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# Pragmatic effects of polarity items revealing focal prominence in Mandarin word order

I-Hsuan Chen

Correspondence:  
ihsuanchen@berkeley.edu  
University of California, Berkeley,  
Berkeley, USA

## Abstract

This paper investigates the information structure of Mandarin Chinese word order through studying the distribution of minimizers, a distinct class of negative polarity items. The emphatic nature of minimizers is an effective indicator for distinguishing the strength of focal prominence in different syntactic construals. The corpus analysis compares the frequency of minimizers in different word order patterns, in different strategies of modification, and in different forms. The results show that their distribution is associated with how arguments are profiled in the information structure since minimizers tend to occur in the positions where their pragmatic inferences are maximally induced. The distribution of minimizers is the result of weighing syntactic constraints and pragmatic effects. The study contributes to characterizing the fine differences of the word order patterns in terms of focal saliency.

## 1 Background

This study investigates the information structure of Mandarin word order through a close examination of the distribution of polarity expressions. Numeral phrases denoting a small quantity are widely employed as pragmatic reinforcers in Modern Mandarin. The pragmatic reinforcers concerned in this paper are negative polarity items (NPIs) in the form of ‘one’-unit word<sup>1</sup>-noun, as shown in (1).<sup>2</sup>

- (1) 不浪費一粒糧食  
bú\_\_làngfèi\_\_[yí\_\_lì\_\_liángshí]  
NEG\_\_waste\_\_one\_\_CLF\_\_food  
(They) did not waste a bit of food.

The type of NPIs falls in the category of minimizers. Minimizers, expressions designating a minimal amount or referring to an end point of a scale, are frequently employed for emphatic functions (Fauconnier 1975; Haspelmath 1997; Horn 1989; Israel 2011). They are found crosslinguistically, such as English *lift a finger*, *sleep a wink*, *hurt a fly*, and *worth a red cent*. They anchor the end point of a conceptual scale and evoke scalar inferences for emphatic function (Israel 2011). They form a distinctive class due to their narrow licensing conditions in that they appear in antiveridical

or antimorphic contexts (Giannakidou 2011). However, they are not equally employed in all kinds of nonveridical environments; they tend to appear in negative environments, as in (2).

- (2) a. He did not lift a finger to help.  
b. \*He lifted a finger to help.

The discussion begins with the puzzle of the synchronic distribution of Mandarin ‘one’-phrases as minimizers. Modern Mandarin unmarked word order is VO (Verb Object) (Li and Thompson 1981), while OV (Object Verb) specifically profiles the preverbal object (Zhang 2000). The ‘one’-phrases as minimizers can appear in both word order patterns, as in (3) and (4).

- (3) 整場會議,他沒說一個字<sup>3</sup>  
zhěng chǎng huìyì, tā méi shuō [yí ge zì]  
whole CLF conference he NEG say one CLF word  
*During the whole conference, he didn't say a word.*

- (4) 整場會議,他一個字都/也沒說  
zhěng chǎng huìyì, tā [yí ge zì] dōu/yě méi shuō  
whole CLF conference he one CLF word FOC/FOC NEG say  
*During the whole conference, he didn't say even a word.*

VO is dominant in Modern Mandarin, and hence, the typical position for minimizers as a grammatical object is expected to be postverbal. However, when they appear with a particular type of negation, they tend to appear in OV. This asymmetrical distribution can provide an answer to how arguments are profiled in different word order patterns with different syntactic constraints. Since minimizers are associated with the issues of negation, focus, and scalar inferences, the distribution of minimizers contributes to revealing the semantic and pragmatic properties encoded in a variety of syntactic constructions. Since the same phrase can appear in various environments, the choice of the construction is bound with other semantic or pragmatic motivations. The following corpus analysis will focus on explaining the reasons behind the asymmetrical distribution.

This paper is organized as follows. Section 2 defines the types of negators which frequently co-occur with minimizers and then shows how different types of negation influence the distribution in VO and OV. Section 3 provides an overview of the synchronic distribution of ‘one’-phrases as minimizers under non-existential negation in Modern Mandarin. The constraints in the distribution will be related to the information structure of word order. Section 4 shows the distribution of minimizers under existential negation and discusses how the constraints of modification reflect the principles of profiling arguments. Section 5 offers a comparison of two types of minimizers with different degrees of grammaticalization. Their differences are connected to the various strategies of achieving emphatic scalar inferences. Section 6 summarizes the influences of pragmatic effects on the choice of syntactic constructions, offering an explanation to the puzzle.

## 2 The frequent types of negators with minimizers

The Modern Mandarin ‘one’-phrase data have been collected from *Chinese Giga-word*<sup>4</sup> (Huang 2009). The combination of ‘one’-phrases as minimizers and three kinds of negation are examined in two types of word order, OV and VO. The three kinds of negation are divided into two types based on their existentiality. The non-existential type includes the generic/stative negator 不 *bù* and the negator for negating the instantiation of an event 沒 *méi*, while the existential type involves the negative predicate 沒有 *méiyǒu* ‘there be not’ (Li and Thompson 1981). The three negators cover different ranges of environments. 不 *Bù* is the most general and neutral form of negator for simple denial of assertions and for refusal. As in (5) and in (6), 不 *bù* does not involve completion regardless of the time frame, past or present.

- (5) 他不聰明  
tā\_\_bù\_\_cōngmíng  
he\_\_NEG\_\_smart  
*He is not smart.*

- (6) 他不讀書  
tā\_\_bù\_\_dúshū  
he\_\_NEG\_\_study  
*He does/did not study.*

If instantiation of events is concerned, the negator is 沒 *méi*, as shown in (7), where 沒 *méi* negates the instantiation of the drinking event.

- (7) 他沒喝酒  
tā\_\_méi\_\_hē\_\_jiǔ  
he\_\_NEG\_\_drink\_\_wine  
*He didn’t drink wine.*

Another negator 沒(有) *méi(yǒu)* is used when the main verb of the sentence is 有 *yǒu*. 有 *yǒu* has a number of different meanings, including existential, possessive, perfective, presentational, and assertive (Cheng 鄭良偉 1978; Huang and James 1987; Tsai 蔡 维天 2004b). The major function of its negative counterpart 沒(有) *méi(yǒu)* concerned in this study is the negation of the existentiality. In (8), the negator 沒有 *méiyǒu* includes both negation and an existential verb. The existential verb 有 *yǒu* can be optional when 沒 *méi* appears.

- (8) 沒(有)水了  
méi\_\_(yǒu)\_\_shuǐ\_\_le  
NEG.EXT\_\_there be\_\_water\_\_sentence-final PTC  
*There is no more water.*

This section concerns the interaction between ‘one’-phrases as minimizers and the two types of negation divided by existentiality: existential negative predicate 沒有 *méiyǒu* and non-existential 不 *bù* and negator 沒 *méi*. Regarding syntactic

positions, 不 *bù* and non-existential 沒 *méi* follow the subject and precede the verb, while existential negative predicate 沒有 *méiyǒu* follows the general form of Mandarin existential sentence as in (9) (cited from Huang and James 1987). As shown in (10), the existential predicate generally precedes the NP in position III to introduce the existence of that NP. The expression in position IV must be semantically related to the NP in position III. As in (10), position IV is filled by an expression of predication, which is a descriptive clause or phrase. Position I hosts a locative NP if there is any.

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

- (10) 桌上有一本小說很有趣[*Chinese Gigaword*]

Position    I               II       III                   IV

zhuō\_\_shàng\_\_yǒu\_\_[yì\_\_běn\_\_xiǎoshuō]\_\_hěn\_\_yǒuqù

table\_\_top\_\_EXT.V\_\_one\_\_CLF\_\_novel\_\_very\_\_interesting

*There is a novel on the table which is very interesting.*

Likewise, the negative predicate 沒有 *méiyǒu* generally precedes the NP in position III to introduce the existence of that NP, as in (11).

- (11) 屋內沒有一個人

Position    I               II       III

wū\_\_nèi\_\_méi\_\_yǒu\_\_[yí\_\_ge\_\_rén]

house\_\_inside\_\_NEG\_\_EXT.V\_\_one\_\_CLF\_\_person

*There is nobody happy inside the house.*

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. I follow Huang and James's (1987) analysis of Mandarin existential sentences and include *yǒu* NP/NP *yǒu* in this broader definition of VO/OV construction due to the shared properties regarding the relative positions between the main predicate and the NP. The combination of an existential verb followed by a postverbal NP is labeled as VO. When the focus construction is involved, the NP whose existence is concerned precedes the existential predicate, as shown in (12). Analogously, the combination of a preverbal NP and the existential predicate is labeled as OV.<sup>5</sup>

- (12) 屋內一個人也沒有

wū\_\_nèi\_\_[yí\_\_ge\_\_rén]\_\_yě\_\_méi\_\_yǒu

house\_\_inside\_\_one\_\_CLF\_\_person\_\_FOC\_\_NEG\_\_EXT.V

*There is not even a single person inside the house.*

The two word order patterns are defined for the purpose of comparing the influences of positional variation on the interpretation of minimizers under the scope of various negators. The positional variation is an effective indicator for distinguishing the strength of focal prominence of different syntactic constructions.

