The Development of Polysemous 'One'-phrase in Mandarin Chinese

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LSA Annual Meeting, Minneapolis, January 2–5, 2014

1. Introduction. Mandarin Chinese has a salient typological feature in the occurrence of classifiers. Studies on numeral-classifier phrases in Mandarin Chinese have garnered much attention (Chao 1968, Cheng & Sybesma 1999, Zhang 2013). However, the functions other than counting have not received due attention. Among the Mandarin numeral phrases, the 'one'-phrases exhibit the most robust contextualized readings. The numeral 'one' is neither simply a number, nor a classifier merely for classifying a noun. When incorporated into the 'one'-classifier-noun sequence, such as *yi-li-mi* 'a grain of rice', *yi-dian-shui* 'a dot of water', and *yi-pian-shuye* 'a piece of leaf', their meanings range from maximality (wholeness), to minimality (zero), showing synchronic variation. These synchronic variants are often treated separately, deprived of a holistic perspective, but they are actually closely related when examined through a historical lens. With historically oriented contextual analysis, this study adopts a constructional approach (Croft & Cruse 2004, Goldberg 2006, Traugott & Trousdale 2013) to analyze the grammaticalization of 'one'-phrases, providing a more precise way to study both synchronic discrepancy and diachronic development.

2. Synchronic variations of 'one'-phrases. Modern Mandarin 'one'-phrases participate in a number of different constructions: counting 'one', downtoner 'a little bit/some', minimality, maximality. The typical function of a 'one'-phrase is for counting, as the Mandarin classifiers are claimed to individualize the denotation of nouns for the purpose of counting and measuring (Chao 1968, Cheng & Sybesma 1999), as shown in (1)[1]. The contrast between the numerals, 'one' and 'two', shows *yi* 'one' in its cardinal function.

(1) wo jian-dao [yi pian   shuye], bu shi   liang pian
    I   picked   one   CL _piece   leaf   not   copular two   CL
    'I picked up one leaf, not two.'

However, *yi* 'one' does not always behave as a typical numeral, as in (2), where 'one' cannot be replaced by other cardinals. Mandarin 'one'-phrases literally refer to an individual item, hence they are often associated with a small amount. Crosslinguistically, expressions for a smallest amount, such as English *budge an inch* and *blink a wink*, tend to become emphasizers in negative sentences, and therefore they have been termed negative polarity items (NPIs) (Israel 2011). The 'one'-phrase in (2) functions as a minimizer NPI, whose minimal amount enables one to order and compare different possibilities, evoking a process called scalar reasoning, a basic cognitive process in human beings.

(2) di   shang [yi pian   shuye] dou   mei   you
    ground on   one   CL_piece   leaf   FOC   NEG   have
    'There is no leaf on the ground.'

The 'one'-phrase in (3) reveals a meaning of 'wholeness'. This numeral 'one' leads to the 'all over' interpretation. It is treated as a determinative quantifier or a non-numeral 'one' with a maximal meaning (Zhang 2013).

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[1] Abbreviations used in this proposal include: CL: classifier, FOC: focus,   NEG: negation, NUM: numeral.

(3) yuanzi　　　li　　　　[yi　　　pian　　　　shuye]
　　courtyard　inside　one　　CL _piece　leaf
　　'The whole courtyard is covered in leaves.'

The 'one'-phrase can also refer to an indefinite small amount as English *a little*, as in (4). In this case, the 'one'-phrase is used to suggest a small amount.

(4) yong　[yi　　dian　　yezi]　　zhuangshi　zhe　　dao cai
　　use　　one　　dot　　leaf　　garnish　　this　　CL　dish
　　'Use a little bit of leaves to garnish this dish.'

