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The grammatical distinction between count nouns and mass nouns in Mandarin Chinese

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The purpose of this paper is to prove the Mass Noun Hypothesis wrong. The hypothesis claims that all common nouns in classifier languages like Mandarin Chinese are mass nouns. The objection against it consists in displaying its implausible deduction, where false conclusions have been drawn due to relying on the grammar of English, which is incongruent with the grammar of Chinese. Consequently, this paper defends the Count Noun Thesis, stating that in Chinese there are count as well as mass nouns. In support of this statement, first, the typology of numeral classifiers had to be established, which resulted in gathering and completing all the reasons to distinguish classifiers from measure words. After only this necessary differentiation was made, it was possible to show that the count/mass distinction exists in Mandarin Chinese. That is, count nouns by default have only one classifier, with certain disclaimers. Apart from that, count nouns, as in every language, may undergo some measurement with measure words. Mass nouns, however, in the context of quantification may appear only with measure words, but not with classifiers. These conditions naturally follow from the ontological status of the two types of nouns' referents, i.e. bounded objects denoted by count nouns, and scattered substances denoted by mass nouns.

Keywords: numeral classifiers, classifiers, measure words, mass/count, Mass Noun Hypothesis, Mandarin Chinese

1. Introduction

In the light of linguistic relativity, human mind is shaped by the shared language and culture. The proposal that linguistic patterns influence the way of thinking has been tested in several case studies. For an example that is closely related to our subject of study, Whorf analyzed Hopi nominal phrases expressing physical entities (Carroll 1956: 140-142). Physical entities usually appear as objects with definite outlines and substances¹, that is homogeneous, unbounded extents. The latter, like air, water, sand etc., we experience as

¹ I wish to thank professor Ned Markosian for careful remarks concerning, inter alia, ontological issues raised in this work. I am also grateful to professor Aleksandra Horecka for discussing this idea with me at

humans in portions, and never in their entirety. However, in SAE languages, mensural terms are useful to express those portions of substances (e.g. “a piece of cloth”, “a cup of coffee”). Supposedly, in Hopi, however, there are no nouns denoting these substances nor phrases expressing measures of unbound entities. Instead, there are separate individuate terms for such quantified portions. Therefore, two different ontologies may be implied – one which assumes the existence of non-perceivable substances, and the other with individuate entities exclusively.

Here, we turn precisely to linguistic phenomena that have such linguistic relativity implications. In particular, this study responds to the Mass Noun Hypothesis, the claim that classifier languages, or specifically the languages with numeral classifiers, lack the grammatical distinction between count nouns and mass nouns, which follows from the idea that all of them are mass nouns (Hansen 1983: 32; Imai & Mazuka 2003: 430; Tai 2003: 312). This claim leads to psychological and philosophical consequences regarding behavior and cognition of classifier language users², like the Chinese. Namely, all the entities denoted by common nouns are substances scattered all over their ontological universum, as some thought (Hansen 1992: 48), or at least hypothesized (Quine 1969: 38). One way to contradict the linguistic relativity interpretation of the Mass Noun Hypothesis is to deliver evidence against its foundation lying in the grammar of classifier languages. This study is an attempt to articulate grammatical rules governing Mandarin Chinese for discerning its count nouns from mass nouns.

This article is organized as follows: in addition to the first, introductory section, this paper is composed of three more. The second section introduces the Mass Noun Hypothesis. The third develops the assumptions behind the Hypothesis and provides arguments against each. The fourth section provides a grammatical criterion for making a count/mass distinction in Mandarin, thus serving as the ultimate critique of the Mass Noun Hypothesis. Establishing the criterion is possible only after the careful explication of the distinction between (sortal) classifiers and measure words.

2. The Mass Noun Hypothesis

The Mass Noun Hypothesis may be stated as follows: all Chinese common nouns are mass nouns. Hansen (1983: 32-33) gives several arguments for this claim based on two premises: the similarity between English mass nouns and Chinese common nouns, and a conclusion drawn from applying the conditions for differentiating English count nouns

its early stage. For providing me with insightful comments throughout the final draft of this paper I thank professor Mieszko Tałasiewicz. This work profited much from the help I gained.

Throughout this paper I will use the term “substance” in the meaning of “scattered portions of stuff” or “mass”, and not synonymous to “thing”.

² Soja et al. (1991: 180-181) and Imai and Mazuka (2003: 431-432) even predicted some consequences of language acquisition, attributing to Quine (1960; 1969) the assertion that until children have learned the count/mass distinction they are not able to understand the ontological distinction between objects and substances. With no specific page reference it is not feasible to show that this claim is falsely attributed to Quine, nevertheless, I myself did not find any such thing stated by Quine.

from mass nouns to the Chinese language, in which they apply to either all common nouns or none. In the next section I will discuss these conditions with certain criticism, but first some introductory remarks on the Chinese language need to be made.

Similarly to Japanese, Korean, Thai, Persian or Bengali, also Chinese is a classifier language. There are many types of classifiers: numeral, noun, genitive, verbal, deictic and locative ones (Kilarski 2013: 33). The classifiers in Mandarin Chinese are numeral classifiers³ (NCL). In fact, due to the reasons the Mass Noun Hypothesis was raised in the first place, it applies not only to Chinese, but most likely to all languages with numeral classifiers, thus also to Japanese, Korean, Vietnamese (Pietrow 2011: 19), and Mayan languages (Zhang 2013: 1). In Mandarin, numeral classifiers may be treated as a separate part of speech, absent from Indo-European languages (Cheung 2016: 269). The number of the classifiers in Mandarin varies in literature, from several dozen to six hundred⁴ (Her & Hsieh 2010: 528), simply because of no agreement on their definition. In general, Chinese being an isolating language, it is rarely possible to determine a word's affiliation to a part of speech unequivocally (Sun 2006: 46), nevertheless, in a context (in a classifier phrase in particular), Mandarin numeral classifiers are identifiable. Therefore, classifiers may be defined as a category of words that occur in the context of quantification (Kilarski 2013: 33), typically with a numeral and/or a demonstrative pronoun (i.e. *zhè* 這 'this', *nà* 那 'that', *nǎ* 哪 'which') or a few exceptional quantifiers (*zhěng* 整 'whole', *jǐ* 幾 'how many/few', *mǒu* 某 'a certain', *měi* 每 'every', etc.) (Hsieh 2008: 1; Li & Thompson 1981: 104-105). The examples of classifier phrases may be formed as in the following:

