1. Introduction

Unlike English, in Mandarin Chinese an ordinal number cannot be followed directly by a cardinal number, as shown by the contrast between (1) and (2). To express the counterpart of (1), Mandarin Chinese utilizes the morpheme qian ‘front’ in the [qian + Num + Cl + N] sequence (henceforth the qian phrase), as indicated in (3).¹

(1) the first three prime ministers
(2) *di yi san-wei shouxiang
   di one three-CL prime minister
(3) qian san-wei shouxiang
   qian three-CL prime minister

a. ‘the first three prime ministers’ [absolute]
b. ‘the previous three prime ministers’ [relative]

Particularly interesting is the fact that the qian phrase is more complex than its English counterpart, since it may assume two different readings expressing the ‘absolute’ and ‘relative’ points of view. Put more clearly, the qian phrase is a deictic expression which is sensitive to variations in the context in which it is uttered. For example, if the speaker stands in the “shoes” of England, the qian phrase denotes the first three prime ministers: Robert Walpole, Spencer Compton and Henry Pelham, as indicated in (3a). This interpretation will

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Abbreviations used in this paper are as follows: CL: classifier; DE: verbal suffix or marker for modifying phrases like genitive phrases, relative clauses; ASP: aspect marker, and SFP: sentence-final particle
not change when the *qian* phrase is used by different speakers; we thus call it an absolute reading. Alternatively, if the speaker stands in his/her own “shoes”, the *qian* phrase refers to the previous three prime ministers relative to the one at the speech time. For instance, the incumbent prime minister of England in 2012 is David Cameron, and the *qian* phrase refers to the previous three prime ministers: John Major, Tony Blair and Gordon Brown, as shown in (3b). In this case, the denotation of the *qian* phrase is contingent on the speech time, and it may refer to different prime ministers when used by different speakers; we therefore call it a relative reading.

The ambiguity of the *qian* phrase raises the following questions: (A) what are the syntactic and semantic properties of the morpheme *qian*; (B) how does the configuration of nominal expressions in Mandarin Chinese accommodate the characteristics of the morpheme *qian*? Any theory about nominal expressions should provide an answer for the above questions.

This paper concerns the fine structure of nominal expressions, especially in the phrase [*qian* + Num + Cl + N]. The interpretation of this construction is sensitive to discourse factors such as perspective and reference point. I will therefore argue for a Perspective projection located right under DP in Mandarin Chinese nominal phrases (cf. Speas (2004); Nishigauchi (1999); Liu (2007); Fillmore (1982)).

The organization of this paper is as follows. Section 2 is devoted to the syntax and semantics of the *qian* phrase in Mandarin Chinese; this discussion will help to crystallize the questions this paper addresses. In Section 3, Li’s (1999, 2009) proposal on nominal expression will be reviewed, and Section 4 will introduce some background on logophors as a preliminary to the main analysis. Section 5 presents my proposal. Finally, the conclusion is presented in Section 6.

### 2. Syntactic and Semantic Properties of the *Qian* Phrase

In comparing *qian* phrases with number expressions, some significant contrasts between the two types of phrases can be highlighted as follows. First, *qian* phrases can occur freely in subject positions or topic positions, as indicated in (4); however, this is not possible for number expressions, as shown by the ungrammaticality of (5) (cf. Li (1998)).

(4) a. Qian liu-ge xuesheng qu -guo Taipei.
   Qian six-CL student go-ASP Taipei
   ‘The first six students have the experience of going to Taipei.’
   ‘The previous six students have the experience of going to Taipei.’

b. Qian liu-ge xuesheng, wo zhidao qu -guo Taipei.
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Qian six-CL student I know go-ASP Taipei
‘The first six students, I know they have the experience of going to Taipei.’
‘The previous six students, I know they have the experience of going to Taipei.’

Six-CL student go-ASP Taipei
‘Six students have the experience of going to Taipei.’
Six-CL student I know go-ASP Taipei
‘There are six students; I know they have the experience of going to Taipei.’

