

Focal Prominence Underlying Distribution of Mandarin Minimizers

I-Hsuan Chen

Department of Chinese and Bilingual Studies
The Hong Kong Polytechnic University
Department of Linguistics
University of California, Berkeley

ihsuanchen@berkeley.edu

Abstract

This corpus study of the distribution of Mandarin minimizer negative polarity items connects word order patterns and focal constructions. The OV word order pattern is claimed to be a focal construal. However, the corpus analysis shows the majority of them stay in VO. This distribution is constrained by the information structure of Mandarin word order patterns and negative constructions. The requirement of focal prominence is clearly reflected in the types of co-occurring modifiers in VO and OV. This study of minimizers shows how emphatic pragmatic inferences are construed through the interaction between focal construction, negation, and numeral phrases.

Key words: minimizers, negation, focus, word order, Mandarin Chinese

1 Introduction

This paper investigates Mandarin information structure entailed in word order and various types of negation through analyzing the distribution of Mandarin minimizers. ‘One’-phases are the main source of minimizers in East Asian numeral classifier languages, which is the presence of numeral classifiers. As shown in (1), the ‘one’-

phrase, a combination of a numeral, a classifier or measure word, and a noun, is used as a negative polarity item (NPI) for emphasizing negation, instead of being used for denoting the actual quantity.

- (1) [yí lì liángshí] dōu/ yě bú làngfèi
one CLF¹ food FOC/ FOC NEG waste
‘(They) did not waste even a bit of food.’

Minimizers form a class of strong NPIs and induce strong scalar inferences (Giannakidou 2011, Israel 2011). The minimizers behave different requirements in VO and OV, as discussed in Section 2.

2 The Distribution of Minimizers in Two Word Order Patterns in Modern Mandarin

The Modern Mandarin ‘one’-phrase data have been collected from *Chinese Gigaword*². The combination of ‘one’-phrases and three types of negation are examined based on two types of word orders, OV and VO. The three types of negation include the generic/ stative negator *bù*, the negator for negating the instantiation of an event *méi*, and the existential negative predicate *méiyǒu* ‘there be not’ (Li and Thompson 1981). The three negators are used in different environments. *Bù* is the most general and neutral form of negation. It is used for simple denial of assertions and for refusal, as shown (2) and (3) *Bù* negator does not involve

¹ Abbreviations: 3.sg: 3rd person singular, ASP: aspect, CLF: classifier, EXT: existential predicate, FOC: focus, LOC: locative, MW: measure word, NEG: negation, negative, PASS: passive, PFV: perfective, POSS: possessive, PRF: perfect, REL: relative.

² The *Chinese Gigaword Corpus* contains approximately 1.1 billion Chinese characters. The data come from two main sources. One is from Taiwan’s Central News Agency (around 700 million characters) and the other is from China’s Xinhua News Agency (around 400 million characters).

completion regardless of the time frame, past or present.

- (2) tā bù cōngmíng
 he NEG smart
 ‘He is not smart.’
- (3) tā bù dúshū
 he NEG study
 ‘He does/did not study.’

When instantiation of events is concerned, the negator *méi* is used. The form *méi* is used when the main verb of the sentence is *yǒu*. *Yǒu* has a number of different meanings, such as existential, possessive, perfective, presentational, and assertive (Cheng 1978, Huang 1987, Tsai 2004). The existential verb *yǒu* can be optionally omitted when the negator *méi* appears. This study concerns two major functions of the negative predicate *méi(yǒu)*. The first one is negating the instantiation of an event, as shown in (4). *Méi* in (4) negates the instantiation of the drinking event. This function is different from the generic/ stative negator *bù*. As shown in (5), *bù* negates habituals or states.

- (4) tā méi hē jiǔ
 he NEG drink wine
 ‘He didn’t drink wine.’
- (5) tā bù hē jiǔ
 he NEG drink wine
 ‘He doesn’t drink wine.’/ ‘He refused to drink wine.’

