EvaP}$ [$_{QIP}$ Ni/Ta   chuan-qi zhe-jian yifu   lai] [$_{Eva'}$ [$_{Eva}$
                    You/S/He wear-qi this-CL clothing lai
         Eva] [$_{EpiP}$ [$_{Evi'}$[$_{Evi}$ Evi] [$_{EpiP}$ Pro yiding   hen haokan]]]]]]
                               must   very pretty
        'It must be very pretty for you/him/her to wear this article of clothing.'

      c. [$_{ToP}$ Zhe-jian yifu [$_{EvaP}$ [$_{QIP}$ Pro chuan-qilai] [$_{Eva'}$ [$_{Eva}$ Eva] [$_{EviP}$
         This-CL clothing   wear-qilai
         [$_{Evi'}$ [$_{Evi}$ Evi] [$_{EpiP}$ Pro kending hen haokan]]]]]]
                           must   very pretty
        'It must be very pretty for one to wear this article of clothing.'

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.

(45)   a. Harry must be the victim.
      b. Harry is the victim.

Given this characteristic of epistemic modals, we suggest that before the syntactic computation of the Chinese V-*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-*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-*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 QlP 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.'
      c. *Pro chuan-qilai, zhe-jian yifu   Pro   hen haokan.
           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 QlP, which
occurs in [Spec, EvaP]. The Eva head, endowed with the intrinsic feature
[+speaker], checks the person feature of the Ql 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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