

Postverbal Constituents in Mandarin Chinese^{1,2}

Chao Li

City University of New York

This paper discusses some previous structural and non-structural accounts of postverbal constituents in Mandarin Chinese and argues for an approach that attaches importance to both structure and non-structural factors like iconicity and information structure, an approach that offers a rather neat and natural account of postverbal constituents in Chinese. The paper also argues that all sentences containing one and only one postverbal duration or frequency phrase should be analyzed as involving a clause that contains both the duration/frequency phrase and the relevant verb except when only the action expressed by the verb is negated. As for sentences that contain two or more postverbal duration/frequency phrases in a row, they involve at least two clauses.

1. Introduction

Many linguists working on Mandarin Chinese (e.g. Chao 1968; Fang 1993; Huang 1984, 1998/1982; Huang et al. 2009; LaPolla 1995; C. Li & Thompson 1975; X. Li 1980; Y. Li 1987, 1990; Shi 2006; D. Xu 1990; L. Xu 1995), directly or indirectly, have touched upon the question of what constituents can occur postverbally and/or what the ordering of postverbal objects and postverbal duration/frequency phrases is. As far as the studies on what constituents can occur postverbally are concerned, they can be classified into two types: structural descriptions or accounts (e.g. Huang 1984; Y. Li 1990) and non-structural descriptions or accounts (e.g. L. Xu 1995; LaPolla 1995).

The purposes of this study are three-fold. First, it aims to review some previous structural and non-structural descriptions or accounts of postverbal constituents and to point out their problems. Second, it intends to argue for an alternative structural-functional account that takes both structure and function into consideration. Third, it also intends to discuss the syntactic status of postverbal duration and frequency phrases, i.e. whether they are all nominal predicates, as claimed by Shi (2006). The following sections will address these three aspects in turn.

¹ Abbreviations: CL=classifier; EXP=experiential; LOC=locative; MM=modifier marker; PERF=perfective; SFP=sentence-final particle.

² “Verbal(ly)” in “preverbal(ly)” and “postverbal(ly)” in this paper is intended to include both verbs and adjectives.

2. Previous accounts

In this section, I review some structural and non-structural descriptions or accounts that have touched upon the issue of postverbal constituents in Chinese. First, with respect to structural descriptions or accounts, what is prominent in the studies by Huang (1984: 54) and Y. Li (1990: 7, 17; see also 1987: 61, note 2) is that postverbal duration and frequency phrases are claimed to be unable to co-occur with a postverbal object, as shown in the contrast between (1a) and (1b), both of which are adapted from Y. Li (1990: 7). In fact, Huang's (and Li's) more general claim, though "oversimplified," is that "a verb in Chinese may be followed by at most one constituent" (Huang 1984: 54). However, as shown in (1c) and particularly (2), this claim or observation has turned out to be incorrect.³ In (2a), for example, the object *ta* 'he' and the duration phrase *san-ge xiaoshi* 'three hours' co-occur with each other, and both appear in a postverbal position.

- (1) a. Ta qi-le san tian/ san ci.
 he ride-PERF three day three time
 'He rode for three days/three times.'
- b. *Ta qi ma san tian/ san ci.
 he ride horse three day three time
 Intended: 'He rode horses for three days/three times.'
- c. Ta qi-le san tian(/ san ci) ma.
 he ride-PERF three day three time horse
 'He rode horses for three days/three times.'
- (2) a. Wo deng-le ta san-ge xiaoshi.
 I wait-PERF him three-CL hour
 'I waited for him for three hours.'
- b. Wo jian-guo na-ge ren san ci.
 I see-EXP that-CL person three time
 'I saw that person three times.'

³ The incorrectness of this observation is also indirectly reflected by studies devoted to the ordering of postverbal objects and duration/frequency phrases, such as the studies by Fang (1993) and X. Li (1980). It is also worth pointing out that it is not so obvious whether the claim made by Huang (1984) and Y. Li (1990) has been abandoned in Huang et al. (2009). Although they cite examples like (i) below, which Huang (1984) and Y. Li (1990) may not take as true counterexamples to their claim, no examples analogous to (2), which clearly involves a definite "direct" object (e.g. pronominal object and demonstrative object), are given.

(i) Huang et al. 2009: 92

Wo shang-guo ta liang ci jinyinzhubao.
 I award-EXP him two time money.jewelry
 'I awarded him money and jewelry twice.'

As for non-structural accounts of postverbal constituents in Chinese, they can be further classified into definiteness accounts and information structure accounts. With respect to the first category, Chao (1968), C. Li & Thompson (1975), and L. Xu (1995) all attach much importance to the notion of definiteness to account for the distribution of NPs in Mandarin. According to C. Li & Thompson (1975: 170), for example, it generally holds that “[n]ouns preceding the verb tend to be definite, while those following the verb tend to be indefinite,” although some refinements are needed and made.⁴ Along a similar line, L. Xu (1995: 37) observes that “[t]here is a tendency for definite NPs to be preverbal and for indefinite ones to be postverbal, whether they are arguments or adjuncts.” However, without refinements as those made by C. Li & Thompson (1975) and without a statistical study of definite and indefinite NP in a large corpus, it is not immediately clear whether Xu’s claim really holds, particularly given the fact that postverbal definite NPs are not difficult to find ((3)).