- (1) 三本書
sān běn shū
three – NCL – book
'three books'
- (2) 這個人
zhè ge rén
this – NCL – man
'this man'
- (3) 每雙眼睛
měi shuāng yǎnjīng
every – NCL – eye
'each pair of eyes'

³ One may intuitively think of Mandarin classifiers as noun classifiers, for they co-occur with nouns, and their choice is dependent on the noun, due to their categorization function (see 4.1). Nonetheless, unlike Mandarin classifiers, "[...] noun classifiers are used in contexts other than quantification" (Kilarski 2013: 36), therefore, Mandarin classifiers cannot be noun classifiers, because they are mainly used in such contexts. Moreover, as Link (1991: 136-137) has pointed out, in all the languages in which numeral classifiers occur in quantification phrases involving a numeral (NL), a classifier (CL) and a noun (N), only four out of six possible combinations exist: (1) (NL + CL + N) (the case of Mandarin Chinese), (2) (N + NL + CL), (3) (CL + NL + N), and (4) (N + CL + NL). This shows that numeral classifiers, when used in the context of quantification, are syntactically directly bound with the numeral, but not necessarily with the noun. That indeed is the case with Mandarin Chinese, except that the numerals are not the only type of determiners that may quantify the noun.

⁴ For example, Li and Thompson (1981: 105) claim after Chao (1968) that there are only several dozen of them, and Erbaugh establishes their number at 120 (1986: 403).

In (1) the classifier phrase is constructed with a numeral, in (2) with a demonstrative, and in (3) with a quantifier expression. Numeral classifiers form a class of words that must be added to the noun when it occurs with a numeral, demonstrative or a quantifier⁵ ⁶, otherwise the formulation of the nominal phrase would be grammatically wrong.

Furthermore, Chinese classifiers contain a variety of elements due to their different affiliations of noun categories. Hence, as suggested in the examples above and exemplified below, different classifiers are used for different nouns.

(4) a. 一條蛇
yī tiáo shé
 one – NCL – snake
 ‘a/one snake’

b. 一條河
yī tiáo hé
 one – NCL – river
 ‘a/one river’

c. 一條繩子
yī tiáo shéngzi
 one – NCL – rope
 ‘a/one rope’

(5) a. 一把刀
yī bǎ dāo
 one – NCL – knife
 ‘a/one knife’

b. 一把傘
yī bǎ sǎn
 one – NCL – umbrella
 ‘an/one umbrella’

c. 一把鑰匙
yī bǎ yàoshi
 one – NCL – key
 ‘a/one key’

Hence, we see that nouns in (4) occur with the classifiers *tiáo* 條 and nouns from (5) with the classifier *bǎ* 把. Classifiers categorize in the sense that most nouns in Chinese have a specific classifier assigned to it (see 4.1). In other words, pairs of classifiers and nouns occur in a somewhat fixed collocation.

At face value the above phrases seem to be strikingly similar to English phrases like ‘one bottle of water’, because each of them consists of a numeral, a mensural-like term and a noun, in this order. However, this does not apply to any noun, but only to mass nouns. On the grounds of this observation some scholars concluded that all Chinese common nouns are mass nouns. Quine’s problem of the indeterminacy of translation is depicted on an example that happens to be relevant to the study of the count/mass distinction. In Japanese “five oxen” is construed with the numeral “5”, the classifier of the animal kind, and a noun that corresponds in some fashion to “ox” (but only “in some

⁵ An exception to this rule is a type of noun that takes no classifiers (see 4.2).

⁶ Not all Mandarin quantifiers may form a classifier phrase.

fashion” to avoid the suggestion that the counterpart of “ox” in a classifier language is an individuating count noun). It is suggested that the classifier’s role is to produce an individuating term, giving a phrase that may be understood in English closest to ‘five head of cattle’ (Quine 1969: 36). Here “cattle” was meant by Quine to be a mass noun. Years later he concedes that it is “[...] an individuated term, semantically plural despite its singular form” (Iida 1998: 118). In general, Quine considers a possibility where the numeral classifier serves as a measure word (Yi 2014: 506); however, it will be shown later that it is not the only possible interpretation once we acknowledge the existence of (sortal) classifiers. Aside from this, the presented idea displays the central motivation for raising the Mass Noun Hypothesis.

3. Incongruity of grammar across languages

In this section the elaboration of the reasons behind the Mass Noun Hypothesis will be presented, each of which I would like to argue with. The objections are raised in order to show, in the end, how certain criteria determining facts about the English language do not correspond to Mandarin Chinese.

Some preliminary remarks should be made concerning nouns and their referents. Generally, common nouns may be divided into count nouns, mass nouns, and collective nouns. Another possible classification is into those which denote concrete or abstract entities. Thus, examples of count nouns referring to concrete (physical) entities would be “horse”, “book”, “head” etc., and those referring to abstract entities would be “suggestion”, “idea”, etc. Mass nouns referring to concrete entities are “water”, “sand”, and those referring to abstract objects are “advice”, “curiosity”, etc. Collective nouns are, for example, “furniture” or “cattle”. There are also nouns with a dual status⁷, which shifts depending on the context: “chocolate” can refer, for example, as a mass noun – to the fondue you dip your fruits in, or as a count noun – to those differently shaped chunks kept in a box. In this study, I will limit the discussion to count and mass nouns referring to concrete entities. Another remark is that the terms naming objects are count nouns, and terms naming substances are mass nouns.

Hansen (1983: 32-33) poses certain grammatical features distinctive for English count nouns and mass nouns:

- A. Count nouns have singular and plural forms while mass nouns do not.
- B. Count nouns can combine directly with the article ‘a/an’ while mass nouns cannot.
- C. A count noun cannot stand alone in its singular form and without an article or a demonstrative or a numeral etc., while a mass noun can. In other words, mass nouns are bare nouns.
- D. Count nouns (unlike mass nouns) can directly combine with ‘many’ and ‘few’. Mass nouns (unlike count nouns) can directly combine with ‘much’, ‘little’, ‘less’.
- E. Count nouns are countable (‘one cat’, ‘five lakes’, ‘twelve cigarettes’), while mass nouns are not. As a result, count nouns can be directly preceded by numerals, unlike

⁷ See Chao (1968: 509) for Chinese examples of nouns with dual status.

mass nouns. The latter, on the other hand, may be associated with mensural terms ('a cup of water', 'two liters of milk').

The given criteria have been applied to the grammar of Chinese nouns. Hansen (1983: 32-33) calls attention to certain facts about Chinese common nouns: they have no plural form, cannot be directly preceded by numerals or indefinite articles, and each of them is associated with numeral classifiers which resemble nouns of measurement in terms of non-classifier languages. Let us bear in mind that all of these apply largely to modern Chinese. Therefore, Hansen concludes, Chinese nouns hold characteristics of mass nouns, and none of count nouns, and that supports the Mass Noun Hypothesis.