The other major function of the negator *méi(yǒu)* is the negation of the existential verb *yǒu*, which is the main focus in this study. As in (6), the negator *méiyǒu* includes both negation and an existential verb. The existential verb *yǒu* is optional when *méi* appears.

- (6) méi yǒu shuǐ le
 NEG.EXT there be water PFV
 ‘There is no more water.’

This section concerns the interaction between ‘one’-phrases as minimizers and the three types of negation, stative or generic *bù*, event-non-instantiation negator *méi*, and existential negative predicate *méiyǒu*. In terms of syntactic positions, *bù* and non-existential *méi* follow the subject and precede the verb, while existential negative predicate *méiyǒu* generally precedes the NP whose existence is being introduced. Its position is the same as its positive counterpart, existential predicate *yǒu*. The Mandarin existential construction is shown (7), where the existence of

‘one person’ is introduced by existential predicate *yǒu*. It is also possible to have a locative NP preceding *yǒu* (Huang 1987), as in (8). Due to the specific arrangement of the existential verb and the unaccusative subject in the Mandarin existential construction, the NP in the position of the unaccusative subject patterns like the object in the canonical VO order. As in (7) and (8), the ‘one’-phrases are preceded by an existential verb. Following Huang’s (1987) analysis of Mandarin existential sentences, this analysis include V subject/ subject V in this broader definition of VO/ OV construction due to the shared properties between them. The combination of an existential verb followed by a postverbal NP is labeled as VO order for the purpose of comparing how word order influences the interpretation of minimizers under the scope of various negators. When the focus construction is involved, the NP whose existence is concerned precedes the existential predicate, as shown in (9). Analogously, the combination of a preverbal NP and the existential predicate is labeled as OV order.

- (7) **yǒu** [yí ge rén] hěn tāoyàn nǐ
 EXT.V one CLF person very dislike you
 ‘There is a person who dislikes you very much.’
- (8) zhuō shàng **yǒu** [yì běn xiǎoshuō]
 table top EXT.V one CLF novel
 hěn yǒuqù
 very interesting
 ‘There is a novel on the table which is very interesting.’
- (9) zhuō shàng [yì běn shū] yě méi **yǒu**
 desk top one CLF book FOC NEG EXT.V
 ‘There is not even a book on the desk.’

The three types of negation have different influences on ‘one’-phrases as minimizers regarding their distribution in different word order patterns. The three types can be divided into two groups based on the principle of existentiality because minimizers have a particular relation with existential constructions. The following discussion will begin with non-existential negators *bù* and *méi* and continue to the existential negative predicate *méiyǒu*.

2.1 ‘One’-phrases as minimizers under non-existential negation

For each of the non-existential negators *bù* and *méi*, the two combinations of NEG-v...‘one’ and ‘one’...NEG-v are collected from the corpus. The former targets ‘one’-phrases in VO, while the

latter targets ‘one’-phrases in OV. Mandarin OV has been regarded as a focal construction (Tsai 2004, Zhang 2000). Thus it should be ideal for minimizers since they attract focal prominence for inducing inferences (Israel 2011). The distribution of the ‘one’-phrases as minimizers in the two word orders based on *Chinese Gigaword* are summarized in Figure 1.

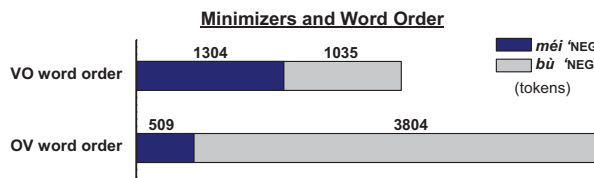


Figure 1: ‘One’-phrases as minimizers in VO and OV under non-existential negation

Notably, the overall number of ‘one’-phrases as minimizers in OV outnumbers that in VO. It should be mentioned that the genres from *Chinese Gigaword* are restricted to newspaper and press releases. In other words, the ‘one’-phrases as minimizers here are collected from written Chinese, which is stylistically formal. SVO is normally preferred in a formal style. Even given the restriction of genres, however, there are still more tokens in OV than in VO, as indicated in Figure 1. The association between minimizers and OV in Modern Mandarin should be more prominent when the genres expand to include colloquial Mandarin.