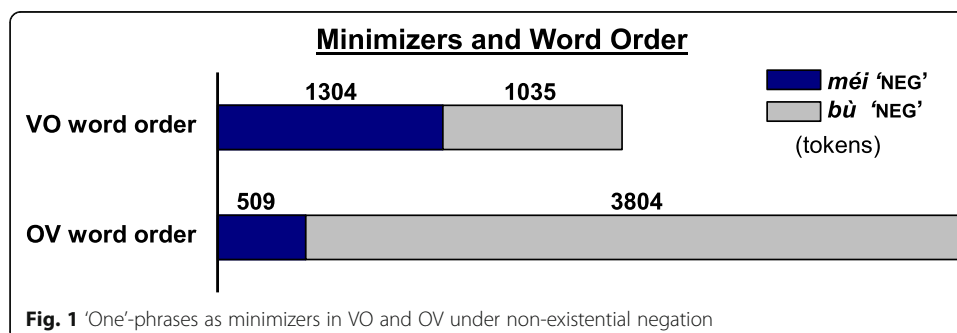
Since the two types of negation have great influences on the distribution of minimizers in word order, the following discussion begins with non-existential negators 不 *bù* and 沒 *méi* and continues to the existential negative predicate 沒有 *méiyǒu*.

### 3 'One'-phrases as minimizers under non-existential negation

For each of the non-existential negators 不 *bù* and 沒 *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 searches for 'one'-phrases in OV. The distribution of 'one'-phrases as minimizers in VO and OV is summarized in Fig. 1.

Notably, the overall number of 'one'-phrases as minimizers in OV outnumbers that in VO. The genres from *Chinese Gigaword* are restricted to newspaper and press releases, and therefore, the minimizers here are collected from written Chinese, which is stylistically formal. SVO is normally preferred in a formal register. Even given the restriction of genres, however, there are still more tokens in OV than in VO. The association between minimizers and OV in Modern Mandarin could be expected to be even more prominent in colloquial Mandarin.

The asymmetry of VO and OV in terms of accommodating 'one'-phrases as minimizers is reflected in how 'one'-phrases are interpreted in VO and OV. The 'one'-phrases with negator 不 *bù* or 沒 *méi* in VO have multiple functions, which can be divided based on their scalarity. The minimizer interpretation, as shown in (13)–(14), evokes scalar inferences. In (13), 'one'-phrases tend to be perceived as the smallest atomic units, which partly attributes to classifiers. The inclusion of a classifier in numeral phrases has become mandatory in Modern Mandarin. Classifiers overtly specify the basic unit of the object because they denote some prominently perceived or imputed properties of the entity to which associated nouns refer, as defined in Allan (1977). On the other hand, measure words can be contextually determined as minimal atomic units. For example, the measure word 口 *kǒu* in (14) is understood as the smallest atomic unit in a drinking event. When 'one'-phrases are used as minimizers, they profile the minimal unit of a scale, which serves as the foundation for inducing scalar inferences. Since they refer to the minimal unit, the numeral 'one' cannot be replaced by other numerals.



- (13) 沒流過一滴淚 [*Chinese Gigaword*]  
 méi\_\_liú\_\_guò\_\_[yì\_\_dī\_\_lèi]  
 NEG\_\_tear\_\_ASP\_\_one\_\_drop\_\_tear  
*hasn't even shed a tear*
- (14) 不喝一口水 [*Chinese Gigaword*]  
 bù\_\_hē\_\_[yì\_\_kǒu\_\_shuǐ]  
 NEG\_\_drink\_\_one\_\_MW(mouth)\_\_water  
*did not drink even one mouthful of water*

In VO, 'one'-phrases under negation can have non-scalar interpretations. As in (15) and (16), the 'one'-phrases refer to an indefinite entity. The emphasis of indefiniteness instead of the precise quantity is reflected in the corresponding English translation "a NP". In this referential function, the numeral 'one' cannot be substituted with other numerals since 'one' does not contrast with other numerals.

- (15) 我們不需要一個獨立的國家 [*Chinese Gigaword*]  
 wǒmen\_\_bù\_\_[xūyào]\_\_v\_\_[yí\_\_ge\_\_dúlìde\_\_guójiā]\_\_o.  
 we\_\_NEG\_\_need\_\_one\_\_CLF\_\_independent\_\_country  
*We don't need an independent country.*
- (16) 我不想成為一位政治領袖 [*Chinese Gigaword*]  
 wǒ\_\_bù\_\_[xiǎng\_\_chéngwéi]\_\_v\_\_[yí\_\_wèi\_\_zhèngzhì\_\_lǐngxiù]\_\_o.  
 I\_\_NEG\_\_want\_\_become\_\_one\_\_CLF\_\_political\_\_leader  
*I don't want to become a political leader.*

The other non-scalar function of the 'one'-phrases under negation in VO is denoting a precise quantity, as in (17) and (18). In the two examples, the numeral 'one' can be used to contrast with other numerals, so the numeral 'one' can be replaced with other numerals.

- (17) 這類事情很可能不止一件 [*Chinese Gigaword*]  
 zhè\_\_lèi\_\_shìqíng\_\_hěn\_\_kěnéng\_\_bù\_\_zhǐ\_\_[yí\_\_jiàn]  
 this\_\_kind\_\_affair\_\_very\_\_likely\_\_NEG\_\_stop\_\_one\_\_CLF  
*It is likely that this is not the only one of this kind of affair.*
- (18) 中國穩定不應繫於一人 [*Chinese Gigaword*]  
 zhōngguó\_\_wěndìng\_\_bù\_\_yīng\_\_xì\_\_yú\_\_[yì\_\_rén]  
 China\_\_stability\_\_NEG\_\_should\_\_tie\_\_at\_\_one\_\_person  
*The stability of China should not be tied to one person.*

Departing from minimizers, the referential and quantity-denoting functions do not induce scalar inferences. These interpretations show that VO under negation can accommodate both scalar and non-scalar readings, and thus, a minimizer reading is not exclusive in VO.

In contrast, when 'one'-phrases appear with negation in OV, they are unambiguously understood as minimizer NPIs, as in (19) and (20).

- (19) 波音公司不賣飛機,一架也不賣 [*Chinese Gigaword*]  
 pōyīn\_gōngsī\_bú\_mài\_fēijī,[yí\_jià]\_yě\_bú\_mài  
 Boeing\_company\_NEG\_sell\_airplane\_one\_CLF\_FOC\_NEG\_sell  
*Boeing does not sell airplanes. It does not sell even one airplane.*
- (20) 送了他四本書,他一本都沒看完 [*Chinese Gigaword*]  
 sòng\_le\_tā\_sì\_běn\_shū,tā\_[yì\_běn]\_dōu\_méi\_kàn\_wán  
 give\_PRF\_he\_four\_CLF\_book\_he\_one\_CLF\_DOU\_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 under negation are non-scalar. The preverbal position particularly favors the interpretation of minimizers due to its strong focal prominence; the preverbal position has been viewed as a focus construal since Old Chinese (Peyraube 1997a, 1997b) till Modern Mandarin (Tsai 蔡维天 2004a; Zhang 2000). The focus of the preverbal object position forces ‘one’-phrases to be interpreted as minimizers. The specific connection of the minimizer reading and OV is already attested in Old Chinese, but their marginal existence has not been discussed in the literature of Mandarin NPIs. The connection became statistically prominent in Early Mandarin Chinese when the negators were non-existential. This association has been shaped by the requirement of focal prominence for the emphatic nature of minimizers, leading to the synchronic distribution.

The minimizers with non-existential negation are associated with particular constructions in both VO and OV for emphatic purpose, resulting in the skewed distribution. They serve as effective diagnostics for focal prominence. Their property of attracting focal prominence will be examined in three constructions.

### 3.1 Collocation with 任何 *rènhe* ‘any’ in VO and OV

The distribution of minimizers in Modern Mandarin in Fig. 1 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 任何 *rènhe* ‘any’ along with ‘one’-phrases guarantee the minimizer reading. Mandarin 任何 *rènhe* exhibits both NPI and Free Choice Item (FCI) usages. The usage concerned in this study is the NPI one. In VO, when 任何 *rènhe* ‘any’ is added to a ‘one’-phrase under negation, the ‘one’-phrase must be understood as a minimizer, as shown in (21) and (22). Without 任何 *rènhe* ‘any’, the ‘one’-phrases with negation in VO can emphasize indefinites or refer to a precise quantity, as shown in (15)–(18).