Second, the different interpretations of qian phrases and number expressions can be demonstrated by two tests: co-reference and binding. A qian phrase in subject position denotes definite individuals, and thus is able to co-refer with or bind a following pronoun ((6a) and (7a), respectively). In contrast, number expressions in this position cannot co-refer with or bind pronouns, as shown by (6b) and (7b), because they do not refer to entities or individuals in the discourse (cf. Li (1998)).

(6) a. Qian san-ge ren_1 lift-not-move this-CL piano
tamen_1 de liliang tai xiao.
they DE strength too small
‘The first three persons cannot lift up this piano. Their strength is too weak.’
‘The previous three persons cannot lift up this piano. Their strength is too weak.’
b. *San-ge ren_1 lift-not-move this-CL piano
tamen_1 de liliang tai xiao.
their DE strength too small
‘Three people cannot lift up this piano. Their strength is too weak.’

(7) a. Zhangsani zhidaq qian san-ge ren_j yiding
Zhangsan know qian three-CL people certainly
ban-de-dong ziji_1j DE piano
move-able-move self’s DE piano
‘Zhangsan knows that the first three persons certainly can move self’s/pelves’
piano(s).’
‘Zhangsan knows that the previous three persons certainly can move self’s piano(s).’

b. Zhangsan zhidao san-ge ren yiding
Zhangsan know three-CL people certainly
ban-de-dong ziji de gangqin.
move-able-move self’s DE piano

‘Zhangsan knows that three people certainly can move self’s piano.’

Further evidence showing the dissimilarity between qian phrases and number expressions is revealed by the following contrast. Qian phrases can not occur in existential sentences or in sentences with secondary predicates, as indicated by the ungrammaticalities in (8a)-(9a); number expressions are grammatical in these environments, as shown in (8b)-(9b) (cf. Huang (1987)).

Village-inside have qian three-CL doctor
‘In the village there are the first three doctors.’

b. Cunzi-li you san-ge yisheng.
Village-inside have three-CL doctor
‘In the village there are three doctors.’

(9) a. *Zhangsan jiao-guo qian san-ge xuesheng hen congming.
Zhangsan teach-ASP qian three-CL student very clever
‘Zhangsan has the experience of teaching the first three students who are very clever.’

b. Zhangsan jiao-guo san-ge xuesheng hen congming.
Zhangsan teach-ASP three-CL student very clever
‘Zhangsan has the experience of teaching three students who are very clever.’

This again demonstrates on syntactic grounds that the qian phrase denotes a definite reading. In terms of semantics, there are many possible denotations of the qian phrase. Some qian phrases may be ambiguous between an absolute reading and a relative reading, while other qian phrases may have only one available interpretation. First, consider the qian phrase in (3), shown in introduction (repeated as (10)), which is ambiguous between an absolute and a relative reading:
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(10) Qian san -wei shouxiang dou shi nanxing.
    Qian three-CL prime minister all be male
    a. ‘The first three prime ministers are all male.’ [absolute]
    b. ‘The previous three prime ministers are all male.’ [relative]

The *qian* phrase is not always ambiguous between the two readings discussed above. Only an absolute reading is possible if an internal protagonist denoted by the external argument of the nominal constituent is provided.

(11) **Yingguo** qian san -wei shouxiang dou shi nanxing. [absolute]
    England qian three-CL prime minister all be male
    ‘The first three prime ministers of England are all male.’

Conversely, the *qian* phrase can denote only a relative reading if the identity of the internal protagonist of the nominal phrase is unclear or such an entity does not exist.

(12) Qian san-tian hen leng. [relative]
    Qian three-day very cold
    ‘The previous three days were very cold.’

If the relationship between the arguments of the nominal expression is “continuous” in the sense that it is not subject to voluntary terminations – as is the case with the relationship between parents and children in (13), we get only an absolute reading. This can be illustrated by the following contrast:

(13) Zhangsan qian san-ge nuer dou zhu zai Taipei. [absolute]
    Zhangsan qian three-CL daught er all live in Taipei
    ‘The first three daughters of Zhangsan all live in Taipei.’

(14) Zhangsan qian san-ge nupengyou dou zhu zai Taipei. [ambiguous]
    Zhangsan qian three-CL girlfriend all live in Taipei
    a. ‘The first three girlfriends of Zhangsan all live in Taipei.’
    b. ‘The previous three girlfriends of Zhangsan all live in Taipei.’

