Chinese Word Order and the Two Typological "Exceptions": A Scalar Approach

Kyung-An Song[†]

Chonnam National University

ABSTRACT

Conventional discussions on the VO/OV typology highlight two perceived "exceptions" in Chinese word order, particularly concerning the placement of relative clauses and adpositional phrases. In this paper, we argue that these seemingly exceptional Chinese word order patterns align with the broader linguistic tendencies of the language rather than being genuine deviations from typological norms. To demonstrate this, we analyze Chinese word orders across 15 parameters and attempt to rank them on a scalar continuum, comparing them to other languages. We assign a score of [-1] to the head-initial pattern parameter, [+1] to the head-final pattern parameter, and [0] for patterns accommodating both. Chinese is expected to exhibit a head-initial tendency; however, the data does not align with this expectation. Notably, it manifests a strong head-final tendency in NPs and VPs, achieving a [+6] score that aligns it closely with OV languages. Consequently, the placement of relative clauses and adpositional phrases in Chinese conforms to the typical pattern of OV languages, and thus, it need not be considered exceptional.

Keywords: Chinese word order, head-final/initial pattern, relative clause, scalar typology, VO/OV typology

1. Introduction

Since Greenberg's seminal work in 1966, the Chinese relative clause has been regarded as an exception to word order typology (cf. Hawkins, 1983; Song, 2012; Dryer 1992, 2007, 2013a). In (S)VO languages, the relative clause usually comes after the head noun. However, in Chinese, which is classified as an SVO language,

it comes before the head noun, as shown in (1).[1]

(1) *Tā   zuótiān   dǎpò   de   chuāng hù*[2]
     he   yesterday   broke   REL   window
     'the window which he broke yesterday'

According to Greenberg (1966: 90), the position of the relative clause (REL) is closely related to the basic word order and the position of the adposition. In SVO languages with prepositions, only the [N-REL] order is allowed. Hawkins (1983: 74) postulated a similar word order implication as in (2).

(2) If a language has Prep word order, then if the verb position is not SOV, the relative clause follows the noun, i.e., Prep ⊃ (-SOV ⊃ NRel).

Dryer (1992) conducted a study on the word orders of 625 languages from six regions worldwide and documented the position of the Chinese relative clause:

(...) when we look at the figures for VO languages we see evidence of a very strong tendency for VO languages to be NRel: RelN order is found in only one genus (Chinese), while NRel order is found in 60 other genera (p. 86).

Dryer (2013a) listed five languages that belong to this exceptional category: Mandarin, Cantonese, Hakka, Bai, and Amis. The first three are Chinese variants.[3] However, it is worthwhile to examine the other two languages more attentively here.

Bai, a language spoken in Yunnan Province of China, exhibits both VO and OV orders (Kang, 2019: 320-323). For instance, it uses SVO order in declarative sentences, but it prefers SOV order in interrogative sentences. The copula construction also demonstrates alternative ordering, such as the copula-second order (a VO pattern) and the copula-final order (an OV pattern). These data suggest that Bai is not a strictly OV language, and therefore the [Rel-N] order in this language may not be considered truly exceptional.

Amis, a Formosan language spoken in Taiwan, is also classified as a VO language

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1) Cf. Downing (1978), Lehmann (1984), Keenan (1985), Song (2001: Ch. 4), Andrew (2007) for precise discussions on the typology of the relative clause. For a thorough typological description of word order related to Chinese relative clauses and their idiosyncrasies, we can refer to Baek (2023: chap. 10).

2) We use data from Su (2019a) and Nguyen (2018) for Chinese and Vietnamese, respectively.

3) Song (2012: 68) identified three languages (Chinese, Bai, and Amis) as exceptions of this sort.

with [Rel-N] order by Dryer (2013a), citing Wu (2006). However, upon closer examination of Wu's data, a different conclusion may be reached. On pages 96-97 of Wu (2006), she writes:

> (...) the adjective-like clausal modifiers always appear before a preposed head noun, (...). On the contrary, the RC-like clausal modifiers can appear before or after a head noun.[4]

Contrary to Dryer's (2013a) classification, this suggests that Amis may not be a genuine exception to the [Rel/N] order typology. Instead, it exhibits an alternative ordering that is often observed in Austronesian languages, such as Tagalog (cf. Song 2020). Amis also uses alternative orderings between the possessive pronoun and the head noun, as well as between the genitive and the head noun (Wu, 2006: 86-87, 91).