- (21) 不放棄任何一次協商機會 [*Chinese Gigaword*]  
 bú\_fàngqì\_rènhe\_[yí\_cì\_xiéshāng\_jīhuì]  
 NEG\_give-up\_any\_one\_CLF\_negotiation\_opportunity  
*did not give up any chance of negotiation*
- (22) 去年沒買任何一本書 [*Chinese Gigaword*]  
 qùnián\_méi\_mǎi\_rènhe\_[yì\_běn\_shū]  
 last-year\_NEG\_buy\_any\_one\_CLF\_book  
*last year did not buy any book*

It is noteworthy that both 任何 *rèn hé* ‘any’ and minimizers are polarity items. Each of them can be used alone for inducing scalar readings by profiling an extreme value in an ordered set of alternatives, as shown in (23) and (24). When 任何 *rèn hé* ‘any’ or the minimizer appear in VO, their associated NPs carry prosodic prominence or emphatic stress as an indication of receiving focal attention. Although the differences between the two types of polarity items are subtle in VO, it is clear that the combination of two polarity items as in (22) has a stronger emphatic effect. Importantly, a ‘one’-phrase in such a combination must be an NPI.

- (23) 去年沒買任何書  
 qùnián\_\_méi\_\_mǎi\_\_**rèn hé**\_\_shū  
 last-year\_\_NEG\_\_buy\_\_**any**\_\_book  
*last year did not buy any book*
- (24) 去年沒買一本書  
 qùnián\_\_méi\_\_mǎi\_\_[yì\_\_běn\_\_shū]  
 last-year\_\_NEG\_\_buy\_\_one\_\_CLF\_\_book  
*last year did not buy any book*

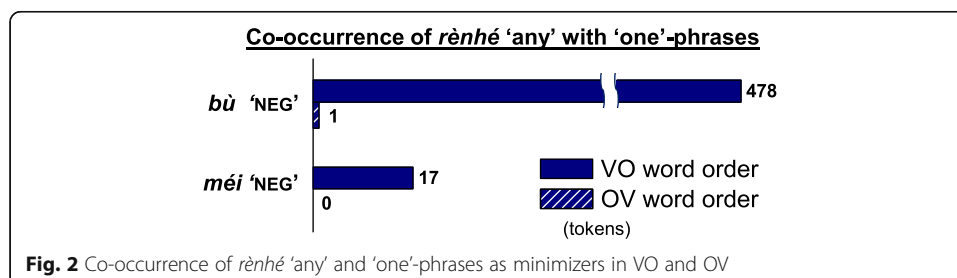
In contrast, the ‘one’-phrases under negation in OV must be minimizers, and thus, the addition of 任何 *rèn hé* ‘any’ does not contribute to specifying the scalar ‘one’-phrases. Following this logic, there should be fewer cases of 任何 *rèn hé* ‘any’ modifying ‘one’-phrases in OV. As shown in Fig. 2, 任何 *rèn hé* ‘any’ appears mostly in VO, while 任何 *rèn hé* ‘any’ is barely found in OV.

The sharp contrast of the occurrences of 任何 *rèn hé* ‘any’ in VO and OV further confirms that the information structure of OV has a special status for minimizers. OV can ensure that ‘one’-phrases under negation are understood as minimizers, while there is an additional element in VO to make ‘one’-phrases unambiguous.

### 3.2 Occurrence of scalar particles, 也 *yě* and 都 *dōu*, in OV

In Modern Mandarin OV, the type of focus which can induce scalar inferences becomes overtly specified as the ‘one’-phrases as minimizers in OV are accompanied by the scalar particles, 也 *yě* and 都 *dōu*. The two scalar particles are closely related to minimizers although their semantics differ greatly in other functions.

Specifically, 也 *yě* is treated as a focus-sensitive additive particle (cf. *too*, *also*) and as focus-sensitive scalar particle (cf. *even*) (Kobuchi-Philip 2009; Szabolcsi et al. 2014). 都 *dōu*, on the other hand, can serve as a focus-sensitive scalar particle,



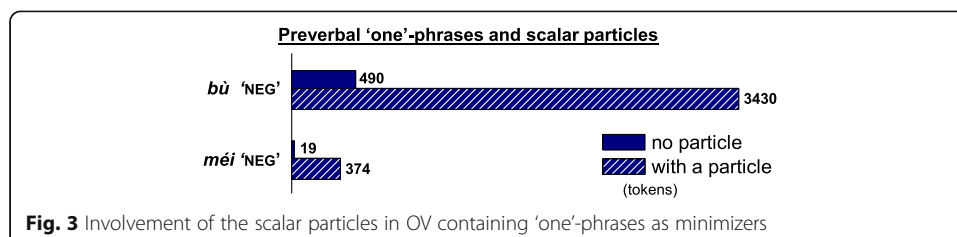
a universal quantifier, and a distributive operator in modern Chinese (Szabolcsi et al. 2014). Although each of the two groups of particles covers a different range of functions, they are both understood as focus-sensitive scalar particles when attached to those ‘one’-phrases expressing a minimal amount. In the environment where both negation and minimizers co-occur, the particles amount to the equivalent of *not even* in English. The involvement of scalar particles is the result of creating maximal distinction between various types of focus carried in OV. The scalar particles emerged in OV around Early Mandarin, but they were not required at the time. However, in Modern Mandarin the great majority of the ‘one’-phrases as minimizers in OV co-occur with the scalar particles, as shown in Fig. 3.

Although the ‘one’-phrases which lack a scalar particle constitute a relatively small proportion, they form a distinct category for conveying a formal register. This class of minimizers is judged to be more archaic and may be viewed as vestiges from earlier periods of Chinese. The ‘one’-phrases of this category have two properties. First, the majority of them are fixed expressions or idioms, as shown in (25) and (26). These two idiomatic expressions can be dated back to Old Chinese. They keep the syntactic characteristics of Old Chinese, where focus-sensitive particles were absent in OV.

- (25) 公私分明,一絲不苟 [*Chinese Gigaword*]  
 gōng\_sī\_fēn\_míng,\_[yì\_sī]\_bù\_gǒu  
 public\_private\_separate\_clear\_one\_shred\_NEG\_mess up  
*...separate public and private interests, and not mess up even one shred* [an idiom to meaning ‘scrupulous’]
- (26) 要能公正無私,一介不取 [*Chinese Gigaword*]  
 yào\_néng\_gōngzhèng\_wú\_sī,\_[yí\_jiè]\_bù\_qǔ  
 must\_be-able-to\_fair\_NEG\_private\_one\_seed\_NEG\_take  
*must be able to be impartial, and not take even one seed* [an idiom meaning ‘not take anything not belonging to oneself’]

Second, those without scalar particles tend to appear in parallel clauses, as shown in (27) and (28). The parallel clauses are pervasively used in slogans for stylistic formal symmetry. This type of ‘one’-phrases also sounds archaic because they appear as though they are the vintages of archaic forms. The tendency of appearing in dependent clauses instead of independent clauses indicates that the form without a scalar particle is not a typical syntactic presentation of minimizers.

- (27) 一趟不白走,一句不白問 [*Chinese Gigaword*]  
 [yí\_tàng\_bù\_bái\_zǒu],[yí\_jù\_bù\_bái\_wèn]



one\_trip\_NEG\_in-vain\_walk\_one\_sentence\_NEG\_in-vain\_ask  
*not have even one trip for nothing and not ask even one sentence for nothing*

- (28) 安全一事不出,紀律一章不違 [*Chinese Gigaword*]  
 ānquán [yí shì bù chū], jìlǜ [yì zhāng bù wéi]  
 safe\_one\_thing\_NEG\_happen\_discipline\_one\_chapter\_NEG\_violate  
*With respect to safety, not a single accident happens. With respect to discipline,  
 not a single rule is violated.*

The preverbal ‘one’-phrases without scalar particles thus have their own syntactic and pragmatic characteristics, departing from the canonical contemporary use.

As shown in Fig. 3, the majority of the preverbal minimizers occur with the scalar particles. As shown in (29) and (30), the occurrence of the particles overtly specifies scalar focus and reinforces the scalar nature of the associated ‘one’-phrases.

- (29) 倒!一瓶也不留 [*Chinese Gigaword*]  
 dào! [yì píng] yě bù liú  
 pour-out\_one\_bottle\_FOC\_NEG\_keep  
*Pour (them) out! Don't keep even a single bottle.*
- (30) 家裡的牛羊一隻都沒損失 [*Chinese Gigaword*]  
 jiālǐde niú yáng [yì zhī] dōu méi sǔnshī  
 in-the-house\_cow\_sheep\_one\_CLF\_FOC\_NEG\_lose  
*...did not lose even a single cow or sheep*

In brief, the ‘one’-phrases as minimizers in OV are highly profiled. Moreover, the occurrence of focus-sensitive scalar particles enhances the scalar inferences from minimizers. These factors explain why minimizers favor OV: minimizers tend to occur in the positions where they are maximally profiled due to their emphatic nature.