- (3) a. Ni weishenme mai zhexie shu?
 you why buy these book
 ‘Why did you buy these books?’
 b. Women yinggai guanxin ta, aihu ta.
 we should be.attentive.to him take.good.care.of him
 ‘We should be attentive to and take good care of him.’

In any case, what is shared by C. Li & Thompson’s study and Xu’s is that the observation is just a tendency. Although, admittedly, studies of tendencies with respect to a specific language or crosslinguistically are of great importance, a characterization of postverbal constituents in firmer terms would be preferred. In addition, the definiteness accounts focus only on the distribution of nouns, and thus fail to account for postverbal PPs and other syntactic constituents, as shown in (4).

- (4) a. Ta fang-le yi-feng xin zai zhuozi-shang.
 he place-PERF one-CL letter LOC table-on
 ‘He put a letter on the table.’

⁴ Specifically, C. Li & Thompson (1975) make the following four refinements:

- (i) “The noun in post-verbal position will be interpreted as indefinite unless it is morphologically [e.g. when modified by *zhe* ‘this’ or *na* ‘that’] or inherently [e.g. when it is a proper name or a personal pronoun] or non-anaphorically [i.e. non-linguistically] definite.” (p.173)
 (ii) “A sentence-initial noun must be interpreted as definite, and may not be interpreted as indefinite even if it is preceded by the numeral *yi*- ‘one.’ (p.177)
 (iii) “The noun following *bei*, although pre-verbal, is immune to Tendency A [i.e. the tendency cited above].” (p.179)
 (iv) “Nouns in prepositional phrases are immune to Tendency A [i.e. the tendency cited above].” (p.182)

- b. Ta shuo ta bu xiang chi kugua.
 he say he not want eat balsam.pear
 ‘He said that he did not want to eat balsam pear.’

Recently, LaPolla (1995) questions the definiteness account of the distribution of NPs and offers an alternative information structure account. He claims that “Chinese does not have a grammatical category of definiteness” (p.308), which can be seen from the fact that the bare noun *keren* ‘guest’ in (5) can have both a definite and indefinite interpretation without its form being changed or without anything being added. According to LaPolla, “verb medial word order has the function of distinguishing topical or non-focal NPs from focal or non-topical NPs, not ‘definite’ and ‘indefinite’ NPs (p.323).” Specifically, “*topical or non-focal NPs occur preverbally and focal or non-topical NPs occur post-verbally*” (LaPolla 1995: 310; emphasis original).

- (5) a. **Keren** lai le.
 guest come SFP
 ‘The guest(s) are coming.’
 b. Lai **keren** le.
 come guest SFP
 ‘There comes a guest.’ or ‘There come some guests.’

However, there are two problems with LaPolla’s (1995) information structure account. First, contra LaPolla, focal NPs like *wo* ‘I’ can occur preverbally, as shown in (6b), which is intended here as an answer to (6a). Second, non-focal NPs can occur postverbally, as shown in (7b), which is intended here as a response to (7a). In (7b), *ta* is non-focal, but it occurs after the verb *jian* ‘to see,’ again contrary to LaPolla’s prediction. One may argue that *ta* in (7b) is also non-topical and that its postverbal occurrence thus conforms to the second part of his claim, namely that focal or non-topical NPs occur after the verb. However, as an answer to (7a), *ta* in (7b) is clearly non-focal. This leads us to the conclusion that *ta* must be neither non-topical nor non-focal, a category that apparently has no place in LaPolla’s proposal.

- (6) a. Shei jian-guo ta?
 who see-EXP he
 ‘Who saw him before?’
 b. **Wo** jian-guo ta.
 I see-EXP he
 ‘I saw him before.’

- (7) a. Ni jian-guo ta ji ci?
 you see-EXP he how.many time
 ‘How many times did you see him before?’
 b. Wo jian-guo ta san ci.
 I see-EXP he three time
 ‘I saw him three times before.’

Therefore, as far as postverbal constituents are concerned, it is not the case that only focal or non-topical elements can occur postverbally. In fact, just as both definite and indefinite NPs can occur postverbally, both focal and non-focal elements can occur in the postverbal position.

3. An alternative account of postverbal constituents

3.1 A structural-functional account

In this subsection, I argue that an alternative and a better approach to what constituents can occur postverbally in Mandarin Chinese is one that takes into consideration both syntactic factors and non-syntactic factors like iconicity and information structure.

First, the semantically patient or theme argument of an intransitive verb occurs in the postverbal position when conveying new information, as shown in (8-9). The postverbal constituent is the single argument of the intransitive verb in both (8) and (9). In (8), this constituent is a theme argument, which is an event participant that necessarily undergoes a change of location at the completion of the event. The underlined part in (9) is a patient argument, which necessarily undergoes a change of state. In both (8) and (9), the single argument of the verb conveys new information. As a result, this theme or patient argument occurs postverbally.