Finally, if the number in the sequence [*qian* + Num + CL +N] is *yi* ‘one’, the *qian* phrase denotes only a relative meaning.
(15) Zhangsan qian yi-ge nupengyou zhu zai Taipei. [relative]
Zhangsan qian one-CL girlfriend live in Taipei
‘The previous girlfriend of Zhangsan lives in Taipei.’

In what follows, I shall discuss how the semantics of the qian phrase can be mapped to its syntactic structure. Before going further into my proposal, it will be instructive to review Li’s (1999, 2009) analyses of the structure of nominal expressions in Mandarin Chinese.

3. Literature Review: Li (1999, 2009)

Li (1999) argues that the morpheme –men in Mandarin Chinese should be analyzed as a plural morpheme realized as an element in D. In addition, she proposes that classifiers head an independent projection, while numbers stay in [Spec, NumP]. This proposal is exemplified by (16), which has (17) as its syntactic structure.

(16) tamen san-ge xuesheng
them three-CL student
‘them three students’

(17) [DP[D[tamen [NumP san [Num [ClP[Cl ge [NP[N xuesheng ]]]]]]]]]
them three CL student

Li (2009) further discusses the properties of more complicated nominal expressions. Many elements belonging to the category D can occur above NumP, like pronouns, proper names, and demonstratives. The longest case is shown in (18).

(18) Zhangsan tamen na san-ge langutou
Zhangsan them those three-CL lazybone
‘Zhangsan them those three lazybones’

It is worth noting that these elements must follow the strict linear word order [proper name + pronoun + demonstrative], and nothing can intervene between any two of these expressions. The structural configuration of this type of expression is provided in (19):
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Let’s see whether the proposal of Li (1999, 2009) can account for the characteristics of the qian phrase under consideration, illustrated again in (20).

(20) qian san-wei shouxiang
qian three-CL prime minister
  a. ‘the first three prime ministers’ [absolute]
  b. ‘the previous three prime ministers’ [relative]

As shown in the previous section, the qian phrase denotes a definite reading, and so one may submit that the morpheme qian stays in the D head. On this view, we should be able to identify the reference of the qian phrase. However, contra our prediction, the true denotation of the qian phrase depends on the identity of the point-of-view holders. In addition, the ambiguity of the qian phrase in (20) cannot be properly represented by the structure in (19) proposed by Li (2009). In what follows, therefore, I will attempt to provide my analysis.

4. Preliminaries

As shown by the discussion in Section 3, the denotation of the qian phrase is contingent on the point-of-view holder or reference point. This phenomenon can also be found in discussions of logophors (cf. Cantrall (1974); Kuno (1972); Kuno and Kaburaki (1977); Zribi-Hertz (1989)). Following the taxonomy of Sell (1987), the antecedent of logophors can be further distinguished into the following three subtypes: Source, Self, and Pivot. According to Huang and Liu (2000), the above roles are demonstrated by the following examples, where Lisi is the internal protagonist:

(21) Zhangsan shuo Lisi you zai piping ziji le.
Zhangsan say Lisi again at criticize self SFP
‘Zhangsan said that Lisi was again criticizing him.’
(22) [Ziji-de xiaohai mei de jiang]-de xiaoxi shi Lisi hen shangxin. 
Self’s DE child not get prize DE news make Lisi very sad 
‘The news that his child didn’t win the prize made Lisi very sad.’

(23)??(Dang) Lisi piping ziji de shihou, Zangsani zheng 
(at) Lisi criticize self DE moment Zangsani right 
zai kan shu. 
at read book 
‘At the moment Lisi was criticizing him, Zangsani was reading.’

Simply put, Lisi in (21) may be understood as the Source antecedent of ziji, since he is the internal agent of the communication, while Lisi in (22) is the internal Self whose mental state is being reported. As for Lisi in (23), he serves as the role of Pivot, since the content of the proposition is evaluated from his point of view.