### 3.3 Double-object construction

Although OV better accommodates minimizers in several ways, some minimizers still have to appear in VO rather than in OV. This is partly due to the syntactic constraints of Mandarin double-object construction as it is VO instead of OV that allows the double-object construction. As shown in (31) and (32), the double-object construction involves the form, V Obj<sub>1</sub> Obj<sub>2</sub>, where the ‘one’-phrase in the position of Obj<sub>2</sub> is the direct object of the verb. The focal stress of the two examples falls on the ‘one’-phrase, indicating that the ‘one’-phrase is employed as an emphatic NPI. In contrast, OV takes only one object argument, as shown earlier in (29) and (30). There is no case that an “indirect” object is instantiated in OV.

- (31) 沒喝我們一口水,卻像親兄弟一樣關心 [*Chinese Gigaword*]  
 méi hē wǒmen [yì kǒu shuǐ] què xiàng  
 qīn xiōngdì yíyàng guānxīn  
 NEG\_drink\_us\_one\_MW\_water\_but\_alike\_close  
 brother\_same\_care-about  
*(He) did not drink a mouthful of our water, but treated us like his close brothers*

- (32) 大家苦幹五年,沒要國家一分錢 [*Chinese Gigaword*]  
 dàjiā kǔ gàn wǔ nián, méi yào guójiā yì fēn qián<sub>2</sub>  
 everyone hard work five year NEG ask-  
 for country one cent money  
*Everyone worked hard for five years and did not ask the country for a cent.*

In sum, VO is relatively flexible to be combined with a variety of constructions, such as a double-object construction. The flexibility offers an explanation as to why there is still a fair portion of minimizers in VO.

The discussion of this section reveals that minimizers tend to occur in OV under non-existential negation. Their distribution reflects both the characteristics and constraints of the information structure of OV. On the other hand, the ‘one’-phrases as minimizers under existential negation have different kinds of distributional constraints, which will be discussed in Section 4.

#### 4 ‘One’-phrases as minimizers with existential negation

When ‘one’-phrases appear with the existential negative predicate of 沒有 *méiyǒu*, the ‘one’-phrases as minimizers do not show a tendency toward OV. Indeed, in the context of 沒有 *méiyǒu*, the majority of ‘one’-phrases as minimizers, up to 13,650 tokens, appear in VO, while fewer than 3000 tokens are found in OV. The 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 the required informative conditions in semantics and pragmatics for ‘one’-phrases to be interpreted as minimizers. In addition, the existential construction in VO is compatible with a variety of syntactic construals which cannot be accommodated by OV. Due to the syntactic characteristics, the VO with existential negation has a big portion of minimizers.

As regards syntactic structures, the Mandarin Chinese existential negator 沒有 *méiyǒu* verb can appear as the sole predicate of the sentence, as shown in (33). It is often preceded by a locative NP. The locative NP in (34), for instance, clearly defines the location where the existence of passengers is concerned.

- (33) 但是迄今還沒有一點跡象 [*Chinese Gigaword*]  
 dànshì qì jīn hái méiyǒu yì diǎn jìxiàng  
 but till now still NEG.EXT one dot sign  
*but till now there is still no sign...*
- (34) 雖然機上沒有一位乘客,但這架飛機... [*Chinese Gigaword*]  
 suīrán jī shàng méiyǒu yí wèi chéngkè, dàn zhè jià fēijī  
 although flight on NEG.EXT one CLF passenger but this CLF flight  
*Although there is not one single passenger on board, the flight...*

The constraints of Mandarin existential constructions on the distribution of minimizers are exemplified by the cases where ‘one’-phrases as minimizers have modification, either predicative clauses or relative clauses. In addition, the requirement of focal prominence of minimizers is reflected in the preferred unit of a ‘one’-phrase.

#### 4.1 Modification in VO: post-NP predicative clauses

Mandarin Chinese existential sentences allow a more complicated structure, where the existential NP is followed by a predicative clause, as shown in (35) and (36). The subtype of existential presentative sentences has a discourse function to present an NP to be further described (Huang 1987; Li and Thompson 1981). As in (35), the NP ‘one person’ is an indefinite referential expression with the detailed action provided by a predicative clause. The indefinite numeral phrase ‘one tree’ in (36) is provided with more details by its following adjectival predicate.

- (35) 外面有一個人敲門  
 wàimiàn\_\_yǒu\_\_[yí\_\_ge\_\_rén]\_\_qiāo\_\_mén  
 outside\_\_EXT.V\_\_one\_\_CLF\_\_person\_\_knock\_\_door  
*There is someone outside knocking on the door.*

- (36) 院子裡有一棵樹很高  
 yuànzǐ\_\_lǐ\_\_yǒu\_\_[yì\_\_kē\_\_shù]\_\_hěn\_\_gāo  
 court-yard\_\_in\_\_EXT.V\_\_one\_\_CLF\_\_tree\_\_very\_\_high  
*There is a tree in the yard which is very tall.*

The same structure also applies to existential negation 沒有 *méiyǒu*. For instance, the ‘one’-phrase introduced by 沒有 *méiyǒu* in (37) is followed by a verb phrase which provides relevant details. In (38), the whole VP following the ‘one’-phrase functions as a restrictive clause specifying the property concerned in the discussion. Similarly in (39), the idiomatic expression *yì fān fēng shùn* with its literal meaning of ‘having favorable winds for sailing’ is used to describe a process going smoothly.

- (37) 沒有一個患者的檢驗結果呈陽性 [*Chinese Gigaword*]  
**méiyǒu**\_\_[yí\_\_ge\_\_huànzhe\_\_de\_\_jiǎnyàn\_\_jiéguǒ]\_\_chéng\_\_yángxìng  
 EXT.V\_\_one\_\_CLF\_\_patient\_\_POSS\_\_inspection\_\_result\_\_show\_\_positive  
*No patient has positive results*
- (38) 將來沒有一個國家能保護它的環境 [*Chinese Gigaword*]  
 jiānglái\_\_**méiyǒu**\_\_[yí\_\_ge\_\_guójiā]\_\_néng\_\_bǎohù\_\_tā\_\_de\_\_huánjìng  
 future\_\_EXT.V\_\_one\_\_CLF\_\_country\_\_can\_\_protect\_\_3.SG\_\_POSS\_\_environment  
*There will be no country that can protect its environment in the future.*
- (39) 沒有一件事一帆風順 [*Chinese Gigaword*]  
**méiyǒu**\_\_[yí\_\_jiàn\_\_shì]\_\_yì\_\_fān\_\_fēng\_\_shùn  
 EXT.V\_\_one\_\_CLF\_\_thing\_\_one\_\_sail\_\_wind\_\_smooth  
*There is not a thing which goes smoothly without a hitch.*

Based on the corpus data, the majority of ‘one’-phrases as minimizers with existential negation 沒有 *méiyǒu* are followed by a phrase of predication, as exemplified in (37)–(39). This type of “complicated” existential construction involving more than one predicate only appears in VO. The preverbal object in OV, on the contrary, allows no predicative phrases.

If there is any modification for the preverbal ‘one’-phrase, it has to precede the noun of the ‘one’-phrase. In (40), for example, the adjective occurs between the classifier and the noun.

- (40) 連一位中國留學生都沒有 [*Chinese Gigaword*]  
 lián [yí wèi **zhōngguó** liúxuéshēng] dōu méiyǒu  
 even\_one\_CLF **Chinese** overseas-student\_FOC\_EXT.NEG  
*There is not even a single Chinese overseas student.*

This contrast shows that minimizers in VO and OV favor different strategies of modification. The next section will discuss the preferred modification for minimizers in OV.

#### 4.2 Modification in OV: relative clauses

Examples (41) and (42) illustrate the different requirements regarding modification in VO and OV. Modification for ‘one’-phrases as minimizers tends to appear as predicative clauses in VO, while modification for ‘one’-phrases in OV is in the form of relative clauses. Predicative clauses have to immediately follow ‘one’-phrases, whereas relative clauses with the relative marker *de* precede ‘one’-phrases. In (41), the ‘one’-phrase in VO is followed by a predicative clause in boldface. If it is paraphrased using OV, the phrase of predication has to be expressed by a relative clause, as in (42).