- (8) Gangcai lai-le liang-ge jingcha.
 a.moment.ago come-PERF two-CL policeman
 ‘Two policemen came (here) a moment ago.’
 (9) Na-xiang li lan-le qi-ba-ge.
 that-box pear rot-PERF seven-eight-CL
 ‘Seven or eight pears in that box got rotten.’

Second, all subcategorized NP or clause complements can occur postverbally in one context or another, as shown in (10-12), where all the relevant postverbal constituents are underlined. The two examples in (10) involve subcategorized complements of adjectives. In (10a) the complement is an NP and in (10b) it is a clause. The two examples in (11) involve subcategorized complements of the verb *xiangxin* ‘believe.’ The complement is an NP in (11a) and is a clause in (11b). As for (12), it involves a subcategorized NP of a

three-place predicate, whose location argument can occur both preverbally and postverbally, a fact that has immediate relevance to our discussion below.

- (10) a. Ta hen manyi ziji-de gongzuo.
 he very satisfied self-MM job
 ‘He is very satisfied with his job.’
 b. Wo hen gaoping ni neng zhaodao ni-de xingfu.
 I very happy you can find you-MM happiness
 ‘I am glad that you can find your happiness.’
- (11) a. Ta hen xiangxin wo-de hua.
 he very believe I-MM word
 ‘He very much believes my words.’
 b. Wo xiangxin ta shi yi-ge hao ren.
 I believe he be one-CL good person
 ‘I believe that he is a good person.’
- (12) a. Zhangsan zai zhuozi-shang fang-le yi-ben shu.
 Zhangsan LOC table-on place-PERF one-CL book
 Intended: ‘Zhangsan put a book on the table.’
 b. Zhangsan fang-le yi-ben shu zai zhuozi-shang.
 Zhangsan place-PERF one-CL book LOC table-on
 ‘Zhangsan put a book on the table.’

Third, subcategorized PP complements can occur preverbally ((12a), (13a), and (14a)), but they can also appear in the postverbal position when such an ordering conforms to the unfolding of the event in the real world, as shown by the contrast between (13b) and (14b). The goal *gei Lisi* ‘to Lisi’ in (13b) occurs after the verb *ji* ‘to send,’ and this conforms to the unfolding of the event of sending. As a result, (13b) is grammatical. As for (14b), however, what he did should go before my feeling good, if there is any temporal ordering of the two at all. As putting the PP after the head violates the temporal constraint, (14b) is predicted to be ungrammatical in Chinese and this prediction is borne out.

- (13) a. Zhangsan gei Lisi ji-le yi-ben shu.
 Zhangsan to Lisi send-PERF one-CL book
 Intended: ‘Zhangsan sent a book to Lisi.’
 b. Zhangsan ji-le yi-ben shu gei Lisi.
 Zhangsan send-PERF one-CL book to Lisi
 Intended: ‘Zhangsan sent a book to Lisi.’

- (14) a. Wo zhen wei ta zihao.
 I really for he proud
 ‘I’m really proud of him.’
 b. *Wo zhen zihao wei ta.
 I really proud for he
 Intended: ‘I’m really proud of him.’

Finally, as for adjuncts, they can and generally must occur postverbally only when used (i) to provide new information about the degree or extent of a comparison or about the degree, extent, result, or goal that an eventuality expressed by a verb or an adjective has reached or will reach, or (ii) to offer new (evaluative) information about that eventuality in terms of quality or about (the state of completion of) that eventuality in terms of quantity, particularly numerical quantity. The following examples in (15) illustrate such postverbal adjuncts, which are all underlined.

- (15) a. Zhangsan pao-de tui dou suan le. (degree/result)
 Zhangsan run-MM leg EMPHASIS sore SFP
 ‘Zhangsan ran so much so that his legs were sore.’
 b. Ta like tiao-dao-le zhuozi-shang. (result: location)
 He at.once jump-onto-PERF table-on
 ‘He/She jumped onto the table at once.’
 c. Zhangsan bi ta gege gao hen duo. (extent)
 Zhangsan than he older.brother tall very much
 ‘Zhangsan is a lot taller than his older brother.’
 d. Zhangsan-de Putonghua shuo-de hen hao. (evaluation; quality)
 Zhangsan-MM Mandarin speak-MM very well
 ‘Zhangsan speaks Mandarin very well.’
 e. Wo deng-le ta san-ge xiaoshi. (quantity; duration)
 I wait-PERF he three-CL hour
 ‘I waited for him for three hours.’
 f. Wo deng-guo ta san ci. (quantity; frequency)
 I wait-EXP he three time
 ‘I waited for him three times.’
 g. Zhangsan bi ta gege gao liang gongfen. (quantity)
 Zhangsan than he older.brother tall two centimeter
 ‘Zhangsan is two centimeters taller than his older brother.’