Nonetheless, let us take a closer look at the criteria one by one. Criterion (A), when applied to Chinese common nouns, implies that all Chinese nouns are mass nouns, because "Chinese nouns have no ordinary plural" (Hansen 1983: 32). However, this statement is bizarre at the least, because one may infer that they only have a singular form. Meanwhile, Chinese language rather lacks the distinction of singular or plural form of nouns, they simply do not inflect for number (or case, or gender, for a fact). In other words, there is no morphological marking of the number category for Chinese common nouns (Cheng & Sybesma 1998: 391; Sun 2006: 46). Consequently, without any context, there is no way in determining whether the noun *lǎoshī* 老師 refers to a single 'teacher' or 'teachers' (Li & Thompson 1981: 11).

Similarly, the second argument is like the first improperly formulated, for again it is not applicable to Chinese language, which does not have either definite or indefinite articles in the first place (Cheung 2016: 243).

The same applies to (C). An exception to this rule should be added, since in English a singular noun may stand as a bare noun if it is in material supposition. But as an argument for the Mass Noun Hypothesis, this criterion applies to English as a particular representative of languages. In Latin (Yi 2014: 510; 2018: 54) or Polish count nouns can also stand alone, but it does not follow that they are all mass nouns.

To make sense from argument (D), a premise concerning Chinese language is required. Unquestionably, Chinese has adverbs *duō* 多 'much, many' and *shǎo* 少 'little, few' which combine with all nouns (Hansen 1983: 33). In Mandarin, we may say *hěnduō shū* 很多書 'many books, a lot of books', and *hěnduō shuǐ* 很多水 'much water, a lot of water'. Then, it may be concluded that Chinese common nouns are of the same nature, that is, considering the previous arguments, the mass-like nature. However, from the English translations of the phrases we may see that the English "a lot of", similarly to the Chinese adverbs, applies to both count and mass nouns (Yi 2014: 510). However, no one assumes that there is no count/mass distinction in English merely on the basis of determiners that are used with English count and mass nouns. The same, then, should be done for Chinese: *wúshùde* 無數的 'countless', 'innumerable', *dàduōshùde* 大多數的 'a majority of', *shǎoshùde* 少數的⁸ 'a small number of' combine with Chinese count but not mass nouns. The linguistic motivation of the determiners relies on the word *shù* 數 'number', indicating that they cannot apply to mass nouns like *shuǐ* 水 'water' or *ròu* 肉 'meat', which by analogy also works in English (Yi 2014: 511). In addition, the de-

⁸ These three are quantifiers that do not appear in classifier phrases.

terminer *jǐ* 幾 ‘few’ also quantifies count nouns exclusively and *yīdiǎn* 一點 ‘a little [bit of]’, contrarily, collocates solely with mass nouns. In sum, it is not the case that in Chinese all determiners apply to all common nouns and that there are no specifically designated determiners for count and mass nouns.

As for the fifth condition, as shown in section 2, all Chinese common nouns in a quantifying context must occur with a classifier. I have no objections to this statement as long as “classifiers” in it are numeral classifiers, because, as shown in the next section, this detail is crucial in distinguishing Chinese count nouns from mass nouns. Therefore, Chinese common nouns do resemble English mass nouns in that they are preceded by an additional word, and thus cannot be directly quantified by numerals and other determiners. The “additional word” is called a numeral classifier and indeed the criterion regarding direct enumeration of the noun is not applicable to Chinese due to its strong classifier system (Yi 2014: 511). It is the Chinese classifier system that will be able to provide us new rules to grammatically separate count nouns from mass nouns in Mandarin Chinese, a careful analysis of which will be presented in the following sections as an ultimate argument against the Mass Noun Hypothesis.

On the basis of the first three criteria it may be concluded that new conditions should be established for distinguishing Chinese count and mass nouns, because the ones presented above are not applicable to Mandarin¹⁰ (Deng & Sun 2011: 104; Yi 2014: 510). From the fact that Chinese common nouns share the features of English mass nouns it does not follow that all are mass nouns, but that there might be different criteria for setting a count/mass distinction.

This case provokes a general thought on imposing methodology in humanities or rules that govern circumstances in one language (or culture) on the other, where this is no longer congruent. The criteria of English grammar were applied to Chinese, all this to create a myth in the form of the Mass Noun Hypothesis.

In the course of this study I will continue defending the Count Noun Thesis, i.e. that contemporary Chinese¹¹ has count nouns as well as mass nouns (Yi 2014: 508). And although the content of the Count Noun Thesis has been generally approved¹², it has been rarely supported with a scrutinous grammatical explanation behind the count/mass distinction in Mandarin¹³. The rebuttal of the grammatical arguments for the Mass Noun

⁹ *Ji* 幾 is a homonymy and means either ‘few’ or ‘how many’, depending on the context. It comes in the first meaning in declarative sentences and in the latter in interrogatives. Therefore, *jǐ* 幾 may be also taken as a quantifier (Zhang 2013: 85).

¹⁰ Or to other classifier languages like Japanese (Iida 1998: 114).

¹¹ The Count Noun Thesis as a matter of fact concerns classifier languages other than Mandarin Chinese. Iida (1998: 115) also accounts the Count Noun Thesis for Japanese common nouns.

¹² See Chao’s (1968: 506ff) and Cheung’s (2016: 244ff) division of nouns into individual nouns, mass nouns, collective nouns, and abstract nouns, Cheng and Sybesma’s (1998) attempt to formulate the count-mass distinction encoded in the grammar of Mandarin Chinese, or Zhang’s (2013) analysis of Chinese nouns that are non-count nouns, but may be divided into mass and non-mass nouns.

¹³ The closest to achieving this for Mandarin were Cheng and Sybesma (1998) with their analysis of the classifier phrases. However, while they have convincingly shown that the distinction between classifiers and measure words is necessary, they did not explicitly form the relations between numeral classifiers and the count and mass nouns.

Hypothesis, however, does not answer the question how to identify count nouns and mass nouns in contemporary Chinese, which I will try to solve in the following section.

4. The grammar of count nouns and mass nouns in Mandarin Chinese

This section proposes conditions for the count/mass distinction in Mandarin Chinese. Because it is based on the differentiation between classifiers and measure words as the main two types of Chinese numeral classifiers, its explication will be presented first. Section 4.1 describes the relation between count nouns and numeral classifiers, and section 4.2 the relation between mass nouns and measure words, altogether indicating grammatical conditions to distinguish count nouns from mass nouns.