Now we have three Chinese variants - Mandarin, Cantonese, and Hakka - which may be considered 'exceptions' to the [Rel/N] order typology. Additionally, the order of object, oblique, and verb in Chinese is also regarded as exceptional in the word order typology. Dryer (with Gensler 2013) states that Chinese uses the [Obl-V-O] order, as illustrated in (3), while other VO languages overwhelmingly follow the [V-O-Obl] order.

(3) *Tāmen [zài fángzi hòumian] xiūli diànshìjī.*
    they   at   house   behind   repair   television
    'They repair televisions behind their house.'

In this paper, we aim to investigate the word order of Chinese and argue that the two orderings in this language are not exceptions to word order typology, but are quite natural if we consider the general tendency of Chinese word order.[5] The exceptional view seems to be influenced by the tradition of OV/VO typology, which we think is not an appropriate framework to describe Chinese word order. Instead, we propose a different approach for this language, which we call "scalar typology".

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4) The 'adjective-like clause' and 'RC-like clause' are the Amis equivalents of English adjectival modifiers and relative clauses (Wu, 2006: 95).

5) An anonymous reviewer pointed out that contrasting patterns are found in Ancient Chinese (See Su, 2019b for a detailed discussion). They suggested that a thorough analysis of word order in Chinese requires an understanding of the language's historical evolution and its interactions with linguistically adjacent languages. We fully agree with this perspective. However, regrettably, such an extensive investigation is currently beyond the scope of our study. Therefore, we intend to explore this aspect in our future research.

2. Head-Final Tendency of Chinese Word Order

Hashimoto (1990 [1978]) presented an insightful view on the word order and structure of Chinese. He divided Asian languages into two groups: southern and northern. Chinese shows a mixed character of these two groups, and its dialects vary depending on their geographic location. Regarding word order, the southern dialects exhibit the tendency of VO languages, while the northern dialects exhibit that of OV languages.

In recent studies, this view of Hashimoto was confirmed by Kang (2011, 2015, 2019) among others. In this view, Mandarin Chinese, which was originally a typical northern dialect of Chinese, is expected to exhibit tendencies of OV-languages in northern Asia. Kang (2019: 79) concludes that (Mandarin) Chinese shows a head-initial pattern in the VP, thus having the VO-type order, while exhibiting a head-final pattern in the NP, which he considers to be an idiosyncratic characteristic of Chinese. He suggests that the 'exceptional' order of [Rel/N] in Chinese could be related to this idiosyncrasy. We see a similar viewpoint in Dryer (2005: 367) and Song (2012: 68, 70).

In this chapter, we will closely examine the word orders in Chinese and demonstrate that they exhibit the head-final pattern not only in the NP but also in the VP. For our discussion, we have selected 15 word order parameters, four for the order of the NP, nine for the order of the VP, and two additional structural parameters: the adposition and the subordinator. We will discuss the word orders within these three categories sequentially below. Additionally, we will compare Chinese to Vietnamese, a typical southern language of Asia, and Korean, a typical northern language of Asia. Vietnamese and Korean display completely opposite word orders across all 15 parameters. We will refer to the Vietnamese pattern as the 'head-initial pattern (HIP)' and the Korean pattern as the 'head-final pattern (HFP)'.

2.1. The Word Order in the NP

As mentioned above, Kang (2019) has highlighted the head-final nature of the NP structure in Chinese. We summarize the Chinese word order patterns related to four parameters in the NP in Table 1, which we compare to Vietnamese, a typical

head-initial language, and Korean, a typical head-final language. As shown in the table, the noun modifiers in Chinese always appear before the related noun, which is a clear indication of the head-final character of the NP structure. Examples (4)-(7) illustrate this pattern.