- (41) 尤其是聯合國,沒有一個會員國可以代表台灣 [*Chinese Gigaword*]  
 yóuqí shì liánhéguó, méiyǒu [yí ge huìyuán guó]  
 specifically\_FOC United-Nations\_EXT.NEG one\_CLF member\_country  
**kěyǐ dàibiǎo táiwān**  
**can represent Taiwan**  
*Specifically in the United Nations, there is no member country that can represent Taiwan.*
- (42) 尤其是聯合國,一個可以代表台灣的會員國也/都沒有  
 yóuqí shì liánhéguó, [yí ge **kěyǐ dàibiǎo táiwān de**  
 specifically\_FOC United-Nations\_one\_CLF **can represent**  
**Taiwan REL**  
 huìyuán guó] yě/dōu méiyǒu  
 member\_country\_YE/DOU\_EXT.NEG  
*Specifically in the United Nations, there is not even a single member that can represent Taiwan.*

Relative clauses associated with numeral phrases may appear in two positions: (a) the position between the unit word and the noun and (b) the position preceding the numeral (Huang et al. 2009). However, relative clauses in the two positions convey different meanings. The relative clauses in position (a) are “non-restrictive,” whereas those in position (b) are “restrictive” (Chao 1968; Hashimoto 1971; Huang et al. 2009).<sup>6</sup> Regarding the ‘one’-phrases used as minimizers, relative clauses tend to appear in position (a), as shown in (42). Relative clauses appearing in position

(b) of numeral phrases may be judged to be unnatural, as shown in (43). The awkwardness has to do with the fact that the relative clause in this position makes the ‘one’-phrase specific or definite. Since minimizer NPIs must be non-specific indefinites, relative clauses in position (b) are less preferred and hence not found in OV in the corpus.

- (43) ??尤其是聯合國,可以代表台灣的一個會員國也/都沒有  
 ??yóuqí shì liánhéguó, kěyǐ dàibiǎo táiwān de  
 specifically\_FOC\_United-Nations\_can\_represent\_Taiwan\_REL\_  
 [yí ge huìyuán guó] yě/dōu méiyǒu  
 one\_CLF\_member\_country\_FOC/FOC\_EXT.NEG  
*Specifically in the United Nations, there is not even a single member country that can represent Taiwan.*

Relative clauses can also modify ‘one’-phrases as minimizers in VO, as shown in (44), which is paraphrased from (41). However, in some cases, the strategy of modification is not ideal in VO. For example, if (38) is paraphrased with a relative clause in VO, the grammatical acceptability becomes problematic, as in (45), which is even rejected by some native speakers. The ungrammaticality of (46) further confirms that position (b) is less ideal for relative clauses to modify minimizers. In VO, relative clauses have some constraints, as shown in the awkwardness resulting from the co-referential constraints between the pronoun and ‘country’.

- (44) 尤其是聯合國,沒有一個可以代表台灣的會員國  
 yóuqí shì liánhéguó, méiyǒu [yí ge kěyǐ  
 specifically\_FOC\_United-Nations\_EXT.NEG\_one\_CLF\_can\_  
 dàibiǎo táiwān de huìyuán guó]  
 represent\_Taiwan\_REL\_member\_country  
*Specifically in the United Nations, there is not a member country that can represent Taiwan.*
- (45) ??將來沒有一個能保護它的環境的國家  
 ??jiānglái méiyǒu [yí ge néng bǎohù tā de huánjìng de guójiā]  
 future\_EXT.NEG\_one\_CLF\_can\_protect\_3.SG\_POSS\_environment\_  
 REL\_country  
*There will not be a country that can protect its environment in the future.*
- (46) \*將來沒有能保護它的環境的一個國家  
 \*jiānglái méiyǒu [néng bǎohù tā de huánjìng de yí ge guójiā]  
 future\_EXT.NEG\_can\_protect\_3.SG\_POSS\_environment\_REL\_  
 one\_CLF\_country  
 Intended reading: *There will not be a country that can protect its environment in the future.*

The preference of a predicative clause over a relative clause in VO can be observed in the corpus data, where up to 95% of the ‘one’-phrases as minimizers in VO are

followed by a predicative clause, but relative clauses for modification are relatively unproductive. The skewed distribution mainly attributes to two reasons. One is due to the syntactic constraints of relative clauses and predictive clauses. For example, predictive clauses better accommodate the involvement of co-referential relations than relative clauses do, as shown in (38), (45), and (46). In the corpus data of the minimizers, no tokens involving co-referentiality are found in the relative clauses. Since predictive clauses have relatively less constraints, the modification via predictive clauses is more productive. The other is the saliency of focal prominence. The existential constructions profile the NP introduced by the existential verbs, and hence this profiled numeral phrase is foregrounded with focal stress. As in (47), the ‘one’-phrase is stressed. The intervention of a long relative clause weakens the stress of the numeral phrase, resulting in the decrease of the emphatic effects, as in (48), the paraphrase of (47) with a relative clause. Based on eight native Mandarin speakers’ judgments, they are both grammatical but (47) is preferred.

- (47) 沒有一家銀行像花旗銀行一樣 [*Chinese Gigaword*]  
 méiyǒu [yí jiā yínháng] xiàng huāqíyínháng yíyàng  
 EXT.NEG\_one\_CLF\_bank\_be-like\_Citi-bank\_same  
*There is no bank that is like Citi bank.*

- (48) 沒有一家像花旗銀行一樣的銀行  
 méiyǒu [yí jiā xiàng huāqíyínháng yíyàng de yínháng]  
 EXT.NEG\_one\_CLF\_be-like\_Citi-bank\_same\_REL\_bank  
*There is no bank that is like Citi bank.*

Relative clauses are rarely found in VO and also seldom appear to modify ‘one’-phrases as minimizers in OV with existential negation. In fact, ‘one’-phrases tend to remain as a basic unit in OV. As shown in (49)–(51), the ‘one’-phrases normally do not have additional modification as the information relevant to the ‘one’-phrases is normally supplied from earlier contexts. For example, the numeral ‘one’-classifier combination in (50) is associated with the ‘tent’ in the previous clause. In a similar vein, the relevant information about the ‘one’-phrase in (51) is specified in its preceding clause. The classifier alone is sufficient to delimit the basic unit of its associated noun, so the noun which appears earlier in the context is free from repetition. Notably, in the corpus, up to 98% of the ‘one’-phrases as minimizers in OV appear in the form of ‘one’-classifier/measure word immediately preceding the scalar particle as in (50) and (51). The high percentage indicates that there is a preferred size to be in focus. Since the preverbal object of the OV construction has focal prominence, the object with a focus stress tends to be a small unit in order to increase the saliency of prosodic prominence. As a result, the basic component of ‘one’-phrases without additional modification enhances the semantic prominence of the minimizer by narrowing the focus site to the ‘one’-phrase only.

- (49) 他如果坐在家裡,一票也沒有 [*Chinese Gigaword*]  
 tā rúguǒ zuò zài jiā lǐ, [yí piào] yě méiyǒu  
 he\_if\_sit\_at\_home\_in\_one\_vote\_YE\_NEG.EXT

*If he sits at home, there will not be even a single vote (for him).*

- (50) 要申領五百頂帳篷,一頂也沒有 [*Chinese Gigaword*]  
 yào\_\_shēnlǐng\_\_wǔ\_\_bǎi\_\_dǐng\_\_zhàngpéng,\_\_[yì\_\_dǐng]\_\_yě\_\_méiyǒu  
 have-to\_\_apply-for\_\_five\_\_hundred\_\_CLF\_\_tent,\_\_one\_\_CLF\_\_FOC\_\_NEG.EXT  
*...plan to apply for five hundred tents, but there is not even a single one.*

- (51) 有機會拿金牌的項目,幾乎一個也沒有 [*Chinese Gigaword*]  
 yǒu\_\_jīhuì\_\_ná\_\_jīnpái\_\_de\_\_xiàngmù,\_\_jīhū\_\_[yí\_\_ge]\_\_yě\_\_méiyǒu  
 have\_\_chance\_\_get\_\_gold-medal\_\_REL\_\_item\_\_almost\_\_one\_\_CLF\_\_  
 FOC\_\_NEG.EXT  
*There is almost not a single category in which there is a chance to win a gold medal.*

Based on the data, the preverbal ‘one’-phrases as minimizers are generally not newly introduced information in the discourse. As shown in (52), 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.

- (52) 沒有人下去,一個也沒有 [*Chinese Gigaword*]  
 méiyǒu\_\_rén\_\_xià\_\_qù,\_\_[yí\_\_ge]\_\_yě\_\_méiyǒu  
 NEG.EXT\_\_person\_\_down\_\_go\_\_one\_\_CLF\_\_FOC\_\_NEG.EXT  
*Nobody went down, not even a single one.*

The different constraints on the modification for minimizers associate with the strategies for maximizing pragmatic effects. Thus, the distribution of minimizers is linked to how arguments are profiled under different syntactic constraints.

#### 4.3 Emphatic effects behind preferred modifying strategies

The discussion so far concerns how the information structure of OV and VO is reflected in the syntactic constraints of the 沒有 *méiyǒu* existential construction. The differences of modification in VO and OV are summarized in (53).