Huang and Liu (2000) argue that these various cases of logophoricity can be integrated to the syntax by introducing an independent Self Phrase, Pivot Phrase, and Source Phrase, which work together to capture the syntax, semantics and pragmatics of logophoricity following Rizzi’s (1997) system. For instance, the structures of (21) and (23) can be represented as (24) and (25), respectively:

(24) [IP Zangsani [VP shou [SourceP ziji [Source Source [IP Lisi you zai piping t_i le]]]]] 

Zangsani say self Lisi again at criticize t_i SFP

(25) [CP [DP [PivotP [ziji,] [IP Lisi piping t_i]] [NP de shihou]] [IP Zangsani zheng 
self Lisi criticize t_i DE moment Zangsani right 
zai kan shu]] 
at read book

As indicated in the above structures, Huang and Liu (2000) claim that [Spec, PivotP] is bound by an NP denoting the Point-of-View holder of the relevant discourse. If no internal protagonist involved is identified as a Point-of-View holder, the speaker will be the default antecedent in [Spec, PivotP].

5. Proposal

Huang and Liu’s (2000) analysis of the long distance ziji provides a reasonable starting point for the treatment of the internal structure of DPs containing a qian phrase. Recall that the interpretation of the qian phrase depends on the “camera angle” chosen by the speaker; I
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shall therefore postulate a pragmatically-related projection within the nominal constituent in Mandarin Chinese (cf. Kuno and Kaburaki (1077); Kuno (1987)). In what follows, for ease of explanation, I first briefly introduce my analysis, and then expand on the details of my proposal.

I argue that the morpheme qian possesses a [Perspective] feature, which projects a Perspective phrase within the nominal expression in Mandarin Chinese. Moreover, the morpheme qian introduces a Point-of-View (henceforth POV) variable which may be bound either by the speaker or by an internal protagonist denoted by an argument of the nominal expression (e.g., the possessor or the external argument) (cf. Nishigauchi (1999); Huang and Liu (2000)). If the POV variable is bound by the speaker, it results in a relative reading; if it is bound by an internal protagonist, it gives rise to an absolute reading.

Now, let us take the following examples as illustrations: First, consider a sentence containing the qian phrase but no overt internal protagonist, as in (26).

(26) Qian san-wei shouxiang dou shi nanxing.
Qian three-CL prime minister all be male

a. ‘The first three prime ministers are all male.’ [absolute]
b. ‘The previous three prime ministers are all male.’ [relative]

The morpheme qian with its [Perspective] feature projects a Perspective phrase, and the POV variable introduced by the morpheme qian can either be bound by a speaker or by a covert internal protagonist. The qian phrase in (26) has (27) as its syntactic structure.

(27) [DP[PerspectiveP qian [Perspective [NumP san [Num [CIP [CI wei [NP shouxiang]]]]]]]]
qian three CL prime minister

2 Following Chomsky (1995), I suggest that the covert Perspective head dominates a bundle of features.

3 The analysis of point-of-view can be substantiated by Koopman and Sportiche (1989) and Speas (2004), who assume that a logophoric pronoun is a variable which must be bound by a pragmatic point of view operator.

4 I follow scholarly tradition in assuming that a classifier heads an independent projection; this proposal was first put forward in Tang (1990) (cf. Cheng and Sybesma (1998, 1999); Li (1998) among others). Saito, Lin, and Murasugi (2008) provide an argument of N’-ellipsis in support of this view. In addition, according to the previous analyses, I propose that number expressions are syntactically represented by the functional projection NumP, and that number expressions stay in [Spec, Num P] (cf. Ritter (1991); Borer (2005); Hsieh (2008)).
Here, if the speaker speaks from his/her own viewpoint, the denotation of the *qian* phrase is closely tied to the temporal/spatial dimension of the speaker. For instance, the incumbent prime minister of England is David Cameron in 2012. Then the *qian* phrase will refer to the previous three prime ministers: John Major, Tony Blair and Gordon Brown. The *qian* phrase results in a relative reading. Alternatively, if the “camera angle” is positioned on the internal protagonist, namely, the speaker stands in the “shoes” of *England*, the *qian* phrase refers to the first three prime ministers of England: Robert Walpole, Spencer Compton and Henry Pelham. The denotation of the *qian* phrase will not differ from speaker to speaker, and will yield an absolute reading.