Table 1. Word orders of the NP in Vietnamese/Korean/Chinese

	Parameters	Vietnamese (HIP)	Chinese	Korean (HFP)
1	Determiner	N + Det	*Det + N*	*Det + N*
2	Adjective	N + Adj	*Adj + N*	*Adj + N*
3	Genitive	N + Gen	*Gen + N*	*Gen + N*
4	Rel-clause	N + Rel	*Rel + N*	*Rel + N*

(4) Position of determiners in Vietnamese, Korean and Chinese
    a. *học sinh   kia*
       student   that
       'that student'
    b. *ce   haksayng*
       that   student
       'that student'
    c. *nà   háizi*
       that   child
       'that child'

(5) Position of adjectives in Vietnamese, Korean and Chinese
    a. *bông hoa   đẹp*
       flower   beautiful
       'beautiful flower'
    b. *yeyppu-n   ai*
       pretty-MOD   kid
       'pretty kid'
    c. *piàoliang   de   nǚhái*
       beautiful   MOD   girl
       'beautiful girl'

(6) Position of genitive in Vietnamese, Korean and Chinese
    a. *nhà   (của)   cô   ấy*

house (GEN) woman the
'the woman's house'

 b. *ku yeca-uy cip*
  the woman-GEN house
  'the woman's house'

 c. *húlí de wěibā*
  fox GEN tail
  'the tail of the fox'

(7) Position of relative clause in Vietnamese, Korean and Chinese
 a. *sách (mà) John đọc*
  book (REL) John read
  'the book which John read'

 b. *onul John-i sa-n   chayk*
  today John-NOM buy-REL:PST book
  'the book John bought today'

 c. *gěi nà gè nǚrén xiě xìn de nánrén*
  to that CL woman write letter REL man
  'the man who wrote the letter to that woman'

The traditional VO/OV-typology does not show a high correlation between the orders of [Det/N] and [V/O] (Dryer, 2013b). Similarly, the position of adjectives in relation to the order of [V/O] does not show a high degree of correlation. However, in VO-languages, adjectives typically come after the noun (Dryer, 2013d), which is not the case in Chinese. The same is true for genitive constructions, where the order [N-Gen] is typical in VO-languages (Dryer, 2013c), but Chinese has the reverse order. While the literature suggests that Chinese relative clause is an exception to the VO-pattern order, it may be more accurate to say that Chinese exhibits a strong tendency toward OV-pattern orders in the NP, rather than toward VO-pattern orders.[6]

2.2. The Word Order in the VP

In contrast to Kang (2019) and the traditional word order typology (cf. Dryer,

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6) To investigate the cause of this idiosyncrasy, we need to have a comprehensive understanding of the diachronic changes of this language and its historical contact with other languages (Baek, 2023: 319).

2005: 367; Song, 2012: 68, 70), we propose that Chinese also exhibits a strong tendency towards OV-type orders, i.e. head-final patterns in the VP. This tendency would provide a clue to the two 'exceptional' word orders observed in Chinese. Based on the nine parameters related to the VP, we summarize the word order patterns of Chinese in Table 2, along with those of Vietnamese and Korean.

Table 2. Word orders of the VP in Vietnamese/Korean/Chinese

	Parameters	Vietnamese (HIP)	Chinese[7]	Korean (HFP)
1	V	*V-initial*	both	V-final
2	Obj	*V + O*	both	O + V
3	Adv	*V + Adv*	Adv + V	Adv + V
4	APP	*V + APP*	APP + V	APP + V
5	Obj/Adv	*O + Adv*	Adv + O	Adv + O
6	Adv/Adv	*Ad1 + Ad2*	Ad2 + Ad1	Ad2 + Ad1
7	DO/IO	*DO + IO*	both	IO + DO
8	COMP	*Adj + Stnd*	*Stnd + Adj*	Stnd + Adj
9	Aux	*Aux + Verb*	*Aux + Verb*	Verb + Aux

Parameter 1 concerns the position of the verb in the VP. While Chinese is typically classified as an SVO language, it also commonly exhibits V-final structures, as shown in (8a-c) (Li & Thompson, 1974). Thus, Chinese displays both head-initial and head-final order in the VP.[8] V-final structures can be converted to V-initial structures, as demonstrated in (8a) and (8d).