- (53) ‘One’-phrases as minimizers in the existential construction

	VO word order	OV word order
‘one’-phrase followed by another expression of predication	√	x
‘one’-phrase modified by a relative clause	√	√

In VO, although both predicative clauses and relative clauses can be used to provide further information for ‘one’-phrases, the strategy of using predicative clauses is preferred. The preference is relevant to the issue of placing the minimizer in prosodic saliency. Due to the syntactic constraints in OV, predicative phrases cannot be accommodated. Because of the restriction, there is still a great amount of ‘one’-phrases as minimizers in VO although OV is relatively ideal for minimizers. 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 profiling the focused elements. Particularly in OV, the ‘one’-phrases have the tendency to remain as a basic numeral phrase without extra modifiers and even appear in the form which omits the noun. Remaining as a basic unit contributes to foregrounding the ‘one’-phrases as minimizers both phonologically and semantically. The preference of a specific form of ‘one’-phrases in the corpus is for inducing the strongest emphatic effects. In brief, the synchronic distribution of ‘one’-phrases in VO and OV under different types of negation is the result of weighing syntactic, semantic, pragmatic, and discourse-level properties with the purpose of achieving the best condition for foregrounding minimizers.

## 5 Diachronic influences on synchronic distribution

Previous sections show that the distribution of minimizers in VO and OV is constrained by various synchronic constraints including negation, focus, and existential structures. In addition to these factors, diachronic factors also contribute to the distribution.

### 5.1 Two types of minimizers in VO and OV

Mandarin ‘one’-phrases can be divided into two major types, non-fixed and fixed ‘one’-phrases, based on the relationship between the measure words/classifiers and the NPs associated with them. The two types are distinguished based on whether the UW slot between — *yī* ‘one’ and the NP can be freely occupied by different unit words, including various classifiers and measure words. The fixed type allows only 點 *diǎn* ‘dot’ in the UW position, whereas the non-fixed type can accommodate different UWS. The sequences of the two types of ‘one’-phrases are shown in (54). Based on the *Academia Sinica Ancient Chinese Corpus*, the fixed ‘one’-phrases are later developments than the non-fixed ones, and they are both highly productive in Modern Mandarin.

- (54) a. non-fixed ‘one’-phrase: *yī* ‘one’-UW-noun  
 b. fixed ‘one’-phrase: *yī* ‘one’- 點 *diǎn* ‘dot’-noun

The distribution of fixed ‘one’-phrases in Modern Mandarin provides more evidence to reveal the tight connection between pragmatic effects and the employment of syntactic constructions.

Non-fixed and fixed ‘one’-phrases have different degrees of sensitivity toward negative polarity. Non-fixed ‘one’-phrases under negation in VO are not exclusively minimizers, as discussed in Section 3. However, when fixed ‘one’-phrases appear under negation in VO, they must be understood as minimizers as shown in (55) and (56). Fixed ‘one’-phrases can designate a dot-shape smallest unit, as in (55), where the shape of a water splash is specified. However, they are frequently used to refer to the smallest quantity of the referents which lack a concrete shape, as in (56). According to the data, the fixed ‘one’-phrases in VO all include their basic three components: the numeral ‘one’, the unit word *diǎn* ‘dot’, and a noun.

- (55) 沒濺起一點水花 [*Chinese Gigaword*]  
 méi\_\_jiàn\_\_qǐ\_\_[yì\_\_diǎn\_\_shuǐhuā]  
 NEG\_\_splash\_\_up\_\_one\_\_dot\_\_sprinkle

...did not splash a bit.

- (56) 不冒一點風險 [*Chinese Gigaword*]  
 bú\_\_mào\_\_[yì\_\_diǎn\_\_fēngxiǎn]  
 NEG\_\_adventure\_\_one\_\_dot\_\_risk  
 ...does not take any risk.

When Modern Mandarin ‘one’-phrases as minimizers are grouped by the division of fixed and non-fixed ‘one’-phrases, it can be observed that the majority of ‘one’-phrases as minimizers in VO belong to the non-fixed type, as shown in Fig. 4.

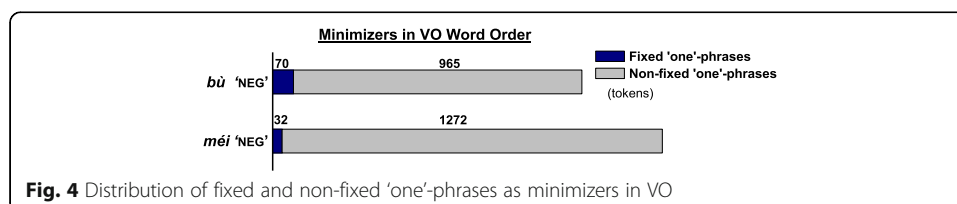
In contrast, the proportion of ‘one’-phrases regarding the fixed and non-fixed division in OV with the scalar particle YE or DOU is reversed. The fixed ‘one’-phrases constitute the majority of the tokens of ‘one’-phrases as minimizers in the preverbal object position, as shown in Fig. 5.

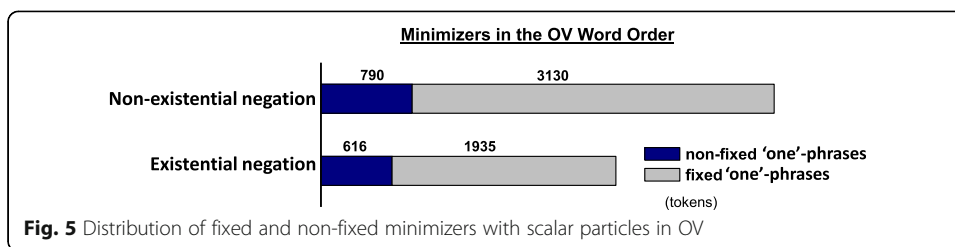
The distribution is associated with the difference in terms of the degrees of behaving as a novel construction. Fixed ‘one’-phrases have undergone changes in semantics, morphology, and collocation, so that they have different features from those of numeral phrases. The process of constructionalization, which refers to the process of creating novel constructions (Traugott 2008; Traugott and Trousdale 2013), will be discussed in Section 5.2. The diachronic factors provide further evidence on the relation between pragmatic effects and syntactic construals, which will be discussed in Section 5.3.

## 5.2 Constructional differences of the two types of minimizers

The emphatic nature of minimizers is present in their preferred syntactic construals. In OV, the NUM-UW combinations of the two types of minimizers tend to stay adjacent to the scalar particle in order to increase saliency. Despite the fact that the two types of ‘one’-phrases behave alike in OV, the two categories differ greatly regarding the degree of constructionalization. The NUM-UW combination of non-fixed ‘one’-phrases still maintains its nominal property as a numeral phrase. Since it belongs to the nominal category, it is treated as a grammatical object in OV. For instance, sentence (57) can be paraphrased in VO, as shown in (58) and (59). The non-fixed ‘one’-phrases in (58) and (59) are the grammatical objects of the predicate. This fact shows that the NUM-UW part of non-fixed ‘one’-phrases adheres to the subcategorization of the predicate, so the syntactic and semantic relations to the predicate remain unchanged.

- (57) 台北員工一個也沒裁 [*Chinese Gigaword*]  
 táiběi\_\_yuángōng\_\_[yí\_\_ge]\_\_yě\_\_méi\_\_cái  
 Taipei\_\_employee\_\_one\_\_CLF\_\_FOC\_\_NEG\_\_fire  
 Not a single employee is fired in Taipei.





- (58) 沒裁一個台北員工  
 méi\_\_cái\_\_[yí\_\_ge\_\_táiběi\_\_yuángōng]  
 NEG\_\_fire\_\_one\_\_CLF\_\_Taipei\_\_employee  
*Not a single employee in Taipei is fired.*

- (59) 台北員工沒裁一個  
 táiběi\_\_yuángōng\_\_méi\_\_cái\_\_[yí\_\_ge]  
 Taipei\_\_employee\_\_NEG\_\_fire\_\_one\_\_CLF  
*Not a single employee is fired in Taipei.*

In contrast, the NUM-UW combination *yì diǎn* 'one dot' cannot function as the post-verbal object in most cases, as reflected in the ungrammaticality of (60) and (61). This suggests that the NUM-UW combination of the fixed 'one'-phrase is not the object of the predicate.

- (60) \*他不相信一點  
 \*tā\_\_bù\_\_xiāngxìn\_\_[yì\_\_diǎn]  
 he\_\_NEG\_\_believe\_\_one\_\_dot  
 Intended reading: *He does not believe even a little bit.*
- (61) 商場沒察覺一點  
 \*shāngchǎng\_\_méi\_\_chájué\_\_[yì\_\_diǎn]  
 commercial center\_\_NEG\_\_realize\_\_one\_\_dot  
 Intended reading: *The commercial center did not even realize a little bit.*

In OV, it is noteworthy that although the combination *yì diǎn* 'one dot' seems to occupy the grammatical object position in OV, it is not part of the argument structure of the predicate. For instance, the main verbs 'shrink' in (62) and 'regret' in (63) are intransitive in Mandarin Chinese and therefore do not take an object argument. In these cases, the phrase *yì diǎn* 'one dot' functions as an adverbial modifier of extent or degree for its following verb phrase. What makes the adverbial phrase seem to be a preverbal object is the occurrence of the scalar particles, DOU and YE, which can serve as an indicator of the OV construction. The similarity of the nominal and adverbial *yì diǎn* indicates their diachronic connection.