The adjuncts in (15a) and (15b) express the degree or result of the running action and the location of the jumper as a result of the jumping event, respectively. The adjunct in (15c) indicates the degree or extent of a comparison and the one in (15d) involves an evaluation in terms of quality. (15e) and (15f) involve adjuncts that express the numerical duration

and frequency of the waiting event. As for (15g), it also involves a numerical quantity, in this case a quantity of the degree or extent of a comparison.

As can be seen from the above discussions, the occurrence of postverbal constituents can be given a rather neat and natural account when we take into consideration not only the syntactic status but also the function of the different postverbal constituents in the event being described. While the occurrence of subcategorized NP or clausal complements in the postverbal position can be described with syntactic terms alone and can be said to follow the basic SVO order of Chinese, the same cannot be said about the single theme or patient argument of an intransitive verb. That is, the occurrence of the latter in the postverbal position cannot be accounted for without taking non-syntactic factors into consideration. Similarly, the occurrence of PP complements and adjuncts postverbally cannot be given a natural explanation by resorting to syntax alone.

Crucially, the postverbal occurrence of single theme/patient arguments of intransitive verbs, PP complements, and adjuncts is not a random phenomenon and is conditioned by iconicity and information structure factors. As we have seen, the single theme/patient argument of an intransitive verb can occur postverbally only when it conveys new information. PP complements can occur in the postverbal position only when such an ordering conforms to the unfolding of the event in the real world, i.e. only when this ordering conforms to the iconicity principle, which states that the order of syntactic constituents should reflect their function in a specific event.⁵ As for adjuncts, their postverbal occurrence can also be reduced to iconicity and information structure considerations. Recall that adjuncts occur after the verb or adjective when they are used to provide new information about the degree, extent, result, or goal that an eventuality expressed by a verb or an adjective has reached or will reach, or to offer new (evaluative) information about that eventuality in terms of quality or quantity. Therefore, the occurrence of postverbal constituents is sensitive to information structure. Meanwhile, the fact that degree, extent, duration, frequency, and result adjuncts occur postverbally also conforms to the iconicity principle. Specifically, such predicate modifiers should occur after the predicate when presented as new information because only after an eventuality lasts for a while can one talk about its degree/extent, duration, frequency, and result.

The advantage of our structural-functional account is that it not only describes what constituents can occur postverbally but also offers natural explanations as to why. For example, the account can naturally capture the contrast between (16a) and (16b). Although *kuaisu* in (16a) and *hen kuai* in (16b) have a similar meaning, the former is used preverbally because it is used to express the manner of running. In contrast, to give

⁵ Cf. Tai's Principle of Temporal Sequence, which says that "the relative order between two syntactic units is determined by the temporal order of the states which they represent in the conceptual world" (1985: 50, 1993: 59).

an evaluative comment about the running action, *hen kuai* in (16b) has to be used after the verb.

- (16) a. Ta kuaisu de xiang wo pao guolai. (manner)
 he quickly MM toward I run over
 ‘He is running over to me quickly.’
 b. Ta pao-de hen kuai. (evaluation)
 he run-MM very fast
 ‘He runs very fast.’

3.2 Apparent counterexamples

In this subsection, we examine some examples that appear to pose a problem for our structural-functional account of postverbal constituents in Chinese offered above. These examples are all concerned with noun phrases containing a quantity element.

First, let’s see whether the use of quantificational noun phrases in the preverbal position in (17-18) is compatible with our structural-functional account. I argue that the use of *san ci* ‘three times’ in (17) and *san tian* ‘three days’ in (18) preverbally does not really pose a problem for our account. This is because *san ci* in (17), with the use of *dou* ‘all,’ does not convey new information, but given or old information. Therefore, it occurs preverbally instead of postverbally. As for *san tian* in (18), it does not express the duration of the book-writing event or the duration after the completion of the writing activity. In fact, it is about how soon the book is completed rather than how long the writing action lasts. This is also reflected by the fact that the English translation of *san tian* in this case is “in three days,” not “for three days.” As a result, it is not so surprising that *san tian* occurs in the preverbal position in (18).

- (17) Ta san ci dou qu-le.
 he three time all go-PERF
 ‘He went all the three times.’
 (18) Ta san tian xi-le yi-ben shu.
 he three day write-PERF one-CL book
 ‘He wrote a book **in three days.**’

Next, let’s consider the interesting pair in (19). The two sentences here express the same meaning, but *yi ci* ‘one time’ can occur both preverbally and postverbally. However, I argue that both (19a) and (19b) are compatible with our account of postverbal constituents in Chinese.

- (19) a. Ta yi ci ye mei qu-guo.
 he one time also not go-EXP
 ‘He did not go there once, let alone twice or more.’ / ‘He did not go there even once.’
- b. Ta mei qu-guo yi ci.
 he not go-EXP one time
 Intended: ‘He did not go there even once.’

Specifically, in (19a) *mei* negates *qu-guo* ‘went.’ In this case, *yi ci* cannot occur postverbally because it would give rise to a semantic conflict. Recall that on our proposal an adjunct that expresses new information about the frequency of an eventuality or about the duration of an eventuality or the duration after the completion of the eventuality should occur postverbally. As only such duration/frequency phrases and no other duration/frequency phrases can occur in the postverbal position and appear in the same clause as the verb or adjective, from a hearer’s perspective our proposal also has bearing on how postverbal duration and frequency phrases should be interpreted. Namely, such phrases should be interpreted in the way stated in (20).