The asymmetry of VO and OV orders in terms of accommodating ‘one’-phrases as minimizers is reflected in how the minimizers behave in the two orders. The ‘one’-phrases with negator *bù* or *méi* in VO may be interpreted in various ways. The interpretation as minimizers is only one of these ways. In Modern Mandarin, the inclusion of a classifier in numeral phrases has become mandatory. Classifiers overtly specify the basic unit of the object since they denote some prominently perceived or imputed properties of the entity to which associated nouns refer, as defined in Allan (1977). They are compatible with the concept of a minimal unit and express the concept overtly. For example, the classifiers in (10) and (11) designate the smallest atomic unit, and the measure words in (12) and (13) refer to the smallest quantity. With the classifiers, the ‘one’-phrases unambiguously profile the minimal unit of a scale, which is the foundation for inducing scalar inferences.

(10) Kàn bú dào [yì zhāng yǒushànd

see NEG ASP one CLF friendly
miànkǒng]
face
‘did not see even one friendly face’

(11) méi liú guò [yì dī lèi]
NEG tear ASP one drop tear
‘hasn’t even shed a tear’

(12) bù hē [yì kǒu shuǐ]
NEG drink one MW(mouth) water
‘did not drink even one mouthful of water’

(13) méi hē qúnzhòng [yì zhōng jiǔ]
NEG drink people one MW wine
‘hasn’t drunk a cup of wine from the people’

In addition to the function of minimizers, ‘one’-phrases can also function as indefinite referential expressions under negation in VO, as in (14), where the ‘one’-phrase is the object of the verb. The ‘one’-phrase emphasizes the indefiniteness instead of the quantity of the denotatum; this is reflected in the corresponding English translation ‘a NP’. In the referential function, the numeral ‘one’ cannot be substituted with other numerals because ‘one’ cannot contrast with other numerals.

(14) wǒ bù [xiǎng chéngwéi]_v [yì
I NEG want become one
wèi zhèngzhì lǐngxiù]_o
CLF political leader
‘I don’t want to become a political leader.’

The ‘one’-phrase under negation in VO can also be a canonical numeral phrase denoting quantity, as in (15). In this case, the numeral ‘one’ can be used to contrast with other numerals. The numeral ‘one’ can be replaced with other numerals.

(15) zhōngguó wending bù
China stability NEG
yīng xì yú [yì rén]
should tie at one person
‘The stability of China should not be tied to one person.’

These different interpretations of ‘one’-phrases show that VO under negation can have various interpretations. A minimizer reading is not guaranteed.

However, when ‘one’-phrases appear under negation in OV, they are unambiguously understood as minimizer NPIs, as in (16).

(16) sòng le tā sì běn shū , tā [yì běn]
give PRF he four CLF book he one CLF
dōu méi kàn wán

FOC NEG read ASP
 ‘...gave him four books. He did not finish even one book.’

No tokens from the corpus show that ‘one’-phrases in the preverbal object position are used as indefinite referential expressions or quantity-denoting phrases. This is because the focus of the preverbal object position in OV forces ‘one’-phrases to be interpreted as minimizers. Based on the data so far, asymmetry between VO and OV can be clearly observed. The following sections will discuss asymmetric requirements for Mandarin minimizers in VO and OV.

2.1.1 Collocation of *rènché* ‘any’ and minimizers in VO and OV

The distribution of minimizers in Modern Mandarin clearly illustrates the asymmetry of OV and VO in terms of securing a minimizer NPI reading. Since VO is open to multiple interpretations, additional mechanisms, such as the occurrence of *rènché* ‘any’, guarantee the minimizer reading. Mandarin *rènché* is functionally similar to English NPI *any*. In VO, when *rènché* ‘any’ is added to a ‘one’-phrase under negation, the ‘one’-phrase must be understood as a minimizer NPI, as shown in (17).