　　As the examples suggest, the interpretations of 'one'-phrases are constrained by the context. It is not merely the reading of 'one' but also the properties of classifiers and the contexts where 'one'-phrases dwell that influence the reading of 'one'-phrases. In any case, the distinct functions of Mandarin 'one'-phrases are not unrelated; rather, they are reflections of different stages of semantic development. For instance, Mandarin *dian* 'dot' first appeared as a noun referring specifically to an ink dot in Old Chinese. Its zero-dimensionality was employed in poetry to describe a distant round shape, such as *yi dian qing yang* 'one dot of sun' and *yi dian bai ou* 'one dot of seagull' in Middle Chinese. The constraint for the round shape in *yi dian* 'one dot' faded away in Early Mandarin. *Yi dian* 'one dot' came to be used to describe abstract nouns, such as *niantou* 'thought' and *feng* 'wind' to emphasize the small quantity. The property of indefiniteness in the 'one dot'-phrases became prominent in Early Mandarin and employed to mean 'some/a little bit'. In modern Chinese, while all the usages are still current, the phrases have developed as NPIs emphasizing the degree of negation, as in (5).

(5)　ta　　[yi　dian　xinxin]　　　dou　　mei　　you
　　he　　one　dot　confidence　FOC　　NEG　　have
　　　'He doesn't have any confidence at all.'

The sequence 'one'-CL-NOUN has developed multiple functions over time. A later developed function can be considered as a construction with its syntax, semantics, and pragmatics encoded.

3. Diachronic development behind polysemies in 'one'-phrases. The synchronic variation of the 'one'-phrases is associated with their diachronic development. Typically, previous studies of Mandarin numeral phrases have focused mainly on their structural aspects. To pin down the actual interpretations of the 'one'-phrases, however, it is necessary to consider their semantics and pragmatics as well as their constructions in interaction.

3.1 DATA SOURCE. The data are gathered from the Chinese corpora of *Academia Sinica*, containing a complete collection of Chinese texts from different periods. The 'one'-phrases are examined in the three subcorpora: Old Chinese (8c. – 1c. B.C.), Middle Chinese (1c – 6c. A.D.) and Early Modern Mandarin (7c. – 19c A.D.). These corpora contain materials from diverse genres. The various sources provide data on all the distinct usages of the 'one'-phrases, making it possible to put together a clear picture of how contexts shape interpretations.

3.1 CONSTRUCTIONAL CHANGE. The 'one'-phrases when understood in different readings have different syntactic, semantic, and pragmatic properties that are interdependent on each other. The sequence, 'one'-CL-NOUN, can be viewed as having relatively indeterminate meaning and it acquires its meaning from the constructions it appears in. The pairing of form and meaning is conditioned by related constructions. Chinese classifiers first appeared in Old Chinese. It was in Middle Chinese that the pattern, 'one'-CL-NOUN, became a pervasive counting phrase. The

minimizer NPI function occurred in late Old Chinese when the sequence, 'one'-CL-NOUN, appeared with negation. The 'one'-phrases as minimizer NPIs were further associated with the quantifiers which also served as focus markers in Early Mandarin. The negation and focus constructions turn the 'one'-phrase in (6) into an NPI. The focus marker in (7) is a quantifier exhausting all the possibilities in seeing people. The 'one'-phrase represents the least possibility. Negating the minimal amount pragmatically leads to total negation. The combination of the focal construction and the 'one'-phrases reflects the emphatic function encoded in minimizer NPIs.

(6) wo   jinri   kun,   [yi dian qili]   ye   wu
    I   today   tired   one dot strength   FOC   NEG_have
    'I'm very tired today. I don't have any strength.'

(7) wo [yi   ge   ren]   dou   mei   kan   dao
    I   one   CL   person FOC   NEG   see   ASP
    'I didn't see anybody.'

The smallness of quantity entailed in 'one'-phrases has another path of development. As in (8), the 'one'-phrase means an indefinite amount, similar to English 'some' and 'a little'. In this case, the indefiniteness is weighted over smallness when compared to the function of a minimizer NPI.

(8) chuanjia   mai   [yi   dian   chai mi]
    fisherman   buy   one   dot   wood rice
    'The fisherman bought some wood and rice.'