In the literature there has been some disagreement on the typology of classifiers in Mandarin Chinese, especially concerning the matter of differentiating classifiers from measure words. Tai and Wang (1990: 37-38), Cheng and Sybesma (1998: 388-389), Her and Hsieh (2010: 529; 533), Yi (2014: 509-510) and Cheung (2016: 269-270) do support the necessity of making a distinction between classifiers and measure words, unlike Chao (1968: 584ff), Hsieh (2008: 34ff), and Li and Thompson (1981: 106)¹⁴. Perceiving them as one homogenous group is justifiable on the grounds of their common feature, namely, that they stand between a determiner and a noun in a quantifying context. Nevertheless, I still share the opinion with the first group. The following serves as an explanation why classifiers are different from measure words.

Another interesting work regarding nominal quantification is the work of Zhang (2013). However, her approach differs from mine, for it does not take the distinction between classifiers and measure words as the main condition for making the count/mass distinction, but defines the count/mass status of a nominal by two properties: numerability (the ability of a noun to combine with a numeral directly) and delimitability (the ability of the noun to be modified by a size or shape modifier).

¹⁴ Beside Cheung (2016: 269), Tai and Wang (1990: 37), and Tai (1994: 480) have also associated the uniformity of classifiers and measure words to Chao (1968) and Li and Thompson (1981). I would like to defend Chao and Li and Thompson's position. Chao (1968) indeed has not provided his typology in accordance with the two groups of classifiers and measure words, but divided the group that he called "measures" into 9 types, first of which are called classifiers, or individual measures (i.e. classifiers in the narrow sense) (1968: 584ff). Therefore, perhaps Chao has not separated classifiers from measure words in default, but at the least he has set the classifiers as a different group. Perhaps the misinterpretation of Chao's intention was caused by the English term 'measures', which in the Chinese version of the book appears as *liàngcí* 量詞 (Chao 1979: 263) referring to classifiers in the wider sense, which may have caused the misunderstanding by taking classifiers in the narrow sense as a subset of measure words, instead of taking Chao's term "measures" as he intended, which are classifiers in the wider sense, and then treating classifiers, or individual measures, appearing in the Chinese version of the book as *gètǐ liàngcí* 個體量詞 'individual measure words' or *lèi cí* 類詞 'sortal classifiers' (Chao 1979: 263), as classifiers in the narrow sense are a subtype of the classifiers in the wider sense.

Similarly, ascribing the uniformity of classifiers and measure words to Li and Thompson (1981) seems to be unjust. Li and Thompson did find a criterion, although only partly correct, for differentiating classifiers from measure words, namely, that measure words, when serving as a noun, do not take a classifier (1981: 105). Nonetheless, the misunderstanding most likely raised from the fact that Li and Thompson in most cases by "measure words" meant "unit measure words", thus to a specific group of measure words, like *jiālún* 加侖 'gallon', *chǐ* 尺 'a Chinese foot' etc.

I wish to point out that there are two usages of the notion of a classifier across the literature. The wider sense regards the word that stands between a determiner and the noun in a quantifying context. The narrow sense of the notion “classifier” refers to the specific type of those words which appear in quantifying contexts, alternatively called by Cheung (2016: 271) and Kilarski (2013: 35) “sortal classifiers”, but “individual measures” by Chao (1968: 585), “individual classifiers” by Zhang (2013: 1) or “categorizers” by Pietrow (2011: 36)¹⁵. In Mandarin terminology the confusion is even bigger, since classifiers as a part of speech, thus in the wider sense, are referred to as *liàngcí* 量詞, literally, ‘measure words’¹⁶. I suggest for both classifiers and measure words the term ‘numeral classifiers’, since numeral classifiers are a separate part of speech in Mandarin Chinese (as opposed to other types of classifiers existent in other languages, but not in Mandarin Chinese). The nomenclature for “measure words” is quite consistent throughout the literature. Alternatively, they may be called “mensural classifiers” (Kilarski 2013: 35), “individuating classifiers” (Zhang 2013: 1), or, infelicitously (see Footnote 12), “massifiers” (Cheng & Sybesma 1998: 389).

There are several reasons to distinguish classifiers from measure words. Tai and Wang’s (1990: 38) purpose was to emphasize the categorization function of the Chinese classifier system (the function which measure words lack), leading them to establishing a criterion for differentiating classifiers from measure words – the temporality of noun quantification performed by measure words (indicating their contingent properties), and the permanence of noun quantification performed by classifiers¹⁷. This takes us back to the issue of classifiers’ motivation, that is, to their cognitive function of categorizing. The choice of a classifier in formulating a classifier phrase is not arbitrary (Lakoff 1986: 26), but dependent on the noun (Pietrow 2011: 128). Classifiers and nouns are bound not only grammatically, in a sense that in Chinese language acquisition, one must basically memorize what classifier a given noun has¹⁸, just like one must learn the gender of German nouns (Chao 1968: 507; 588), but also cognitively, because the classifier system in Chinese reflects human conceptual structures (Tai 1994: 479). Measure words, on the other hand, are not bound to a specific noun because of their key function that the classifiers do not have, namely, that of measuring, while classifiers’ conceptual basis is of cognitive character, hence their main function is to categorize.

¹⁵ Originally, in Polish *kategoryzatory* (Pietrow 2011: 36).

¹⁶ *Shùliàngcí* 數量詞 is another term for the concept covering both classifiers in the narrow sense and measure words (Tai & Wang 1990: 37).

¹⁷ While it should be added that this applies as long as the denoted, singular object is in a normal (non-honorific, non-simplified) context, with the exclusion of possible synonymic classifiers, since the entity denoted by the noun that may be categorized by a classifier may also be quantified by a measure word (see below).

¹⁸ Although, based on the intrinsic properties of the noun’s referent, the choice of the classifier to some extent may be predictable. Let’s take Cheung’s (2016: 271ff) three groups of classifiers that connote the properties of being long and narrow (*zhī* 支, *gēn* 根, *tiáo* 條), round and oval (*kē* 顆, *lì* 粒, *tuán* 團), and flat (*zhāng* 張, *piàn* 片, *miàn* 面), where to the last group the classifier *fú* 幅 may be added to this group after Tai and Chao (1994: 67). When encountering a new noun, and its classifier is unknown, but it happens to fall under one of the three property descriptions, then the chances of predicting the wrong classifier are narrowed down.