(17) qùnián méi mǎi **rènché** [yì běn shū]
 last year NEG buyany one CLF book
 ‘last year did not buy any book’

Interestingly, both *rènché* ‘any’ and minimizers are polarity items. Each of them can be used alone for scalar readings. When *rènché* ‘any’ and the minimizer appear in VO, their associated NPs have prosodic prominence or emphatic stress. This indicates that they profile an extreme value in an ordered set of alternatives. Since both of them occur in a scalar construal, they induce similar scalar inferences. Although the subtle differences between the two types of polarity items are hard to distinguish in the VO, it is clear that the combination of two polarity items as in (17) has a stronger emphatic effect. Importantly, such a combination must be an NPI. It does not allow alternative interpretations.

In contrast, the ‘one’-phrases under negation in OV are not ambiguous in nature. In this case, the addition of *rènché* ‘any’ does not help much in terms of turning the ‘one’-phrases into minimizers. Following this logic, there should be fewer cases of *rènché* ‘any’ modifying ‘one’-phrases in OV. The prediction turns out to be true, as reflected in the difference regarding the frequency of co-occurrence of *rènché* ‘any’ with ‘one’-phrases in

VO and OV. As in Figure 2, *rènché* ‘any’ appears mostly in VO, it is barely found in OV.

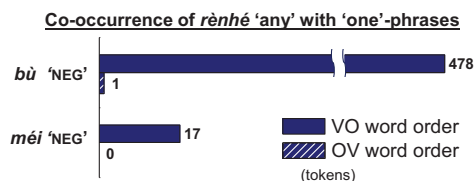


Figure 2: Co-occurrence of *rènché* ‘any’ and ‘one’-phrases as minimizers in VO and OV

The sharp contrast of the occurrences of *rènché* ‘any’ in the two word orders again shows that the information structure of OV can ensure that ‘one’-phrases under negation are understood as minimizers, while VO may need additional elements to make a minimizer reading unambiguous. The addition of the NPI *rènché* ‘any’ to ‘one’-phrases can be viewed as a strategy to fully distinguish the minimizer function from other readings of ‘one’-phrases in VO.

2.1.2 Requirement of focus particles for minimizers in OV

In Modern Mandarin, the type of focus in OV becomes overtly specified. The ‘one’-phrases as minimizers in OV are now accompanied by the focus-sensitive scalar particles, *yě* and *dōu*. The involvement of scalar particles is the result of creating maximal distinction between various types of focus carried in the OV construction. The great majority of the ‘one’-phrases as minimizers in OV co-occur with the scalar particles, as shown in Figure 3.

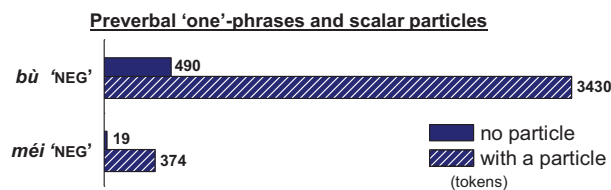


Figure 3: Involvement of the scalar particles in OV order containing ‘one’-phrases as minimizers

The ‘one’-phrases which lack a scalar particle have two properties. First, this class of minimizers is more archaic, and may be viewed as vestiges from earlier periods of Chinese which characterize the formal style. Second, preverbal ‘one’-phrases without scalar particles tend to appear in parallel clauses, as shown in (18). The parallel clauses are normally used in slogans for stylistic formal symmetry. This type of ‘one’-phrases also sounds formal because they look as though they are imitations of archaic forms.