Significantly, when an internal protagonist is realized by an overt nominal expression, such as *yingguo ‘England’* in [Spec, DP] in (28), the POV variable can be directly bound by that internal protagonist. The *qian* phrase thus results in an absolute reading, with the structure shown in (29).

(28) Yingguo qian san-wei shouxiang dou shi nanxing. [absolute]
    England qian three-CL prime minister all be male
    ‘The first three prime ministers of England are all male.’

(29) [DP Yingguo [PerspectiveP qian[Perspective [NumP san [Num [CIP [Cl wei
    England qian three CL
    [NP shouxiang]]]]]]]
    prime minister

Second, let us turn to the case of a *qian* phrase with no internal protagonist, as illustrated in (30).

(30) Qian san-tian hen leng. [relative]
    Qian three-day very cold
    ‘The previous three days were very cold.’

In (30), the context of the sentence does not provide any internal protagonist or a reference point for the ‘camera angle’ to be placed on. The only option left for the binder of the POV variable is the speaker; otherwise, the prohibition against vacuous quantification will be violated (cf. Kratzer (1989)).
In contrast, if an internal protagonist *zhe ge yue* ‘this month’ is provided within the nominal expression, as shown in (31), the POV variable can and must be bound by it. An absolute reading is thus expected.

\[(31)\]  
\[\text{Zhe ge yue qian san-tian hen leng. [absolute]}\]  
\[This CL month qian three-day very cold\]  
\[‘The first three days of this month were very cold.’\]

Interestingly, the language facts are in reality more complex than what we have discussed so far. Consider the following two sentences, both of which contain an internal protagonist; note that (32) is limited to an absolute reading, whereas (33) is ambiguous.

\[(32)\]  
\[\text{Yingguo qian san-wei shouxiang dou shi nanxing. [absolute]}\]  
\[England qian three-CL prime minister all be male\]  
\[‘The first three prime ministers of England are all male.’\]

\[(33)\]  
\[\text{Zhangsan qian san-ge nupengyou dou zhu zai Taipei. [ambiguous]}\]  
\[Zhangsan qian three-CL girlfriend all live in Taipei\]  
a. ‘The first three girlfriends of Zhangsan all live in Taipei.’

b. ‘The previous three girlfriends of Zhangsan all live in Taipei.’

Given my analysis, the ambiguity of (33) is unexpected. We need to account for the fact that the POV variable in (33) can optionally be bound by the speaker. The reasoning is as follows. Since the speaker can potentially have a spatial or temporal association with an internal protagonist *Zhangsan*, the “camera angle” can be easily shifted from *Zhangsan* to the standpoint of the speaker. The POV variable can then be bound by the speaker in turn, and the *qian* phrase is thus able to denote a relative as well as an absolute reading. However, this kind of perspective shifting is impossible with an internal protagonist like *England* in (32). *England* is a country and hence an abstract notion which is detached from the speaker temporally or spatially; the speaker almost certainly had not even come into existence when England was established. Obviously, it is unreasonable for the speaker to ‘go proxy’ for the internal protagonist *England*. The *qian* phrase in (32) can therefore only assume an absolute reading.

Interestingly, an additional contrast relevant to our discussion is demonstrated by the following pair.
(34) Zhangsan qian san-ge nupengyou dou zhu zai Taipei. [ambiguous]
Zhangsan qian three-CL girlfriend all live in Taipei
a. ‘The first three girlfriends of Zhangsan all live in Taipei.’
b. ‘The previous three girlfriends of Zhangsan all live in Taipei.’
(35) Zhangsan qian san-ge nuer dou zhu zai Taipei. [absolute]
Zhangsan qian three-CL daughter all live in Taipei
‘The first three daughters of Zhangsan all live in Taipei.’