- (62) 數量及種類一點也沒縮水 [*Chinese Gigaword*]  
 shùliàng\_\_jí\_\_zhǒnglèi\_\_[yì\_\_diǎn]\_\_yě\_\_méi\_\_suōshuǐ

quantity\_and\_kind\_one\_dot\_FOC\_NEG\_shrink  
*The quantity and kinds do not shrink even a little bit.*

- (63) 他哥哥一點都不後悔 [*Chinese Gigaword*]  
 tā\_gēge\_[yì\_diǎn]\_dōu\_bú\_hòuhuǐ  
 he\_brother\_one\_dot\_FOC\_NEG\_regret  
*His brother does not regret even a little bit.*

The modifying function of *yì diǎn* ‘one dot’ can also be observed in the clause where the verb is transitive and its argument structure is fully satisfied. As shown in (64)–(65), the transitive verbs ‘have’ in (64) and ‘cherish’ in (65) have their object immediately following them. Although the phrase *yì diǎn* ‘one dot’ looks as if it occupies the position of the preverbal object, it is not the argument selected by the verb.

- (64) 對當時的情景一點也沒有印象 [*Chinese Gigaword*]  
 duì\_dāngshíde\_qíngjǐng\_[yì\_diǎn]\_yě\_méi\_yǒu\_yìnxìàng  
 to\_then\_scene\_one\_dot\_FOC\_NEG\_have\_impression  
*(He) does not have even a little bit of memory of the scene of the incident.*
- (65) 似乎一點也不珍惜這種成就 [*Chinese Gigaword*]  
 sìhū\_[yì\_diǎn]\_yě\_bù\_zhēnxí\_zhè\_zhǒng\_chéngjiù  
 seem\_one\_dot\_FOC\_NEG\_cherish\_this\_kind\_achievement  
*(He) seems not to cherish even a little bit of this kind of achievement.*

Example (64) can be paraphrased with *yì diǎn* ‘one dot’ as part of a nominal phrase as in (66). In this case, the whole nominal phrase in the bracket in (66) should allow the alternation between VO and OV. As shown in (67), the same phrase is allowed in the postverbal position. The contrast between (64) and the pair of (66) and (67) shows that *yì diǎn* ‘one dot’ in (64) syntactically differs from that in (66) and (67).

- (66) 對當時的情景一點印象也沒有  
 duì\_dāngshíde\_qíngjǐng\_[yì\_diǎn\_yìnxìàng]\_yě\_méi\_yǒu  
 to\_then\_scene\_one\_dot\_impression\_FOC\_NEG\_have  
*(He) does not have even a little bit of memory of the scene of the incident.*
- (67) 對當時的情景沒有一點印象  
 duì\_dāngshíde\_qíngjǐng\_méi\_yǒu\_[yì\_diǎn\_yìnxìàng]  
 to\_then\_scene\_NEG\_have\_one\_dot\_impression  
*(He) does not have a little bit of memory of the scene of the incident.*

Similarly, the fact that *yì diǎn* ‘one dot’ is not part of the nominal phrase can be supported by the paraphrase of (65) in (68). The ungrammaticality shows that *yì diǎn* ‘one dot’ does not belong to the postverbal nominal phrase.

- (68) \*似乎不珍惜一點這種成就  
 \*sìhū\_bù\_zhēnxí\_[yì\_diǎn]\_zhè\_zhǒng\_chéngjiù

seem\_NEG\_cherish\_one\_dot\_this\_kind\_achievement  
 (He) seems not to cherish even a little bit of this kind of achievement.

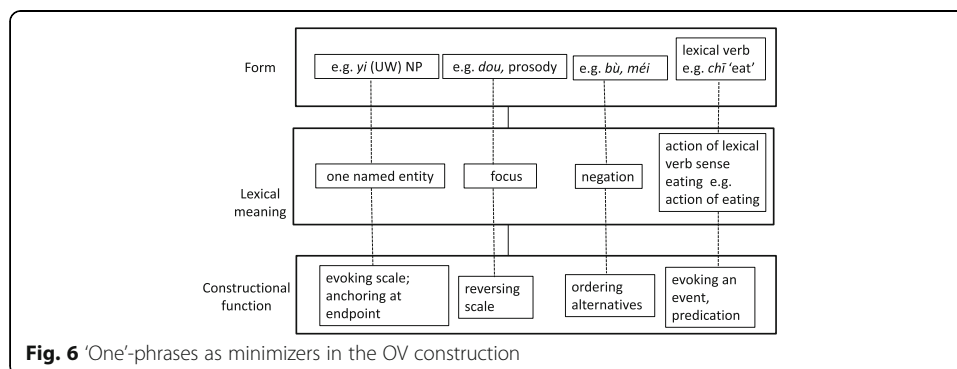
The contrasts in alternations indicate that *yì diǎn* ‘one dot’ in (64)–(65) actually modifies its following clause. The modifying function of the phrase *yì diǎn* ‘one dot’ is clear if the clause contains an adjectival predicate. In (69)–(70), what follows the negator is an adjectival predicate, such as ‘romantic’, ‘fresh’, and ‘unfamiliar’. In this case, the phrase *yì diǎn* ‘one dot’ is undoubtedly not the object even though it seems as though it is in the preverbal object position.

(69) 這件事他們一點都不浪漫 [*Chinese Gigaword*]  
 zhè jiàn shì tāmen [yì diǎn] **dōu** bú làngmàn  
 this\_CLF thing they one\_dot **FOC** NEG romantic  
*Regarding this matter, they are not romantic at all.*

(70) 所以今天跳起探戈一點也不陌生 [*Chinese Gigaword*]  
 suǒyǐ jīntiān tiào qǐ tàngē [yì diǎn] **yě** bú mòshēng  
 therefore today dance up Tango one\_dot **FOC** NEG unfamiliar  
*Therefore when he danced Tango today, it was not unfamiliar to him at all.*

The discussion of the phrase *yì diǎn* ‘one dot’ with DOU and YE so far shows that it deviates from the nominal category and instead functions as an adverbial modifier. This development has been shaped by the construction where it occurs. When the phrase *yì diǎn* ‘one dot’ functions as an adverbial, it collocates with a scalar particle, DOU or YE, and a negator, as shown in (62)–(70). The combination of the NUM-UW phrase, a scalar particle, and a negator is similar to the form of the typical OV construction containing ‘one’-phrases as minimizers, as illustrated in Fig. 6. The presentation of form and meaning pairing is adapted from Croft and Cruse (2004: 258). The NUM-UW combination *yì diǎn* ‘one dot’ appears precisely in the object position of the OV construction despite the fact that *yì diǎn* ‘one dot’ may not be the true grammatical object.

Based on Fig. 5, there are more fixed ‘one’-phrases as minimizers in OV than in VO in Modern Mandarin. The tendency is a reflection of the high frequency of fixed ‘one’-phrases in the preverbal object position. When the class expansion occurred in the predicate



position of the construction, reanalysis of the construction was subsequently activated. The predicate gradually expanded from transitive verbs to intransitive verbs and even to adjectival predicates. Importantly, class expansion happened only in the cases where the fixed ‘one’-phrases omit the noun, as exemplified in (62) and (63). If the noun remained in the fixed ‘one’-phrases, its salient nominal property greatly reduced the chances of class expansion in the predicate. When the verb position is filled with predicates which do not belong to the category of transitive verbs, the relation between *yì diǎn* ‘one dot’ and the predicate is reanalyzed as the relation between an adverbial modifier and its modified element. The adverbial-predicate relation emerged partly due to the syntactic and semantic similarities to the adverbial-predicate relation in Mandarin Chinese, wherein the adverbial modifiers generally precede their modified elements. As shown in (71), the adverb 根本 *gēnběn* ‘simply’ must precede the negator. It is noteworthy that 根本 *gēnběn* ‘simply’ in (71) and 絲毫 *sīháo* ‘shred and hair’ in (72) are adverbial NPIs (Hsiao 2002). Unlike fixed ‘one’-phrases as minimizers, they do not require a scalar particle.