(18) [yí tàng bù bái zǒu] ,

one trip NEG in vain walk
 [yí jù bù bái wèn]
 one sentence NEG in vain ask
 ‘not have any trip for nothing and not ask a sentence for nothing’

The preverbal ‘one’-phrases without scalar particles thus have their own syntactic and pragmatic characteristics, departing from typical contemporary use. As indicated in Figure 3, the majority of the preverbal minimizers occur with the scalar particles. The canonical form of minimizers in OV is shown in (19) and (20), where the occurrence of the particles clearly indicates scalar focus and reinforces the scalar nature of their associated ‘one’-phrases.

- (19) [yì píng] yě bù liú
 one bottle FOC NEG keep
 ‘Don’t keep even a single bottle.’
- (20) jiālǐde niú yang [yì zhī]
 in the house cow sheep one CLF
 dōu méi sǔnshī
 FOC NEG lose
 ‘...did not lose even a single cow or sheep’

2.1.3 VO-OV asymmetry in acceptance of Double-object construction

Although OV is apparently a more ideal place for minimizer ‘one’-phrases as minimizers, there are still a fair number of them in VO, as shown in Figure 3. This is partly due to the syntactic constraints of OV. VO allows the Mandarin double object construction. As shown in (21) and (22), the double object construction involves the form, Subj V Obj₁ Obj₂, where the ‘one’-phrase (Obj. 2) is the direct object of the verb. The focal stress of the two examples falls on the ‘one’-phrase, which indicates that the ‘one’-phrase is used as an emphatic NPI. However, OV can accommodate only one object argument. In OV, the preposed object must be the direct object.

- (21) méi hē women₁ [yì kǒu shuǐ]₂ què
 NEG drink us one mouth water but
 xiàng qīn xiōngdì yíyàng guānxīn
 alike close brother same care about
 ‘(He) did not drink a mouthful of our water, but treated us like his close brothers’
- (22) dàjiā kǔ gàn wǔ nián ,
 everyone hard work five year
 méi yào guójiā₁ [yì fēn qián]₂
 NEG ask for country one cent money
 ‘Everyone worked hard for five years and did not ask the country for even a cent.’

OV can only accommodate one preverbal object. In contrast, VO is relatively flexible to take ‘one’-phrases as minimizers occurring in a variety of constructions, such as a double-object construction.

This section has discussed the distribution of minimizers under non-existential negation, which reveals their tendency to occur in OV word order.

3 ‘One’-phrases as minimizers with existential negation

When ‘one’-phrases appear with the existential negative predicate of *méiyǒu*, the ‘one’-phrases as minimizers do not show a tendency toward OV. This distribution is unlike the distribution under non-existential negation. In the context of *méiyǒu*, the majority of ‘one’-phrases as minimizers (13,650 tokens) appear in VO, while fewer than 3,000 tokens are found in OV. Such a vast difference suggests that existential negation has a remarkable influence on the distribution of ‘one’-phrases as minimizers in the two word order patterns. The distribution implies that Mandarin existential constructions should be able to provide informative conditions in semantics and pragmatics for ‘one’-phrases to be interpreted as minimizers. With respect to the syntactic properties, the existential constructions in VO are compatible with a variety of predicate constructions which cannot fit into OV. Due to the syntactic characteristics, the existential constructions in VO can accommodate a larger diversity of constructions involving minimizers as compared with those in OV.

Mandarin existential sentences can occur in a more complicated structure involving more than one VP. For example, sentences (23) and (24) contain two verbs, as a subtype of existential presentative sentences. This type of sentence is labeled as “realis descriptive clauses” by Li and Thompson (1981). It is analyzed as a serial verb construction and it has two properties. First, the direct object of the existential verb must be indefinite. Second, its discourse function is to present or introduce an NP to be further described. As in (23), the NP ‘one person’ is an indefinite referential expression, followed by a descriptive clause. The indefinite numeral phrase ‘one tree’ in (24) is provided with more details by its following adjectival predicate.

- (23) yǒu [yí ge rén] qiāo mén
 EXT.V one CLF person knock door
 ‘There is someone knocking on the door.’

(24) *yuànzi yǒu [yì kē shù] hěn gāo*
 court yard EXT.V one CLF tree very high
 ‘There is a tree in the yard which is very tall.’