(8) V-final position in Chinese

    a. *Wǒ   zài   Běijīng   zhù.*
       I   in   Beijing   live
       'I live in Beijing.'

    b. *Wǒ   hé   nǐ   yīqǐ   qù.*
       I   with   you   together   go.
       'I go along with you.'

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7) Anonymous reviewers pointed out that we have marked and unmarked order in alternative orderings (cf. Parameter 1, 2, 7), which we could not consider in our scalar analysis.

8) See footnote 14 for a similar pattern in German.

c. *Tā cóng Shànghǎi lái.*
   he from Shanghai come
   'He came from Shanghai.'

d. *Wǒ zhù zài Běijīng.*
   I   live in Beijing
   'I live in Beijing.'

Parameter 2 concerns the position of the object. In Chinese, the SVO word order can be transformed into the SOV structure by using the preposition *bǎ* 'holding' (Li & Thompson, 1989: 463-491). As for Parameter 3, Chinese exhibits the [Adv-V] order, which is a head-final order (Ross & Ma, 2014: 19; Kang, 2019: 66).[9]

Parameter 4 is closely related to Parameters 1-3. In intransitive constructions, such as those in (8), adpositional phrases (APP) like *zài Běijīng* 'in Beijing', *hé nǐ* 'with you', *cóng Shànghǎi* 'from Shanghai' appear before the verb. In transitive constructions, these phrases also typically appear before the verb, as shown in (9) (Ross & Ma, 2006: 18; Su, 2019a: 54, 68).

(9) The position of adpositional phrases in Chinese
   a. *Tā gēn tāde nǚpéngyǒu chī wǎnfàn.*
      he with his girlfriend eat dinner
      'He eats dinner with his girlfriend.'

   b. *Wǒ zài jiā xǐ yīfú.*
      I   at home wash cloth
      'I wash the cloth at home.'

   c. *Mary yòng qiānbǐ huà huà.*
      Mary with pencil draw pictute
      'Mary draws the picture with a pencil.'

   d. *Mary cóng shūbāolǐ náchū kèběn.*
      Mary from school bag take out textbook
      'Mary took out the textbook from the school bag.'

Dryer (with Gensler 2013) used the term "oblique phrase" for the adpositional phrases in (9), confirming that this kind of word order, i.e. [Obl-V-O] order, is quite rare, which is found only in the varieties of Chinese (cf. example (3)). As mentioned

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9) We should note that the position of adverbs can vary within individual languages, depending on their type. The adverbs in Table 2 refer to typical adverbs, such as those indicating time, location, and direction (cf. Vennemann, 1974: 9).

above, Dryer considers this as an exceptional case in the word order typology. However, despite its rarity, we can argue that this word order is not idiosyncratic, but rather a natural order in Chinese. This can be seen when we consider the general word order tendencies of Chinese surveyed in this paper. We previously demonstrated that the Chinese VP can take either a V-initial or a V-final structure, as shown in Parameter 1 of Table 2. The sentences in (9) exhibit a combination of these structures, as illustrated in Figure 1; the adpositional phrase appears before the verb, following the head-final tendency of Chinese, while the object comes after the verb, forming a head-initial structure.

The first four parameters in Table 2 are directly related to the verb, the head of the VP. Based on the relative position of the parameters to the verb, it can be easily determined if it concerns a head-initial or a head-final order. However, Parameters 5-9 are not directly related to the verb, which means that we cannot apply the terms, (i.e. head-initial vs head-final order), to these orderings. For these parameters, the terms 'head-initial pattern' and 'head-final pattern' would be more appropriate. These are not very different from Vennemann's (1974) idea of "operand/operator,"[10] which has been considered too strong in typological studies (cf. Song, 2012: 19). Nevertheless, it still seems useful for the scalar approach of this paper. Parameters 5-9 exhibit a head-initial pattern in Vietnamese and a head-final pattern in Korean, while Chinese follows the head-final pattern except for a single exception.