(20) Interpretation of postverbal duration/frequency phrases

Postverbal duration/frequency phrases should be interpreted as indicating the duration or frequency of the eventuality expressed by the verb or adjective in the same clause, or the duration after the completion of the eventuality expressed by that verb or adjective.

Given (20), a postverbal frequency phrase has to be interpreted as the frequency of the eventuality denoted by the verb or adjective. In other words, if *yi ci* ‘one time’ was used postverbally in (19a), it would be grouped with *qu-guo* ‘went’ and together they mean ‘went once.’ However, as shown in (21a), the semantic grouping of *mei* and *qu-guo* and that of *qu-guo* and *yi ci* create a semantic conflict. This is because the former grouping says that the “going” eventuality did not take place but the latter says that it took place once. Therefore, if there is the semantic grouping of *mei* and *qu-guo*, *yi ci* cannot be used postverbally. However, in this case it can be used preverbally and no semantic conflict arises, as its preverbal use prevents it from being semantically grouped with *qu-guo*.

(21) Semantic grouping

- a. *<[**mei** {**qu**] yi ci]>
 b. <[**mei** [qu **yi** **ci**]]>

If avoidance of semantic conflict can account for (19a), then the question is how to account for the use of *yi ci* ‘one time’ in the postverbal position in (19b). Recall that on our account the postverbal use of *yi ci* entails its semantic grouping with *qu-guo*. To

make sense of this semantic grouping in a negative sentence, what is negated cannot be taken to be the action alone, but both the action and the frequency phrase. In other words, to make any sense, the semantic grouping of (19b) should be (21b), not (21a). While “not going once” can mean “more than once” or “less than once,” the latter interpretation can only mean that the relevant action did not take place, as “half a time,” “one-third of a time,” or similar expressions do not make any sense. As a result, the semantic grouping in (21b) can lead to the intended reading of (19b). In a word, the difference between (19a) and (19b) is that the semantic grouping of *mei* and *qu-guo* is entailed in the former, but not in the latter. This semantic grouping, when entailed, prevents the frequency phrase from occurring postverbally, as we have seen in (19a).

Let’s end the discussion of (19) with Y. Li’s (1987) general observation that the sentence must be in the negative form when a true duration/frequency phrase occurs before the verb, as can be seen from (19a) above and (22) below. Y. Li accounts for this by proposing that such sentences in fact involve the deletion of *you* ‘to have, there be, achievedly.’ On her analysis, (22) is derived from (23), which has *you* before the duration phrase. On Y. Li’s reasoning, the ungrammaticality of (22) when without the negative marker is due to the same unknown factor that can account for the ungrammaticality of (23) when used in a positive context. If so, the *you*-deletion analysis of (22) does not really offer an explanation as to why the sentence would be bad when in the positive form, as she cannot account for why (23) would be ungrammatical when without the negative marker.

(22) Ta liang nian *(mei) lai Meiguo le.
 he two years not come America SPF
 ‘It has been two years that he did not come to the U.S.’

(23) Ta you liang nian *(mei) lai Meiguo le.
 he achievedly two years not come America SPF
 ‘It has been two years that he did not come to the U.S.’

I argue that the ill-formedness of the type of semantic grouping as seen in (21a) can also account for the general observation made by Y. Li (1987). On my account, this fact actually results from the impossibility of having both the semantic grouping of the negative marker and the verb and the semantic grouping of the verb and the duration/frequency phrase. As seen above, this is due to the fact that the former grouping gives rise to the interpretation that the action did not take place and that the latter brings forth the interpretation that the action did take place. The two interpretations lead to a semantic conflict. Note that the semantic conflict arises only when there is a negative marker that negates the verb or adjective AND when the duration/frequency phrase occurs postverbally because on our proposal the duration/frequency phrase in this syntactic environment needs to be interpreted as the duration/frequency of the eventuality

or the duration after the completion of the eventuality. Therefore, if what is intended to express is that the action did not take place, the duration/frequency phrase has to be used preverbally to avoid a semantic conflict.

In a word, our structural-functional account of postverbal constituents predicts that the duration/frequency phrase, when referring to the duration/frequency of the eventuality or the duration after the completion of the eventuality, should occur postverbally if the action itself is not negated. However, if only the action expressed by the verb is negated and if there is a true duration/frequency phrase in the same clause, the duration/frequency phrase can only occur preverbally to avoid a semantic conflict. These facts account for Y. Li's observation that the predicate can only be in a negative form when a true numerical duration/frequency phrase occurs preverbally.

Finally, let's consider whether our structural-functional account of postverbal constituents in Chinese can also account for the examples in (24). Note that in these two examples, the duration phrase does not refer to the duration of the eventuality denoted by the verb, but the duration after the completion of the eventuality. However, such examples are not true counterexamples to our proposal. In fact, our proposal predicts that duration phrases that are about the duration after the end of an eventuality should occur postverbally when presented as new information.