Furthermore, Her and Hsieh (2010) introduced some rectification to the already existing grammatical criteria for the distinction between classifiers and measure words in Chinese. Firstly, they raised the question of the effect of adjectival modifications in classifier phrases: in those involving a sortal classifier the adjective modifies the noun in both cases – when it stands before the classifier and after the classifier; while in case of measure words, the adjective modifies the measure word or the noun, depending on its position in the phrase. Secondly, they reconsidered the possibility of inserting *de* 的 after a measure word, but not a classifier (Chao 1968: 555; Tai 1994: 481; Cheng & Sybesma 1998: 388) and concluded that it is the case only when the numeral *yī* – ‘one’ begins the classifier phrase in the context of quantification. Thirdly, as at first suggested by Chao (1968: 508), and Tai (1994: 481), classifiers may be replaced with the general classifier *ge* 個¹⁹, while measure words cannot.

Moreover, to a certain degree any noun could serve as a unit of measurement (Chao 1968: 601; Cheng & Sybesma 1998: 403; Her & Hsieh 2010: 545; Kilarski 2013: 35)²⁰, but then it would act as a measure word, and not as a classifier (see 4.2). In addition, the opposite (i.e., that every measure word can occur as a noun) is implausible (see 4.2; Cheng & Sybesma 1998: 403, 409). Another difference between Chinese classifiers and measure words is that the latter are translatable into non-classifier languages, simply because they are language universals (Erbaugh 1986: 402; Tai & Wang 1990: 39; Tai 1994: 481; Her & Hsieh 2010: 528), although in the non-classifier languages they would take forms of measure terms or quantifiers (Kilarski 2013: 35). By the same token, classifiers add no additional meaning²¹ to a Chinese classifier phrase, unlike measure words (or generally mensural terms).

In sum, certain criteria for discerning classifiers from measure words were provided on semantic and syntactic grounds, whereas others – on the basis of their cognitive function. From a broader perspective, it may be generally said that in classifier phrases containing a count noun, thus also a classifier, the numeral quantifies the noun, but in the case of a classifier phrase containing a measure word, it is the measure word that is quantified, and not the noun (Her & Hsieh 2010: 532). The intention of this study to part classifiers from measure words, however, is not a goal in itself, but a means to differentiate count nouns from mass nouns in Mandarin Chinese²². Having given the arguments for the necessity of differentiating classifiers from measure words, we may proceed with the analysis of the count/mass distinction in Mandarin Chinese.

¹⁹ This statement is rather vague without complementing it with the following comment: *ge* 個 is a possible alternate for a classifier only semantically, because, in consequence, it will be grammatically ill-formed (see 4.1).

²⁰ Some nouns may function as measure words, or, to put it differently, some measure words may serve as nouns themselves. See Chao (1986: 585; 603) or Li and Thompson (1981: 106-107) for examples of measure words that are also nouns.

²¹ Unless we are talking about the case of synonymic classifiers for the same noun (see 4.1).

²² Some also think that based on only the (numeral) classifier, it is impossible to identify whether the noun is a count or mass noun (Imai & Mazuka 2003: 436-437), which is untrue (see below).

4.1. Numeral classifiers and count nouns

Classifiers, next to measure words, form a subclass of a Chinese part of speech called numeral classifiers. In this section, the term ‘classifier’ should be understood in the narrow sense. Chao (1968: 585-593) mentions 51 classifiers and his list is inexhaustive²³. Chinese classifiers may be also divided in line with certain cognitive categories: animacy, shape (length, flatness, roundness), size, consistency, and attributes of parts, as suggested by Tai (1994: 483-490).

In order to determine whether a noun in Mandarin Chinese is a count noun, let’s start with the statement that each count noun, unlike a mass-term, has its own specific, single sortal classifier (Chao 1968: 507, 585; Iida 1998: 115-116) (see section 2). For example, the proper classifier for *shū* 書 ‘book’ is *běn* 本, for *xìn* 信 ‘letter’ it is *fēng* 封, for *chènshān* 襯衫 ‘shirt’ it is *jiàn* 件, for *mǎ* 馬 ‘horse’ it is *pǐ* 匹, for *lǎoshī* 老師 ‘teacher’ it is *ge* 個, and for *huā* 花 ‘flower’ it is *duǒ* 朵. While *mǎ* 馬 ‘horse’ can be associated only with the classifier *pǐ* 匹, this classifier can also combine with *luózi* 騾子 ‘mule’ and *luòtuó* 駱駝 ‘camel’. Thus a classifier, as mentioned above, is bound categorically with a fixed set of nouns, or, cognitively speaking, classifiers categorize nouns (Lakoff 1986: 47; Tai & Wang 1990: 38; Tai 1994: 481; Tai & Chao: 67). In some cases, as usually when it comes to fuzziness, less prototypical nouns associated with a given classifier category, e.g. *xīnwén* 新聞 ‘news’ for the classifier *tiáo* 條 (Tai & Wang 1990: 42; Tai 1994: 489), may be explained by grammatical, motivated (by metaphorical extension in this case) convention (Lakoff 1986: 28, 48). In general, Chinese count nouns combine with classifiers (unlike mass nouns), but also each count noun is designated to only one classifier. Although generally accurate, this statement requires precision because of exceptions. In a normal context count nouns have only one proper classifier, but unless the count noun appears in a classifier phrase in one of the situations presented below, it may appear to take another classifier. Moreover, count nouns may also be parsed with measure words.

Formal register

One context enabling using an alternative, non-standard classifier is the formal register. In writing, in contrast with spoken Putonghua, a more ‘literary’ classifier is induced. For example, in formal register, the classifier *zé* 則 would rather be used for the word *xiāoxī* 消息 ‘news’ instead of the regular *tiáo* 條 (Tai & Wang 1990: 49).

Formal register, in either writing or speech, is additionally governed by the politeness principle, which results in the occurrence of honorific lexicon. In Mandarin Chinese it may as well be displayed in the classifier system. If we want to express respect, instead of addressing to a third person *nà ge lǎoshī* 那個老師 ‘that teacher’ we can say *nà wèi lǎoshī* 那位老師 ‘that teacher’ in a more polite manner. Even though the meaning of the noun undergoes a pragmatic change, its reference stays the same.

²³ For example, the list lacks the classifier *piàn* 片 (see 4.2).