Tā   gēn   tāde   nǚpéngyǒu   chī   wǎnfàn. (= (9a))
　　|<--->|<-------------->|
　　　　　　　　　　　⇑　　　　　　　　　　⇑
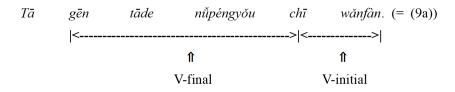　　　　　　　　　V-final　　　　　　　V-initial

Figure 1. Mixed structure of the Chinese VP

Examples of [Obj/Adv] order in the three languages are given in (10). Korean and Vietnamese show opposite orders. Chinese has the characteristic order [Adv-V-Obj]. However, the relative order of [Obj] and [Adv] follows the Korean pattern, namely [Adv-Obj].

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10) Cf. Lehmann (1974) for a similar idea.

(10) Order of [Obj/Adv] in Vietnamese, Korean and Chinese

    a. *Tôi   uống   cà phê   hàng ngày.*

       I   drink   coffee   every day

       'I drink coffee every day.'

    b. *Na-nun   mayil   kkhephi-lu   masi-n-ta.*

       I-NOM   every day   coffee-ACC   drink-PRES-DECL

       'I drink coffee every day.'

    c. *Wǒ   měitiān   hē   kāfēi.*

       I   every day   drink   coffee

       'I drink coffee every day.'

Examples (11a, b) demonstrate a stark contrast between Korean and Vietnamese regarding the order in the VP that includes two sorts of adverbs: [Adv1-Adv2- Obj-V] and [V-Obj-Adv2-Adj1] order, respectively.[11] In (11c), Chinese once again shows the characteristic order [Adv1-Adv2-V-Obj], whereby the relative order of the two sorts of adverbs follows the Korean pattern, namely [Adv1-Adv2].

(11) Order of adverbs in Vietnamese, Korean and Chinese

    a. *Tôi   gặp   Mary   ở trường   hôm qua.*

       I   met   Mary   in school   yesterday

       'I met Mary in the school yesterday.'

    b. *Na-nun   ecey   hakkyo-eyse   Mary-lu   manna-ss-ta.*

       I-NOM   yesterday   school-LOC   Mary-ACC   meet-PST-DECL

       'I met Mary in the school yesterday.'

    c. *Wǒ   zuótiān   zài   xuéxiào   jiàndào-le   Mary.*

       I   yesterday   in   school   meet-PF   Mary

       'I met Mary in the school yesterday.'

In terms of object ordering, Korean typically employs the [IO-DO] pattern, while Vietnamese uses the reverse [DO-IO] pattern. Chinese usually aligns with Korean's pattern, utilizing the [IO-DO] pattern. But it often shows [IO-DO] order, too. Examples are given in (12).

(12) Order of [IO/DO] in Vietnamese, Korean and Chinese

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11) These general word order tendencies in the VP were already identified in earlier German linguistic studies such as Fourquet (1959), Admoni (1962), Flämig (1964) and Kirkwood (1969).

a. *Minh   tặng   đồng hồ   cho   bố.*
   Minh   give   watch   to   father
   'Minh gave a watch to his father.'

b. *John-i   Mary-eykey   chayk-u   cwu-ess-ta.*
   John-NOM   Mary-DAT   book-ACC   give-PST-DECL
   'John gave Mary a book.'

c. *Wǒ   gěi   tā   yī   běn   shū.*
   I   give   he   one   CL   book
   'I gave him a book.'

d. *Wǒ   sòng-le   yī   běn   shū   gě   tā.*
   I   send-PF   one   CL   book   to   he
   'I sent him a book.'

In the comparative construction, the three languages also show the same word order patterns as the parameters discussed by now (cf. example (13)).[12]

(13) Comparative constructions in Vietnamese, Korean and Chinese

a. *Lan   nhỏ   hơn   Mai.*
   Lan   small   COMP   Mai.
   'Lan is smaller than Mai.'

b. *John-i   Mary-pota   cak-ta.*
   John-NOM   Mary-COMP   small-DECL
   'John is smaller than Mary.'

c. *John   bǐ   Mary   xiǎo.*
   John   COMP   Mary   small
   'John is smaller than Mary.'

In the order of auxiliary construction, we find a single exception to the general tendency of the three languages illustrated above. Specifically, Chinese does not follow the pattern seen in Korean, but instead follows the pattern observed in Vietnamese (cf. example (14)).