- (24) a. Ta lai-le liang tian le.
 he come-PERF two day SFP
 'It has been two days since he came.'
 b. Ta si-le san nian le.
 he die-PERF three year SFP
 Intended: 'It has been three years since he passed away.'

One may argue that the two examples in (24) are true counterexamples to the structural-functional account because they can be analyzed as involving two clauses, as proposed by Shi (2006). That is, (24a), for example, may have the structure in (25), in which the duration phrase is not part of the smaller clause, but the predicate of the larger clause. As on our account a duration phrase indicating the duration after the completion of an eventuality, like a duration phrase indicating the duration of the eventuality, should occur postverbally and be in the same clause as the verb or adjective that expresses that eventuality, the analysis of (24a) as (25) appears to be problematic for our proposal.

- (25) [_{S1} [_{S2} Ta lai-le] liang tian le]

However, there is evidence that (25) may not be the right analysis for (24a). The evidence comes from the use of *yijing* 'already,' as seen in (26). If (24a) were said to have the structure in (25), (26) should have the structure in (27). However, the structure shown in (27) fails to account for the fact that *yijing* can have scope over the duration

phrase in (26) (see (28) for another example). This is because as shown in (29), *yijing* cannot have scope over a duration phrase when they do not occur in the same clause, even though they are in the same sentence.^{6,7} This suggests that (27) is not the right analysis for (26). Rather, (26) should be analyzed as consisting of a single clause, not two clauses, as *yijing* in this sentence has scope over the duration phrase. As the single difference between (24a) and (26) is the use of *yijing* in the latter sentence and as there is no evidence that the addition of *yijing* leads to a difference in the general structure between these two sentences (cf. the English pair in (30)), we conclude that a two-clause analysis of (24a) does not hold and that sentences like (24) do not pose a problem for our structural-functional account of postverbal constituents in Chinese.

(26) Ta yijing lai-le liang tian le.
 he already come-PERF two day SFP
 ‘He has already been here for two days.’

(27) [S₁ [S₂ Ta yijing lai-le] liang tian le]

(28) Ta yijing likai na-ge chengshi san nian le.
 he already leave that-CL city three year SFP
 ‘It has already been three years since he left that city.’

(29) a. [S₁ Wo yijing zhidao [S₂ ta cengjing zai na-ge difang zhu-le
 I already know he once LOC that-CL place live-PERF
 shi nian] le.
 ten year SFP
 ‘I already know that he once lived in that place for ten years.’
 b. Ta cengjing zai na-ge difang zhu-le shi nian (*le).
 he once LOC that-CL place live-PERF ten year SFP
 ‘He once lived in that place for ten years.’
 c. *Ta yijing cengjing zai na-ge difang zhu-le shi nian.
 he already once LOC that-CL place live-PERF ten year
 ‘*He already once lived in that place for ten years.’

(30) a. He has lived here for three years.
 b. He has already lived here for three years.

⁶ A sentence may contain one or more clauses.

⁷ (29b) shows that *le* is not part of the embedded clause in (29a), and (29c) shows that *yijing* cannot be used with that embedded clause.

In a word, the apparent counterexamples to our structural-functional account of postverbal constituents in Chinese are not true counterexamples upon closer examination. Among these sentences, the ones in (24) bear on the question of the syntactic status of postverbal duration/frequency phrases, a question that will be further discussed in the next section.

4. Syntactic status of postverbal duration/frequency phrases

In section 3.2, I have argued that sentences like (24), (26), and (28) should be given a single-clause analysis, on which the duration/frequency phrases in these sentences serve an adverbial function and do not count as the main predicate of the whole sentence. As mentioned above, this analysis differs from Shi's (2006) proposal, on which all sentences involving a postverbal duration/frequency phrase that is not the object of the verb should be given a multiple-clause analysis and all postverbal duration/frequency phrases should be analyzed as a main predicate.

Note that on Shi's proposal, sentences like (31) should also be given a two-clause analysis, just like the analysis for (24).⁸ According to Shi, such an analysis is compatible with the fact that the duration phrase in (31) can be negated and can be used with adverbs like *yijing* and "modal verbs," as shown in (32).

(31) Shi 2006: 56

Nie Yunlong bing-le liang tian.
 Nie Yunlong sick-PERF two day
 'Nie Yunlong was sick for two days.'

- (32) a. [Nie Yunlong bing-le hai **mei** liang tian], jiu qi-bu-lai-le.
 Nie Yunlong sick-PERF yet not two days then rise-not-up-PERF
 'Nie Yunlong could not get up after he was sick for less than two days.'
- b. Nie Yunlong bing-le **yijing** liang tian le.
 Nie Yunlong sick-PERF already two day SFP
 'Nie Yunlong has been sick for already two days now.'
- c. Nie Yunlong bing-le **yinggai** liang tian le ba.
 Nie Yunlong sick-PERF probably two day SFP SFP
 'Nie Yunlong has been sick for probably two days now, right?'