The general classifier *ge* 個

The second permissible situation in which a count noun may take other than its default classifier could be described as a grammatical simplification in language instantiated by the extended usage of the classifier *ge* 個. This classifier category encompasses a variety of referents: human beings, inanimate objects and abstract objects (Cheung 2016: 272), hence it is called the general classifier, and is the most frequently used one. However, while “some individual nouns have no specific classifiers and take only the general classifier *ge* 個” (Chao 1968: 508), “[...] *ge* 個 [...] is applicable to all individual nouns” (Chao 1968: 588). Thus it is acceptable to say *nà gè cài* 那個菜 ‘that dish, that course of food’ instead of the proper *nà dào cài* 那道菜 meaning the same (Li & Thompson 1981: 112). Moreover, *ge* 個 is used more often in mainland China, while in Taiwan a variety of classifiers is apparently better preserved. As an illustration, compare *yīgè diànyǐng* 一個電影 used by mainland Chinese with *yī bù diànyǐng* 一部電影 used more often in Taiwan to express ‘a/one movie’. The first case may suggest that the dissemination of the general classifier is simply a matter of negligence in language use. The second one may be related to dialectal influence²⁴. Another explanation could be provided by analogy to the Japanese general classifier *tsu* – the class of nouns ascribed to the general classifier accepts new word-members whose referent does not fit the category of any other classifier because of the unspecific character of the referent (Pietrow 2011: 381). For reasons I will not be able to determine here, the evolution of the Chinese language undeniably leads to many classifiers being replaced by *ge* 個, which thus possibly depletes the lexicon of classifiers.

Let’s get back to Chao’s claim on the substitutive role of the general classifier *ge* 個, restated elsewhere: “[...] *ge* 個 is a possible alternate for almost any individual classifier” (1968: 508), and also phrased in a similar manner by Tai: “[...] a classifier in Mandarin Chinese can be substituted by *ge*, especially in colloquial spoken Mandarin” (1994: 481). Some attention should be devoted to the character of the modality in the expressions “alternate classifier” or “can be substituted”, since, in my view, this implies total arbitrariness in replacing any classifier in a classifier phrase (with a count noun) with the general classifier *ge* 個. For example, Chao claims that it is possible to form a phrase *yīgè mén* 一個門 instead of the proper *yīdào mén* 一道門 ‘one door(way)’ and *yīshàn mén* 一扇門 ‘one door’ (1968: 508). Tai suggests that instead of *yītiáo yú* 一條魚 one may say *yīgè yú* 一個魚. But what, then, would *yī gèmen* 一個門 or *yīgè yú* 一個魚 mean? *Yīdào mén* 一道門 refers to the way leading through the door, while *yīshàn mén* 一扇門 could be found in a home improvement store. Which of these does then *yī ge mén* 一個門 refer to? Perhaps to both? Further, according to Tai and Wang (1990: 37, 50), the cognitive basis of the classifier *tiáo* 條 lies in the concept of ‘extension in length’. If that were the case, then *yīgè yú* 一個魚 would have to refer to a fish which is not long. That, in turn, would mean that *tiáo* 條 could not be randomly substituted by *ge* 個, at least not without a change in meaning. In conclusion, the modality of the substitution role of the general classifier claimed by Chao (1968: 508) and Tai (1994: 481)

²⁴ See Tai and Wang (1990: 49) for the discussion on classifiers among Chinese dialects.

may be only interpreted in the way proposed by Yi (2009: 213-214) – as a test for identifying Chinese count nouns, when the general classifier *ge* 個 could be taken only by a count noun, but not by a mass noun. The substitutive role of *ge* 個 for other classifiers cannot be assumed arbitrarily without either producing a grammatically ill-formed phrase (because nouns are already assigned to a given classifier category) or a change in meaning. In the end one also wonders whether a test is necessary, since, after a clear distinction between classifiers and measure words has been made, it could be simply said that count nouns take classifiers (unless the nouns are a special type of mensural nouns, see 4.2), while mass nouns do not. This makes the condition involving the general classifier *ge* 個 unnecessary.

Therefore, while one may not at will substitute a classifier (in a classifier phrase involving a count noun) with the general classifier (Zhang 2013: 47-48), the gradual propagation of the general classifier is undeniable.

Variations in meaning

Some nouns have several relatively synonymous classifiers and the choice between them is thus relatively arbitrary. Relatively, because absolute synonymy between the meanings of the same noun put in two contexts with different classifiers is unreachable²⁵. For example, *chē* 車 ‘car, vehicle’ combines with either *liàng* 輛 or *bù* 部, and the same applies to *fángzi* 房子 ‘house’ with classifiers *zuò* 座, *dòng* 棟 and *zhuàng* 幢. At first glance the combinations bring no change in meaning, but on the grounds of the cognitive function of classifiers, there is always some subtle difference in connotation involved. Erbaugh (1986: 400) writes that “Chinese classifier use is variable rather than categorical [...]” on the basis of the possible expressions referring to ‘a goat in single action’ (‘a/one goat’): *yī zhī yáng* 一隻羊, *yītóu yáng* 一頭羊, *yītiáo yáng* 一條羊, *yīgè yáng* 一個羊. Firstly, the general classifier has been already discussed above, so the last phrase should be excluded from this juxtaposition. Secondly, Erbaugh most likely came to this conclusion because her material was limited to spoken language, where the grammatical convention is less strict than in formal register. In sum, I disagree that classifier alternation can be done at will, and I still claim that linguistic correctness requires fulfillment of a fixed set of grammatical rules.

Let us enhance the problem with nouns that accept a different classifier than normally, due to some deviation of the shape of their referent. For example, *máojīn* 毛巾 ‘towel’ and *dèngzi* 凳子 ‘bench’ take the classifier *tiáo* 條 because they denote long objects with relative flexibility, but if those objects are not long or slender, parsing them with classifiers *kuài* 塊 and *zhāng* 張 respectively is more suitable (Tai & Wang 1990: 40), even giving a translation of *yī zhāng dèngzi* 一張凳子 as ‘a stool’ (Tai & Chao 1994: 72). Now it should be more obvious how classifiers “pick up” different salient features of objects, so if a noun may be parsed with more than one classifier (and it is neither the

²⁵ As shown above on the example of *mén* 門 ‘door’ and *yú* 魚 ‘fish’, and below.

honorific nor the general classifier case), this may only mean that the sense cannot stay the same.

Seldom do nouns undergo even greater change in meaning depending on the classifier. *Yī jié kè* 一節課 or *yī táng kè* 一堂課 exhibit the use of “synonymous” classifiers and mean ‘one lesson’ or ‘one class’ but *yī mén kè* 一門課 means ‘one subject’. *Yī gè rén* 一個人 means ‘one person, someone’ while *yī kǒu rén* 一口人 means ‘one family member’²⁶.