Besides minimality, some of the 'one'-phrases have also developed a reading of maximality. For instance, the sequence, 'one'-*pian* 'piece'-NOUN, can refer to maximality in addition to counting. In Old Chinese, the phrase was used for counting thin flat objectS, as in (9a). The 'one'-phrase extended to refer to a covered area as in (9b) in Middle Chinese. In Early Mandarin, the 'one'-phrase could take an abstract noun to mean 'wholeness' or 'all over the…', as in (10). The classifiers in the 'one'-phrases with a maximal reading are named temporary classifiers, such as *bizi* 'nose' and *shen* 'body' or some specific classifiers such as *pian* 'piece' and *tuan* 'round mass' (Chao 1968). The reading wholeness does not appear if the occurring numeral is not 'one'.

(9) a.   yi   pian hei   shi   b.   yi   pian   huo   qi
          one   piece black stone   one   piece fire   arise
          'a piece of black stone'   '… fire breaking out all over'

(10) yi   lian   youchou
     one   face   worry
     '…the face looked all worried…'

The conditions for developing the reading maximality are the occurrence with gradable predicates, such as *lin* 'to wet', *sa* 'to sprinkle', *tu* 'smear' and adjectives referring to wholeness, *zheng* 'whole', or completion, as in (11).

(11) tu   yi   zheng   lian   niba
     smear   one   whole   face   mud
     'smear mud all over the face'

The multiple readings of 'one'-phrases share one feature: scalar implication. The 'one'-phrase serves as a reference point on a scale, invoking different scalar inferences when situated in different scale backgrounds. On a counting scale, the 'one'-phrase refers to a unit. When behaving as a minimizer NPI, the 'one'-phrase indicates the bottom of a scale, whereas it refers

to the top of a scale for maximality. The scalar implications are built into the whole construction instead of one lexeme through grammaticalization. Each function of the 'one'-phrase is treated as a construction that has different relationships among its three components with its scalarity encoded. Different parts of semantics are emphasized in different readings. The various readings of the 'one'-phrases reflect incremental development across stages, as shown in Figure 1[2].
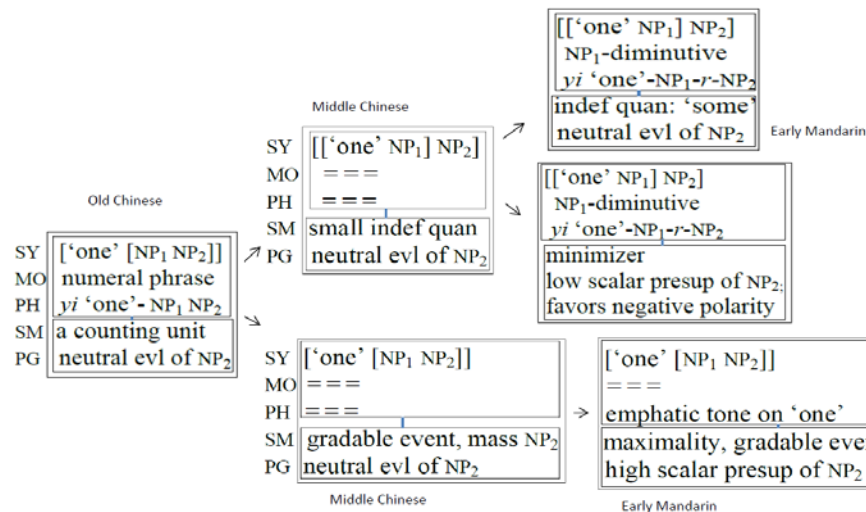
Figure 1. The constructional development of 'one'-phrases

4. Diachronic development underlying synchronic variation. The incremental development of 'one'-phrases can be treated as the accumulation of a series of local steps formed through reanalysis of syntactic structures, resulting in new configurations from old materials. The changes are well constrained by their conjoined constructions. The constructional account shows that it is the entire construction, rather than a single lexical item, the numeral or the classifier, that has undergone grammaticalization.

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[2]Notations used in this figure are: SY: syntax, MO: morphology, PH: phonology, SM: semantics, PG: pragmatics, '==': 'carries over from prior stage', 'evl': evaluation, indef: indefinite, presup: presupposition, quan: quantity.