- (71) 根本不漂亮  
 [gēnběn]\_\_bú\_\_piàoliàng  
 simply\_\_NEG\_\_beautiful  
*simply not beautiful at all*

- (72) 絲毫不在意  
 [sī\_\_háo]\_\_bú\_\_zàiyì  
 shred\_\_hair\_\_NEG\_\_care  
*does not care at all*

The adverbial function of *yì diǎn* ‘one dot’ is absent in Old Chinese and Middle Chinese according to *Academia Sinica Ancient Chinese Corpus*. It can only be dated back to the period of Early Mandarin Chinese. Notably, the scalar particles DOU and YE must occur in the cases where *yì diǎn* ‘one dot’ behaves as an adverbial modifier in the majority of cases, as shown in (62)–(65) and (69)–(70). The requirement of the scalar particle for fixed ‘one’-phrases instead of other adverbial NPIs supports the hypothesis that the reanalysis has occurred in the OV construction. As illustrated in (73), the scalar particles are reminiscent of the OV construction. The scalar particle and *yì diǎn* ‘one dot’ are generally viewed as a unit by native speakers due to their mandatory collocation. Their combination as a whole behaves as a strict NPI, which must appear with negation and cannot occur in other types of NPI-licensing environments.

Constructional changes are hypothesized to precede and enable constructionalization (Traugott and Trousdale 2013). The constructional changes before constructionalization typically involve expansion of pragmatics, semanticization, and distributional changes, as shown in the development of the nominal *yì diǎn* ‘one dot’ toward an adverbial modifier. Such a combination with a negator has become a fixed expression, which can even be used as a short negative answer, as shown in (74). The whole phrase reinforces negation, which evokes strong scalar inferences than a bare negation does.



appear in two forms. One is the canonical numeral phrase containing the three components: the numeral ‘one’, the unit word *diǎn* ‘dot’. and a noun, as shown in (75)–(76).

- (75) 對布希本人一點好處也沒有 [*Chinese Gigaword*]  
 duì\_\_bùxī\_\_běnrén\_\_[yì\_\_diǎn\_\_hǎochù]\_\_**yě**\_\_méiyǒu  
 to\_\_Bush\_\_personally\_\_one\_\_dot\_\_advantage\_\_**FOC**\_\_NEG.EXT  
*There is not even a bit of advantage to Bush himself.*

- (76) 一點汗都流不出來 [*Chinese Gigaword*]  
 [yì\_\_diǎn\_\_hàn]\_\_**dōu**\_\_liú\_\_bù\_\_chūlái  
 one\_\_dot\_\_sweat\_\_**FOC**\_\_flow\_\_NEG\_\_out  
*(He) did not sweat even a little bit.*

The other form is the combination *yì diǎn* ‘one dot’ without the noun. In OV, the combination *yì diǎn* ‘one dot’ is more frequently found than the form composed of three elements. Indeed, *yì diǎn* ‘one dot’ alone is often treated as a fixed unit, as shown in (77)–(78).

- (77) 購買世界杯相關產品的顧客一點也沒減少 [*Chinese Gigaword*]  
 gòumǎi\_\_shìjièbēi\_\_xiāngguān\_\_chǎnpǐn\_\_de\_\_gùkè\_\_[yì\_\_diǎn]  
 purchase\_\_World Cup\_\_related\_\_products\_\_REL\_\_customer\_\_one\_\_dot  
**yě**\_\_méi\_\_jiǎnshǎo  
**FOC**\_\_NEG\_\_diminish  
*The number of customers purchasing World Cup products does not diminish even a little bit.*

- (78) 對中國的影響,不能說一點也沒有 [*Chinese Gigaword*]  
 duì\_\_zhōngguó\_\_de\_\_yǐngxiǎng,\_\_bù\_\_néng\_\_shuō\_\_[yì\_\_diǎn]\_\_**yě**\_\_méiyǒu  
 to\_\_China\_\_REL\_\_influence\_\_NEG\_\_can\_\_say\_\_one\_\_dot\_\_**FOC**\_\_NEG.EXT  
*It cannot be said that it does not affect China at all.*

The omission of the noun of the ‘one’-phrase in OV is not found only in fixed ‘one’-phrases. As discussed in Section 4, non-fixed ‘one’-phrases as minimizers tend to appear as the minimal size and omit the modifiers in order to maximize the prosodic and semantic prominence. The preference of one form over the other of ‘one’-phrases is linked to the strategy for increasing focal effects.

Section 5 approaches the distribution of minimizers from a diachronic perspective. The type of fixed minimizers has a stronger tendency in OV than the other type of minimizers. In addition, they are more frequent in appearing as the smallest size. Due to their strong emphatic nature, their skewed distribution captures the different strengths of focal saliency of information structure in VO and OV.

## 6 Conclusions

This paper has discussed the synchronic distribution of ‘one’-phrases as minimizers to investigate the information structure of a variety of constructions. Regarding word order, Modern Mandarin minimizers can occur in VO and OV, but they have an

asymmetrical distribution under different types of negation. The corpus analysis shows that the distribution is constrained by the focal prominence required by the emphatic pragmatic effects of minimizers.

With their emphatic nature, Mandarin minimizers are reliable diagnostics for distinguishing the strengths of focus in various construals. The analysis shows that the minimizers favor OV under non-existential negation, while they prefer VO under existential negation. The asymmetrical distribution reflects how arguments are profiled in different word order patterns.

The study also provides a close examination on the strategies of modification, predicative clauses and relative clauses, for minimizers in different word order patterns. The comparison shows that the two clauses are not equally accommodated by VO and OV. Particularly, intervention between focus-sensitive scalar particles and minimizers in OV are not allowed. The constraint also explains why not all minimizers occur in the position with the strongest prominence. The involvement of modifiers leads to the discussion of the variation in the forms of minimizers. In OV, specifically, the 'one'-phrases tend to occur as a concise unit with only the numeral and the unit word in order to maintain the prominent saliency in prosody and semantics.

The synchronic distribution has been shaped by diachronic development. Since one type of minimizers advanced farther on the way of constructionalization than the other, the comparison confirms the preferred positions and constructional sizes of minimizers. Thus, the diachronic development shows how pragmatic effects have been achieved overtime.

Minimizers relate the issues of negation, word order, focus, and scalarity. Their distribution offers an integrated perspective on how these elements interact. Through the investigation of their distribution, we can come to understand how the choice of syntactic construals is associated with pragmatic inferences.

## 7 Endnotes

<sup>1</sup>Following Zhang (2013), all types of CLFs and measure words are treated as unit words (UW). UW represents the ensemble of classifiers and measure words unless otherwise specified.

<sup>2</sup>Abbreviations: 3, third person; ASP, aspect; CLF, classifier; EXT., existential predicate; EXT.V, existential verb; FOC, focus; MW, measure word; NE, negation, negative; NUM, numeral; POSS, possessive; PTC, particle; REL, relative; SG, singular; UW, unit word

<sup>3</sup>Both *bàn* 'half' and *yī* 'one' can refer to a small quantity, and thus they are frequently employed as minimizers in Mandarin. As pointed out by a reviewer, 半 *bàn* 'half' can replace 一 *yī* 'one' in most cases of the minimizers.

<sup>4</sup>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).

<sup>5</sup>The broader definition of the VO/OV pattern is employed in order to show the generalization of positional variation constrained by Mandarin information structure. The existential sentences which have position IV do not allow the VO/OV alternation as shown in (i) and (ii).

- (i) 桌上沒有一本小說有意思

I                      II                      III                      IV  
 zhuō\_shàng\_méi\_yǒu\_[yì\_běn\_xiǎoshuō]\_yǒuyìsi  
 table\_top\_NEG\_EXT.V\_one\_CLF\_novel\_interesting  
*There are no interesting novels on the desk.*

- (ii) \*桌上—本小說有意思都沒有

\*zhuō\_shàng\_[yì\_běn\_xiǎoshuō]\_yǒuyìsi\_dōu\_méi\_yǒu  
 table\_top\_one\_CLF\_novel\_interesting\_FOC\_NEG\_EXT.V  
 Intended reading: *There are no interesting novels on the desk.*

A reviewer suggests that the contrast can be captured by the immovability of the small clause complement of *méiyǒu* (Xie 2014). This study concerns how the syntactic constraint in modification of the existential sentences influences the distribution of minimizers in different word order patterns. The details will be discussed in Section 4.

<sup>6</sup>In the literature, there is no current consensus with respect to the analysis of Mandarin relative clauses. Del Gobbo and Francesca (2003, 2010) proposes an analysis against this restrictive versus non-restrictive (or descriptive/appositive) analysis. In her analysis, Mandarin relatives consistently behave as restrictive relative clauses. The restrictive versus descriptive contrast is analyzed as a deictic meaning versus generic meaning contrast (Del Gobbo and Francesca 2005). Although these analyses differ from each other, they all admit that relatives in different positions of the numeral phrases lead to different interpretations. In this section, I adopt Huang et al. (2009)'s distinction of two types of relatives to discuss how the position of relatives influences the acceptability of a minimizer interpretation. The principles are as follows: (i) relative clauses modify what follows them and (ii) the scope of modification is the elements to the right of the modifier. Relative clauses preceding numeral phrases modify the whole numeral phrase, while relative clauses appearing in the position between the unit word and the noun of a numeral phrase modify only the noun.

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