(14) Auxiliary constructions in Vietnamese, Korean and Chinese

a. *Tôi   có thể   nói   tiếng hàn.*

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12) See also Lehmann (1973) and Dryer (1995, 2007) for the general word order tendencies in the auxiliary construction and the comparative construction.

I   can   speak   Korean

'I can speak Korean.'

b. *Na-nun   icey   ka-yaha-n-ta.*

I-NOM   now   go-must-PRES-DECL

'I must go now.'

c. *Wǒmen   yīnggāi   bāngzhù   tārén.*

we   must   help   others

'We must help others.'

2.3. The Adposition and the Subordinator

We have now two additional structural parameters to examine: the adposition and the subordinator. In an adpositional phrase, the adposition is the head. Although the subordinator is not included in the parameter list of Vennemann (1974) or Lehmann (1973), we can consider the subordinator, as a functional word, to be the head or head-like expression of the construction, analogous to the adpositional phrase. Therefore, the [Subordinator- Clause] order would be the head-initial pattern, and the [Clause-Subordinator] order would be the head-final pattern. The word orders in Korean, Vietnamese, and Chinese related to these two parameters are summarized in Table 3.

Table 3. Position of adposition and subordinator in Viet/Kor/Chin

	Parameters	Vietnamese (HIP)	Chinese	Korean (HFP)
1	Adposition	Adp + N	Adp + N	N + Adp
2	Subordinator	Conn + Cls	Conn + Cls	Cls + Conn

Examples of adpositions are given in (15) (See also examples in (9) and (11) above). Examples of subordinators are given in (16). It is noteworthy that Chinese aligns with the Vietnamese pattern for these two parameters, contrary to its general tendency illustrated above.

(15) Position of Adpositions in Vietnamese, Korean and Chinese

a. *ở   trường*

in   school

'in the school'

b. *hakkyo-eyse*
   school-in
   'in the school'
c. *zài   xuéxiào*
   in   school
   'in the school'

(16) Position of subordinators in Vietnamese, Korean and Chinese
  a. *nếu   Lan   ốm*
     if   Lan   ill
     'if Lan is ill'
  b. *ney-ka   aphu-myen*
     you-NOM   sick-if
     'if you are sick'
  c. *rúguǒ   wǒ   qù   yīgè   xīnde   chéngshì   lǚyóu   dehuà*
     if   I   go   one   new   city   travel   PTCL
     'if I travel to a new city'

2.4. Scalarization and Discussion

In the previous sections, we have analyzed the Chinese word order tendencies across 15 parameters, comparing them with Vietnamese and Korean. Now, we will attempt to demonstrate these tendencies statistically by scalarizing the word order of individual languages. To do this, we will assign a score of [-1] to the head-initial pattern parameter, a score of [+1] to the head-final pattern parameter, and a score of [0] to the parameter that allows both patterns. Table 4 summarizes the scalarized word order tendencies of six languages, which includes Vietnamese, Korean, and Chinese. Additionally, we have included three European languages - French, German, and English - based on earlier researches conducted by the author (cf. Song & Kim, 2019; Song & Lee, 2023).

Vietnamese, as a typical head-initial language, exhibits the head-initial pattern for all 15 parameters and receives a score of [-15] in this analysis. Conversely, Korean, as a typical head-final language, shows the head-final pattern for all 15 parameters and receives a score of [+15]. Among the three European languages, French shows a strong head-initial tendency, while German leans more towards the head-final pattern than the head-initial pattern. English, which originated from Germanic but was later heavily influenced by French, is closer to French than to German.

Chinese is typically assumed to be a (S)VO language in typological studies, which would suggest a head-initial tendency in its word order. However, the data does not align with this expectation. Instead, our analysis reveals a strong head-final tendency with a score of [+6]. Out of the 15 parameters we investigated, the head-initial pattern is only observed in three of them.