It should be first pointed out that although *yinggai* can be used as a modal verb, as in (33), it can also be used as an adverb. In (32c), *yinggai* is in fact an adverb, not a modal verb, as claimed by Shi (2006). As a result, Shi's argument can be rephrased as follows: (31) should be given a dual-clause analysis because the duration phrase can be negated and can be modified with adverbs like *yijing* 'already' and *yinggai* 'probably.'

⁸ All the glosses and translations as to Shi's examples are mine.

- (33) Ni yinggai qu.
 you should go
 ‘You should go.’

However, the fact that the duration phrase in (31) can be negated and can be used with *yijing* and *yinggai* cannot count as real evidence for a dual-clause analysis of the sentence. This is because the duration phrase in (31) is notionally an adverbial phrase, although syntactically it is a noun phrase. As a result, it is not surprising that they are compatible with *mei*, which arguably is also an adverb, *yijing*, *yinggai*, and other similar adverbs. Therefore, the fact that the duration phrase can be modified with such adverbs does not provide a convincing argument that sentences like (31) consist of two clauses and that the duration phrase is the main predicate of the whole sentence. Moreover, there is no clear evidence that sentences like (32b) and (32c) contain two clauses, thus also contrary to Y. Li’s (1987) analysis of sentences containing a postverbal duration/frequency phrase modified with *yijing* as consisting of two clauses.

Having argued that sentences like those in (24), (26), (28), (31), and (32) involve a single clause, not two clauses,⁹ I would like to point out that there are two types of sentences discussed in Shi (2006) that indeed should be analyzed as consisting as two clauses, as argued by Shi himself.

The first type is illustrated by (34), in which the verb is negated with *mei* ‘not.’ There are two pieces of evidence that (34) should be analyzed as involving two clauses and having the structure in (35).

- (34) Shi 2006: 55
 Wo mei chu-guo da men yijing san-ge yue le.
 I not go.out-EXP big gate already three-CL month SFP
 ‘I have not gone out a bit for already three months now.’

- (35) [_{S1} [_{S2} Wo mei chu-guo da men] yijing san-ge yue le]

First, as pointed out by Shi (2006: 54-55), *mei*(you) ‘not’ and *le*, the perfective marker and sentence-final particle, cannot co-occur in the same clause when the verb is negated by *mei*(you), as shown in (36). However, when the verb is negated by *mei*(you) and when *mei*(you) and *le* are not in the same clause, the sentence can be grammatical, as shown in (37). In this example, although *meiyou* and *le* appear in the same sentence, they do not occur in the same clause. As a result, the sentence is good. Given these observations, the fact that (34) is grammatical strongly suggests that the sentence involves not just one clause and that *mei* ‘not’ and *le* are not in the same clause.

⁹ For (32a), we are only concerned with the part in the square brackets.

- (36) a. Ta chi-le fan le.
 he eat-PERF meal SFP
 'He has already eaten'
 b. Ta hai mei chi fan.
 he still not eat meal
 'He has not eaten yet.'
 c. *Ta mei chi-le fan le.
 d. *Ta mei chi-le fan.
 e. *Ta mei chi fan le.

(37) Shi 2006: 55

[_{S1} [_{S2} Zhang xiaozhang **meiyou** nadao boshi xuewei] yijing shi
 Zhang president not get doctor degree already be
 zhongsuozhouzhi de shi **le**].
 all.people.know MM matter SFP
 'That President Zhang did not get his doctoral degree is a matter that everyone has known.'

The second piece of evidence for a dual-clause analysis of (34) comes from our analysis of postverbal constituents in Chinese. As discussed earlier, a postverbal duration/frequency phrase cannot occur with a negated verb in the same clause. Given this, the fact that (34) involves both a negated verb and a postverbal duration phrase and that the sentence is grammatical also suggests that the negated verb and the duration phrase are not in the same clause.

The other type of sentences discussed by Shi (2006) that should be given a dual-clause analysis are those that involve both a duration phrase and a frequency phrase or involves two duration phrases in a row, as shown in (38-39). What is special about these sentences is that the last duration/frequency phrase refers to a happening that includes the first duration/frequency phrase. In (38), for example, *henduo nian* 'for many years' does not refer to the duration of the waiting event or the duration after the completion of the waiting event, but the fact that it has been many years that I wait for him for two or three hours. This strongly suggests that sentences like (38) and (39) do not involve a single clause, particularly given our proposal that postverbal duration/frequency phrases can only be about the duration/frequency of the eventuality itself or the duration after the completion of the eventuality. Moreover, Shi (2006) cites Liu et al. (2001) in literally stating that there can only be one duration/frequency phrase in a single clause. This also suggests that (38) and (39) involve more than one clause, given that the former involves both a duration phrase and a frequency phrase and the latter involves two duration phrases in a row.

(38) Shi 2006: 54

Bingren mei tian bian xue liang-san ci yijing
 patient every day defecate blood two-three time already
 ban nian duo le.
 half year more SFP

‘It has been over half a year that the patient has blood in his/her stool for two or three times a day.’