In sum, while there is a possibility of an alternative classifier for a given noun, its polysemous sense may shift. The cognitive function of classifiers imposes a certain sense of the noun. Those shifts in the meaning of a noun caused by the choice of a classifier may be studied within cognitive lexical semantics and lexical ambiguity. Note that this case applies to a single user’s discourse, for “in many cases, the choice of the classifiers is determined by the register, discourse type, and the age and dialectal background of the speakers” (Cheung 2016: 274).

Measure words and count nouns

The final circumstance regards cases in which count nouns are expressed in some means of measurement. For example, we may intend to convey some clusters, or groupings of a noun’s referent. This applies to non-classifier languages as well – we may have a few or more of given individuals and we somehow group them. Those would be words that differ depending on the objects referred to, like ‘a team of athletes’, ‘a herd of horses’, ‘a pile of books’, etc. First, the general argument for the Mass Noun Hypothesis presented in section 2. may be (implausibly, as we shall see in a moment) raised again, but this time against the English phrases just mentioned. They also resemble phrases containing mass nouns, like ‘a bottle of water’; however, no one would claim ‘athlete’ or ‘horse’ to be mass nouns, and in Chinese it should not be otherwise. Second, the words used to express such clusters are also relatively definable – those would be measure words called “collective measure words”. Unlike classifiers, measure words group both count nouns and mass nouns. Nevertheless, it is possible that not all measure words may quantify count nouns, since without doubt there are measure words which apply to count nouns only (see 4.2).

To conclude, count nouns usually have only one (prototypical) classifier, but there are cases in which they may be combined with a different one: in literary language (including the honorific register), linguistic simplification, or gradable changes in meaning. In addition, they may also combine with the majority of measure words. Most importantly, after separating classifiers from measure words, the individuating function of classifiers may be debunked, especially when the cognitive function of classifiers has been emphasized.

²⁶ In *yī kǒu rén* 一口人 Chao considers *kǒu* 口 to be not an individual measure (classifier in a narrow sense, sortal classifier), but a quasi-measure, hence a more literal translation ‘one mouth (to feed)’ (1968: 612). See below on inexclusive classification of numeral classifiers.

4.2. Measure Words and Mass Nouns

As noted earlier, the function of measure words is measuring. Hence, they are obligatory in mass noun quantification, because of the ontological nature of the nouns' referents. This concerns any natural language (assuming all of them have mass nouns), although other equivalents of measure words may occur, since not all languages have numeral classifiers. Furthermore, count nouns may also undergo measurement – in parts, clusters, or other groupings. What distinguishes count nouns from mass nouns, then, are the classifiers that may not be parsed with mass nouns by means of their ability of permanent quantification. In this section a closer overview of how mass nouns may be measured with different types of measure words will be provided.

Even those who agree upon the separation between classifiers and measure words may hold different opinions on the typology of measure words. Beside (sortal) classifiers, Chao lists eight types of numeral classifiers (1968: 584ff). In the following section, I shall adopt Cheung's (2016: 274-279) classification of measure words with some modification. Therefore, eventually, the division will include standard measures, container measures, generic measures, collective measures, and partitioning measures.

The proposed classification is not definitive, but rather a reorganization of the typology of measure words, especially when the classification of Chinese measure words is inconsistent throughout the literature, and their variety and large number does not facilitate the task. Furthermore, the possibilities of setting a criterion of classification are manifold – beside the existent divisions mentioned above, measure words could be for example divided into those that are also nouns, and in consequence may take a numeral classifier themselves, those that are also nouns but may not take a classifier, and those which do not function as nouns²⁷. And even this would be quite problematic (perhaps except for setting the third group which would then consist of most container measure words), because if we consider the following: “if the noun itself denotes a measure, it does not take a classifier [...]” (Li & Thompson 1981: 105), then it may turn out that there are no measure words that can act as nouns and take a classifier, which is untrue (see below).

Thus, I will not try to create an exhaustive typology of measure words here. In this section, however, I will point to some issues that cause theoretical problems in numeral classifier classification in Mandarin Chinese, as well as pay more attention to the features of measure words that will bring us to a conclusion that measure words measure both count and mass nouns (Her & Hsieh 2010: 530) in different configurations, and, on the grounds of what has been said about classifiers, Chinese mass nouns may be distinguished by the ability of being parsed with measure words²⁸, but not classifiers.

²⁷ Cheng and Sybesma (1998: 403) have suggested a similar division of numeral classifiers into those which can occur as independent nouns and those which cannot. They conclude that the division plainly conforms the division into measure words and classifiers, which is not plausible considering, for instance, some container measure words (see below).

²⁸ Thus, I agree with Hansen in terms of the claim cited in (E), i.e. that mass nouns parse with measure words because they are measurable, but not countable, except that Hansen assumed all numeral classifiers are measure words.

Unit measure words

Unit measure words, also called ‘standard measure words’ (Cheung 2016: 245, Zhang 2013: 37) or ‘quantitative measures’ (Tai & Wang 1990: 39), are words expressing some units of measurement for length, weight, volume and area accepted internationally or nationally. Those include words like *yīnglǐ* 英里 ‘mile’, *gōngshēng* 公升 ‘liter’ or *píngfāng mǐ* 平方米 ‘square meter’. They function similarly as in English, thus we may apply them in classifier phrases like *yī gōngjīn píngguǒ* 一公斤蘋果 ‘one kilogram of apples’ (count noun) or *yī gōngjīn miànfěn* 一公斤麵粉 ‘one kilogram of flour’ (mass noun). As we can see, unit measure words can combine with both count and mass nouns.

Speaking of unit measure words, it seems befitting to mention nouns that do not have classifiers. Li and Thompson (1981: 105) suggested a criterion for identifying nouns that do not take a classifier: all nouns which may act as a measure word do not take a classifier. However, it may be disproved, taking temporary measures (see below) as the best counterexample, because these measure words, when acting as nouns, do require classifiers. Therefore, Li and Thompson’s criterion is implausible. Nonetheless, there are nouns that do not have classifiers, and unit measure words seem to be an exemplar of the case. But next to other unit measures Li and Thompson (1981: 105) also listed a puzzling noun *tiān* 天 ‘day’, which is a noun and does not take a classifier, though it is not clear what it would be a measure of. Let’s hypothesize that it is a measure of time. Then, it could be juxtaposed with other nouns of time measurement: *miǎo zhōng* 秒鐘 ‘second’, *fēnzhōng* 分鐘 ‘minute’, *xiǎoshí* 小時 ‘hour’, *xīngqī* 星期 ‘week’, *yuè* 月 ‘month’, *nián* 年 ‘year’. Of these, only *xiǎoshí* 小時 ‘hour’, *xīngqī* 星期 ‘week’ and *yuè* 月 ‘month’ may still require a classifier when serving as a noun. In sum, if we set a new criterion for distinguishing nouns that do not have classifiers simply by identifying them as unit measure words, while, at the same time, accepting nouns of time measurement as a type of unit measures, then we would get three unit measure words that are exceptions from the general rule. Perhaps that is why the classifier in the classifier phrase with *xiǎoshí* 小時 ‘hour’, *xīngqī* 星期 ‘week’ and *yuè* 月 ‘month’ is in fact optional.