Huang (1987) further proposes a general form of Mandarin existential sentences as repeated in (25). Position II is reserved for existential predicates. The grammatical subject generally appears in Position I. Position III is for the NP whose existence is being asserted. Position IV is filled by an expression of predication, which is a descriptive clause or phrase. The expression in Position IV has to be semantically related to the NP in Position III.

(25) ... (NP) ... EXT.V ... NP ... (XP) ...
 Position I II III IV

The general form not only applies to positive existential predicates, but also to existential negation *méiyǒu*. For instance, the ‘one’-phrase introduced by *méiyǒu* in (26) is followed by a verb phrase which provides relevant details. In sentence (27), the whole VP following the ‘one’-phrase functions as a restrictive clause specifying the property concerned in the discussion.

(26) *méiyǒu [yí ge huànzhě de*
 EXT.V one CLF patient POSS
jiǎnyàn jiéguǒ] chéng yángxìng
 inspection result show positive
 ‘Not a single patient has positive results’

(27) *jiānglái méiyǒu [yí ge guójiā]*
 future EXT.V one CLF country
néng bǎohù tā de huánjìng
 can protect 3.SG POSS environment
 ‘There will not be a country that can protect its environment in the future.’

In the data from *Chinese Gigaword*, when ‘one’-phrases as minimizers appear with existential negation *méiyǒu*, the majority of them are followed by a phrase of predication. However, the “complicated” existential construction involving more than one predicate can only appear in VO. According to the corpus data, the generalization is that in OV the NP as the preverbal object cannot be followed by any predicative phrases. If there is any modification for the denotatum of the preverbal ‘one’-phrase, it has to precede the noun of the ‘one’-phrase. As in (28), the adjective occurs between the classifier and the noun.

(28) *lián [yí wèi zhōngguó*
 even one CLF Chinese

liúxuéshēng] dōu méiyǒu
 overseas student FOC EXT.NEG
 ‘There is not even a single Chinese overseas student.’

Examples (29) and (30) illustrate the different requirements regarding modification in the two word orders. Predicative clauses and relative clauses appear in different syntactic positions to modify ‘one’-phrases as minimizers. Predicative clauses have to immediately follow ‘one’-phrases, whereas relative clauses with the relative marker *de* precede ‘one’-phrases. In (29), the ‘one’-phrase as minimizer in VO is followed by an expression of predication in boldface. If it is paraphrased using OV, the phrase of predication has to be expressed by a relative clause. In Modern Mandarin, a relative clause is marked by *de* at the end, as underlined in (30).

(29) *yóuqí shì liánhéguó méiyǒu [yí*
 specifically FOC UN EXT.NEG one
ge huìyuán guó] kěyǐ dàibiǎo táiwān
 CLF member country can represent Taiwan
 ‘Specifically in the United Nations, there is no member country that can represent Taiwan.’

(30) *yóuqí shì liánhéguó , [yí ge*
 specifically FOC United Nations one CLF
kěyǐ dàibiǎo táiwān de huìyuán guó]
 can represent Taiwan REL member country
yě / dōu méiyǒu
 FOC/FOC EXT.NEG
 ‘Specifically in the United Nations, there is not even a single member that can represent Taiwan.’

Relative clauses can also modify ‘one’-phrases as minimizers in VO, as shown in (31). However, in some cases the strategy of modification is not ideal in VO. For example, if (27) is paraphrased with a relative clause in VO, the grammatical acceptability becomes a problem, as in (32), which is even rejected by some native speakers. The ungrammaticality of (33) shows that the position between the unit word and the noun in VO is not an ideal position for relative clauses modifying ‘one’-phrases as minimizers.

(31) *yóuqí shì liánhéguó , méiyǒu*
 specifically FOC United Nations EXT.NEG
[yí ge kěyǐ dàibiǎo táiwān de
 one CLF can represent Taiwan REL
huìyuán guó]
 member country

‘Specifically in the United Nations, there is not a member country that can represent Taiwan.’