(39) Wo zheyang deng ta liang-san-ge xiaoshi yijing henduo nian le.
 I like.this wait he two-three-CL hour already many year SFP
 ‘It has been many years that I wait for him like this for two or three hours.’

In sum, the use of *mei* ‘not’ and adverbs like *yijing* ‘already’ and *yinggai* ‘probably’ right before duration/frequency phrases does not count as true evidence for a dual-clause analysis of sentences containing a postverbal duration/frequency phrase that is not the object of the verb of the sentence. All the sentences in Shi (2006) that contain a postverbal duration/frequency phrase should be analyzed as having the duration/frequency phrase and the relevant verb in the same clause except when only the action expressed by the verb is negated or when there is more than one postverbal duration/frequency phrase in a row. As a result, only for these exceptions can we possibly analyze the postverbal duration/frequency phrase as the main predicate of the sentence. In all the other cases, the postverbal duration/frequency phrase is just an adjunct, not a main predicate.

5. Conclusion

In this paper I have discussed some previous structural and non-structural accounts of postverbal constituents in Mandarin Chinese, and pointed out their shortcomings. I have argued for an approach that pays enough attention to both structure and non-structural factors like iconicity and information structure. On our account, postverbal constituents are generally of two types: those that can be described with structural terms alone and those that cannot. The former group includes only subcategorized NP and clause complements. As for all the other postverbal constituents, they cannot be fully accounted for without taking iconicity or information structure or both into consideration.

With respect to postverbal duration and frequency phrases, on which most research on postverbal constituents tends to focus, I have argued that contra Y. Li (1987) and Shi (2006), all sentences containing one and only one postverbal duration or frequency phrase should be analyzed as involving a clause that contains both the duration/frequency phrase and the relevant verb except when only the action expressed by the verb is negated. As for sentences that contain two or more postverbal duration/frequency phrases in a row, they involve at least two clauses. When the duration/frequency phrase and the verb are in

the same clause, the duration/frequency phrase is just an adjunct. It can serve as the main predicate of a sentence only when the two are in two different clauses.

References

- CHAO, YUEN REN. 1968. *A grammar of spoken Chinese*. Berkeley & Los Angeles: University of California Press.
- FANG, MEI. 1993. Binyu yu dongliang ciyu de cixu wenti (The ordering of objects and frequency phrases). *Zhongguo Yuwen* 1993.1.54-64.
- HUANG, C.-T. JAMES. 1984. Phrase structure, lexical integrity, and Chinese compounds. *Journal of the Chinese Language Teachers Association* 19.2.53-78.
- HUANG, C.-T. JAMES. 1998/1982. *Logical relations in Chinese and the theory of grammar*. New York & London: Garland.
- HUANG, C.-T. JAMES; Y.-H. AUDREY LI; and YAFEI LI. 2009. *The syntax of Chinese*. Cambridge, MA: Cambridge University Press.
- LAPOLLA, RANDY J. 1995. Pragmatic relations and word order in Chinese. *Word order in discourse*, ed. by Pamela Downing and Michael Noonan, 297-329. Amsterdam & Philadelphia: John Benjamins.
- LI, CHARLES N., and SANDRA A. THOMPSON. 1975. The semantic function of word order: A case study in Mandarin. *Word order and word order change*, ed. by Charles N. Li, 164-195. Austin: University of Texas Press.
- LI, XINGYA. 1980. Binyu he shuliang buyu de cixu (The ordering of objects and numerical complements). *Zhongguo Yuwen* 1980.3.171-174.
- LI, YEN-HUI AUDREY. 1987. Duration phrases: Distributions and interpretations. *Journal of the Chinese Language Teachers Association* 22.3.27-65.
- LI, YEN-HUI AUDREY. 1990. *Order and constituency in Mandarin Chinese*. Dordrecht: Kluwer.
- LIU, YUEHUA; WENYU PAN; and WEI HU. 2001. *Shiyong Xiandai Hanyu yufa* (A practical grammar of Modern Chinese). Beijing: Commercial Press.
- SHI, DINGXU. 2006. Dongci hou shuliang duanyu de jufa diwei (On the syntactic status of the postverbal numerical phrases). *Hanyu Xuebao* 2006.1.51-58.
- TAI, JAMES H.-Y. 1985. Temporal sequence and Chinese word order. *Iconicity in syntax*, ed. by John Haiman, 49-72. Amsterdam & Philadelphia: John Benjamins.
- TAI, JAMES H.-Y. 1993. Iconicity: Motivations in Chinese grammar. *Principles and prediction: The analysis of natural language*, ed. by Mushira Eid and Gregory Iverson, 153-173. Amsterdam & Philadelphia: John Benjamins.
- XU, DAN. 1990. Postverbal word order in Chinese. *Cahiers de Linguistique—Asie Orientale* (CLAO). 19.1.91-107.
- XU, LIEJONG. 1995. Definiteness effects on Chinese word order. *Cahiers de Linguistique—Asie Orientale* 24.1.29-48.