Table 4. Scalarized word order tendencies of six languages[13)]

	Parameters	Viet	Frn	Eng	Ger[14)]	Chin	Kor
1	Determiner	-1	+1	+1	+1	+1	+1
2	Adjective	-1	-1	0	+1	+1	+1
3	Genitive	-1	-1	+1	0	+1	+1
4	Rel-clause	-1	-1	-1	0	+1	+1
5	Verb	-1	-1	-1	0	0	+1
6	Object	-1	-1	-1	0	0	+1
7	Adverb	-1	-1	-1	0	+1	+1
8	Adp. Phrase	-1	-1	-1	0	+1	+1
9	Obj/Adv	-1	-1	-1	+1	+1	+1
10	Adv/Adv	-1	-1	-1	+1	+1	+1
11	DO/IO	-1	-1	0	+1	0	+1
12	Comparative	-1	-1	-1	-1	+1	+1
13	Auxiliary	-1	-1	-1	-1	-1	+1
14	Adposition	-1	-1	-1	-1	-1	+1
15	Subordinator	-1	-1	-1	-1	-1	+1
	Total	-15	-13	-9	+1	+6	+15

In the introduction, we began our discussion by highlighting two typological 'exceptions' in Chinese word order: the position of relative clauses and adpositional phrases. In the VO/OV typology, these categories are expected to come after their

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13) An anonymous reviewer suggests differentiating the weights associated with the 15 parameters, which is indeed a crucial aspect in a scalar analysis like the one presented in this paper. However, determining these weights might not be solely at the discretion of an individual researcher. It would be more appropriate to reach a consensus among typologists regarding this matter.

14) German exhibits the V-initial structure in the main clause and the V-final structure in subordinate clauses. Parameter 5-8 are related to these alternative orderings. In addition, [0] score is assigned to German relative clause; along with the traditional relative clauses, we also include such participial constructions in this category as follows:

der   jeden   Tag   vor   der   Tür   auf   seinen   Besitzer   wartende   Hund
the   every   day   before   the   door   on   his   owner   waiting   dog
'the dog waiting for its owner at the door every day'

head in VO languages and before their head in OV languages. However, Chinese deviates from this principle and is considered exceptional.

In our scalar approach, we can interpret the position of relative clauses and adpositional phrases in Chinese differently. As shown in Table 4, Chinese exhibits a strong tendency towards head-finality not only in NPs but also in VPs. This head-final tendency in VPs implies that Chinese cannot be simply classified as a VO language. Instead, it suggests that Chinese is closer to OV languages. Assuming this, the two word orders in Chinese need not be considered exceptional because they align with the general tendency of OV languages.

3. Conclusion

This paper argues that Chinese word order cannot be successfully treated with a traditional binarism of VO/OV typology. While the VO/OV typology categorizes Chinese as a VO language, the position of relative clauses and adpositional phrases in Chinese is considered exceptional as it does not align with the general tendency of VO languages. In contrast, our scalar approach demonstrates that Chinese exhibits a strong head-final tendency, not only in noun phrases (NPs) but also in verb phrases (VPs), indicating a closer resemblance to OV languages rather than VO languages. As a result, the two previously labeled 'exceptional' word orders in Chinese are no longer exceptional but rather natural ones that align with the general tendencies of OV languages.

Abbreviations

ACC=accusative, Adj=adjective, Ad(v)=adverb, Adp=adposition, APP=adpositional phrase, Aux=auxiliary, Chin=Chinese, CL=classifier, Cls=clause, COMP=comparative, Conn=connective, DAT=dative, DECL=declarative, Det=determiner, DO=direct object, Eng=English, Frn=French, Gen=genitive, Ger=German, H=head, HFP=head-final pattern, HIP= head-initial pattern, IO=indirect object, Kor=Korean, LOC= locative, MOD=modifier, N=noun, NOM=nominative, NP=noun phrase, O=object, Obj=object, Obl=oblique, PF=perfective, Prep=preposition, PRES=present, PST=past, PTCL=particle, RC=relative clause, REL=relative (clause/marker), S=subject, Stnd= standard, V=verb, Viet=Vietnamese, VP=verb phrase

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Kyung-An Song
Professor Emeritus
German Department
Chonnam National University
77 Yongbong-ro, Buk-gu, Gwangju 61186, Korea
E-mail: kasong@chonnam.ac.kr