- (32) ??jiānglái **méiyǒu** [yí ge néng bǎohù
future EXT.NEG one CLF can protect
tā de huánjìng de guójiā]
3.SG POSS environment REL country
‘There will not be a country that can protect its environment in the future.’

- (33) *jiānglái **méiyǒu** [néng bǎohù tā
future EXT.NEG can protect 3.SG
de huánjìng de yí ge guójiā]
POSS environment REL one CLF country
Intended reading: ‘There will not be a country that can protect its environment in the future.’

The awkwardness of (32) can mainly be attributed to three reasons. First, it is difficult to trace the referent of the third person pronoun in the cases where the pronoun precedes its referent. Second, Mandarin sentences generally do not allow the phonological clash of multiple *de*, which have various functions such as a possessive or a relative clause marker. Third, existential constructions profile the NP introduced by the existential verbs in the information structure. This profiled NP is foregrounded with focal prominence. The intervention of a long relative clause may decrease the focal prominence assigned by the existential predicate. The preference of a predicative clause over a relative clause in VO is reflected in the corpus data, where up to 95% of the ‘one’-phrases as minimizers in VO are followed by an expression of predication. The use of relative clauses for modifying minimizers is relatively not productive.

Relative clauses are rarely found in VO, and also seldom appear to modify ‘one’-phrases as minimizers in OV. As shown in (34)-(35), the ‘one’-phrases normally do not have additional modification. The information relevant to the denotatum of ‘one’-phrases is normally provided in earlier contexts. For example, the numeral ‘one’-classifier combination in (35) is associated with the ‘tent’ appearing in the previous clause. Notably, the majority of the ‘one’-phrases as minimizers in OV order have the noun omitted in the corpus data. Since the classifier alone is sufficient to delimit the basic unit of its associated noun, the noun which appears earlier in the context does not need to be repeated. The way the preverbal minimizers behave in the corpus data also reveals a special property of the OV

construction. Since the preverbal object of the OV construction has focal prominence, the preverbal object with a focus stress tends to be a small unit, which can make the prosodic prominence more salient. In addition to the prosodic emphasis, the basic component of ‘one’-phrases without additional modification also increases the semantic prominence of the minimizer by narrowing the focus to the ‘one’-phrase only.

- (34) tā rúguǒ zuò zài jiā lǐ
he if sit at home in
[yí piào] yě méiyǒu
one vote FOC NEG.EXT
‘If he sits at home, there will not be even a single vote (for him).’

- (35) yào shēnlǐng wǔ bǎi dǐng zhàngpéng
want apply for five hundred CLF tent
[yí dǐng] yě méiyǒu
one tent CLF NEG.EXT
‘...plan to apply for five hundred tents, but there is not even a single one.’

Based on corpus data, the preverbal ‘one’-phrases as minimizers are generally not newly introduced information in the discourse. As shown in (36), the first clause clearly conveys a negative proposition, but the preverbal ‘one’-phrase in the second clause repeats the information for the sake of emphasis and reinforcement.

- (36) méiyǒu rén xià qù , [yí ge]
NEG.EXT person down go one CLF
yě méiyǒu
YE NEG.EXT
‘Nobody went down, not even a single one.’

The discussion so far concerns how the information structure of OV and VO is reflected in the syntactic constraints of the *méiyǒu* existential construction. The differences of ‘one’-phrases with negation *méiyǒu* in VO and OV are summarized in (37).