The above two sentences differ from each other only with respect to the noun phrase in the subject positions nupengyou ‘girlfriend’ and nuer ‘daughter’. This difference is reducible to the distinction between the two relationships, namely, boyfriend/girlfriend relation and father/daughter relation in (34) and (35), respectively. However, unlike the ambiguity of (34), (35) allows only an absolute reading. In effect, this is because the relation between father and daughter, unlike that of boyfriend and girlfriend, is genetic, and thus is considered to continue indefinitely without intermission under normal circumstances. It is therefore questionable for the speaker to refer to the ‘previous’ three daughters of Zhangsan relative to the one at the speech time of the speaker. That is, if the relationship between the nominal constituent cannot be terminated, a “camera angle” can never be positioned at the viewpoint of the speaker. Since the POV variable involved can never be bound by the speaker, it must be bound by the internal protagonist to avoid the violation of vacuous quantification. An absolute reading therefore results.

This analysis also explains a contrast that can be observed between pairs of sentences like the following:

(36) Zhangsan qian yi-ge nupengyou zhu zai Taipei. [relative]
Zhangsan qian one-CL girlfriend live in Taipei
‘The previous girlfriend of Zhangsan lived in Taipei.’
(37) *Zhangsan qian yi-ge nuer zhu zai Taipei.
Zhangsan qian yi-CL daughter live in Taipei
*‘The previous daughter of Zhangsan lived in Taipei.’

As illustrated by my discussion, the relationship of father and daughter is perpetual, and it is thus absurd for the qian phrase in question to refer to any “previous” daughter relative to the one at the speech time of the speaker.
The final idiosyncrasy of the *qian* phrase is its limitation to a relative interpretation if the number in the [*qian* + Num + Cl + N] sequence is *yi* ‘one’.

(38) Zhangsan qian yi-ge nupengyou zhu zai Taipei. [relative]
Zhangsan qian one-CL girlfriend live in Taipei
‘The previous girlfriend of Zhangsan lives in Taipei.’

In (38), if the POV variable is bound by an internal protagonist Zhangsan, it is expected to denote *the first girlfriend*. *Contra* our expectation, this possibility is ruled out, as indicated by the lack of ‘the first student’ reading in the following sentence:

(39) Qian yi-ge xuesheng qu-guo Taipei. [relative]
Qian one-CL student go-ASP Taipei
a. ‘The previous student has the experience of going to Taipei.’
b. # ‘The first student has the experience of going to Taipei.’

It appears, then, that the POV variable in (38) can only be bound by the speaker, resulting in a relative reading.

So far in this section, I have argued that a POV variable is introduced by the morpheme *qian*; this variable may be bound either by the speaker or by an internal protagonist denoted by an argument of the nominal expression (e.g., the possessor or the external argument) (cf. Speas (2004); Nishigauchi (1999); Huang and Liu (2000)). If the POV variable is bound by the speaker, it results in a relative reading; if the POV variable is bound by an internal protagonist, it gives rise to an absolute reading. A POV variable can additionally be bound by the speaker even if an internal protagonist is available under the condition that the speaker can be temporally or spatially associated with the internal protagonist and therefore ‘go proxy’ for the internal protagonist. In addition to this, the relationship between entities within the nominal expression also plays a crucial role in determining the interpretation of the *qian* phrase in question. If the relationship involved is continued and perpetual, a POV variable can only be bound by an internal protagonist, but if the relationship is alienable, an ambiguity results. Finally, if the number in the *qian* phrase is *yi* ‘one’, we can only get a relative reading due to the fact that the *qian* phrase can never refer to the ‘first one’ of anything.
6. Conclusion

In this paper, I first used empirical data to show that it is improper to analyze the morpheme *qian* as remaining in D throughout the derivation. I then demonstrated that the otherwise puzzling properties of the *qian* phrase find explanation once a Perspective phrase is provided. I argued that the *qian* phrase contains a Perspective projection, and the morpheme *qian* further introduces a POV variable. The two possible interpretations of the *qian* phrase can be attributed to the two Points-of-View involved. Specifically, if a POV variable is bound by the speaker, it results in a relative reading; if the variable is bound by an internal protagonist, it gives rise to an absolute reading. This analysis not only provides support for the split DP hypothesis generally, but also indicates that such a hypothesis can be productively extended to Mandarin Chinese.

Reference


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