- (37) ‘One’-phrases as minimizers in existential constructions

	VO	OV
‘one’-phrase followed by another expression of predication	√	x
‘one’-phrase modified by a relative clause (yi-CLF RC N)	√	√

Although both predicative phrases and relative clauses can be used to provide further information

for 'one'-phrases, relative clauses are preferred. The preference of one strategy over the other is relevant to the issue of profiling the element of which the existence is concerned. In OV, the 'one'-phrases have the tendency to remain as a basic numeral phrase without extra modifiers. This is for the purpose of foregrounding the 'one'-phrases as minimizers both phonologically and semantically. Even though the three strategies of providing further information of the 'one'-phrases are all legitimate, the actual use in the corpus shows that the choice of the form for modification is determined by the principle of maximally foregrounding the focused elements. Among the three modification strategies, the existential construction with a predicative phrase in VO has most tokens. This type of modification satisfies the emphatic nature of minimizers because the NP immediately following the existential predicate is profiled in the information structure. The principle of profiling important information provides an answer as to why 'one'-phrases as minimizers under existential negation do not show a tendency toward OV.

4 Conclusion

The semantics and pragmatics of OV support the minimizer reading of preverbal object phrases, so OV should be ideal for Mandarin 'one'-phrases as minimizers. Following this line, it predicts that in Modern Mandarin the majority of 'one'-phrases as minimizers should occur in OV. On the contrary, this turns out not to be the case because the majority of 'one'-phrases as minimizers still stay in VO when under existential negation. This study solves the puzzle by showing that the distribution of 'one'-phrases as minimizers in VO and OV is linked with their co-occurring negators. The property of existentiality of negation can divide Mandarin negation into two types. In the environment of non-existential negation, there are more 'one'-phrases as minimizers appearing in OV than in VO. However, when they occur with existential negation, the vast majority of them stay in VO. The distribution in which VO outnumbers OV in the existential constructions has remained unchanged since Old Chinese. This phenomenon of 'one'-phrases staying in VO is due to the semantic and syntactic characteristics of the existential constructions. The 'one'-phrases under existential negation in VO can receive sufficient focal prominence, which is required for the interpretation of minimizers. In order to maximize the focal prominence, most of the 'one'-phrases as

minimizers remain in the basic form, leaving other information in the preceding context.

In sum, this paper presents a corpus analysis on the distribution of Mandarin minimizers. The results not only show the crucial function of focal constructions in inducing emphatic inferences from negative polarity items, but also explain how information structure shapes the distribution and interpretation of numeral phrases.

Acknowledgments

The author would like to thank reviewers for their insightful feedback and Hong Kong Polytechnic University for the research support.

References

- Allan, Keith. 1977. Classifiers. *Language* 53 (2): 285-311.
- Cheng, Robert L. 1978. Tense interpretation of four Taiwanese modal verbs. In *Proceedings of Symposium on Chinese Linguistics, 1977* Linguistic Institute of the Linguistic Society of America, ed. by Robert L. Cheng, Ying-chi Li, and Ting-chi Tang, 243-266. Taipei: Student Book Co.
- Giannakidou, Anastasia. 2011. Positive polarity items and negative polarity items: variation, licensing, and compositionality. In *Semantics: An international handbook of natural language meaning*, ed. by Claudia Maienborn, Klaus von Stechow, and Paul Portner, 1660-1712. Berlin: Mouton de Gruyter.
- Huang, C-T, James. 1987. Existential sentences in Chinese and (in)definiteness. In *The Representation of (In)definiteness*, ed. by Eric J. Reuland and Alice G.B. ter Meulen, 226-253. Cambridge, MA: MIT Press.
- Israel, Michael. 2011. *The Grammar of Polarity: Pragmatics, Sensitivity and the Logic of Scales*. Cambridge: Cambridge University Press.
- Li, Charles N., and Sandra A. Thompson. 1981. *Mandarin Chinese: A functional reference grammar*. University of California Press, Berkeley.
- Tsai, Wei.-Tien Dylan. 2004b. Tan 'you ren', 'you-de ren', he 'you-xie ren' [On 'a person', 'some of the people', and 'some people' in Chinese]. *Hanyu Xuebao* 漢語學報 [Chinese Linguistics] 2004 (2): 16-25.
- Zhang, Ning. 2000. Object shift in Mandarin Chinese. *Journal of Chinese Linguistics* 28 (2).201-246.