Container measure words

Container measure words are such as *xiāng* 箱 ‘box, case’, *hé* 盒 ‘box’, *bēi* 杯 ‘cup’. Most of them can combine with both count and mass nouns. For example, both “cigarette” (count nouns) and “sugar” (mass noun) may be combined with the container measure word *bāo* 包 ‘pack, bag’ to give *yībāoyān* 一包菸 ‘a pack of cigarettes’ and *yībāotáng* 一包糖 ‘a bag of sugar’.

Container measure words are also good examples of how measure words, according to their definition, are applicable to different mass nouns. Let us compare *yībēi shuǐ* 一杯水 ‘a cup of water’, *yībēi chá* 一杯茶 ‘a cup of tea’, and *yībēi miànfěn* 一杯麵粉 ‘a cup of flour’ – more or less any mass or substance named by a mass noun may be measured with cups. Measure words in this regard maintain their applicability to various things, unlike classifiers, which cannot be freely associated with nouns and give their

referents an innovative category – no matter how long and thin a book is, it will never be parsed with the classifier *tiáo* 條²⁹.

There are a few examples of measure words distinguished as a subset of container measure words by Cheung (2016: 278) that by Chao (1968: 584-585; 603) are set as one of the nine exhaustive classes of numeral classifiers, thus separated from container measure words, called “temporary measures”. This kind of measure words usually denotes body parts or enclosed areas (Li & Thompson 1981: 111), like in the examples *yīshēn xuě* 一身雪 ‘a body of snow’ or *yī wūzi yān* 一屋子煙 ‘a houseful of smoke’. As indicated earlier, measure words form an open class, unlike classifiers, which is clearly evidenced by temporary measure words, which originally are nouns (container nouns specifically; Kilarski 2013: 37) used as measures. Another thing particularly displayed by temporary measure words is how they “[...] indicate the temporary location of the mass” (Cheung 2016: 245-246). This feature of temporality in mass noun quantification has already been invoked above in the juxtaposition of classifiers and measure words.

While temporary measure words illustrate how almost any noun may act as a measure word, container measure words disprove that in Mandarin every measure word may also be a noun. *Píng* 瓶 is a container measure word meaning ‘bottle (of)’, but it is *píngzi* 瓶子 ‘bottle’ that is a count noun with its own classifier (Cheung 2016: 277). However, it seems that most, if not all, Chinese measure words may etymologically be nouns.

Collective measure words

Another separate type of measure words is, in Cheung’s wording (2016: 274-277), “collective measures”. Although this is not explicitly stated by Cheung, they can be divided into three types.

One of them has two representatives: *yīxiē* 一些 ‘some’ and *yīdiǎn* 一點 ‘a little’. According to their meaning, they are referred to as ‘indeterminate numbers or amounts’ (Cheung 2016: 277). While it has been correctly noted that *yīxiē* 一些 ‘some’ appears with both count and mass nouns, and *yīdiǎn* 一點 ‘a little’ – with mass nouns only (Cheung 2016: 277), one important issue has been overlooked, namely, that the two are not even numeral classifiers.

First, let us consider the syntactic properties of these two expressions. Both *xiē* 些 and *diǎn* 點 do not combine with any other numeral than *yī* 一 ‘one’, as classifiers usually do. In addition, *xiē* 些 may be combined with demonstrative pronouns. Nevertheless, its semantic role is indicating plurality (*yīxiē* 一些 means ‘some’; *zhèxiē* 這些 means ‘these, those’). In contrast, *diǎn* 點 in the sense of ‘a little’ may be only parsed with *yī* 一 ‘one’, so perhaps *yīdiǎn* 一點 in the meaning of ‘a little’³⁰ is supposed to be considered as an independent lexical unit. Therefore, although the two syntactically behave like numeral classifiers, with some exceptional limitations to the word element standing before

²⁹ See Tai and Wang (1990: 38) for a more detailed explanation why classifiers cannot be freely substituted for one another.

³⁰ I keep emphasizing the ‘a little’ sense because *diǎn* 點 is a polysemous item, thus may also, for example, as a noun mean ‘a dot’, which enables it to take all numerals and demonstrative pronouns.

them, *yīxiē* 一些 ‘some’ and *yīdiǎn* 一點 ‘a little’ are linguistic counterparts of quantifiers in Mandarin.

With one subtype of collective measure words excluded, the most prototypical type of collective measure words refer to groups or clusters. For animate beings we have nominal phrases with measure words like: *yī bān niánqīng rén* 一班年輕人 ‘a bunch of young people’, *yī duì zhànshì* 一隊戰士 ‘a file of soldiers’, *yī bāng háizi* 一幫孩子 ‘a group of children’, *yī gǔ tǔfěi* 一股土匪 ‘a gang of bandits’, *yīqún yáng* 一群羊 ‘a flock of sheep’; for inanimate beings, examples are as follows: *yī shù xiānhuā* 一束鮮花 ‘a bunch of flowers’, *yī chuàn yàoshi* 一串鑰匙 ‘a bunch of keys’, *yī guà biānpào* 一掛鞭炮 ‘a string of firecrackers’, *yībǐ qián* 一筆錢 ‘a sum of money’ (Cheung 2016: 275-276). *Pī* 批 ‘batch, group’ and *qún* 群 ‘crowd, group’ are set apart as measure words that apply to both animate and inanimate beings (Cheung 2016: 275).

Another type of grouping measure words distinguished by Cheung (2016: 276) boils down to two examples: *duì* 對 ‘pair, couple’ and *shuāng* 雙 ‘pair’. I would like to group these examples with another measure word, *dǎ* 打 ‘dozen’, even though Cheung (2016: 274) classifies it for some reason as a unit measure word. Examples of classifier phrases involving the three are: *yī duì fūfù* 一對夫婦 ‘a married couple’, *yī duì zhěntou* 一對枕頭 ‘a pair of pillows’, *yī shuāng shǒutào* 一雙手套 ‘a pair of gloves’, *yī shuāng wàzi* 一雙襪子 ‘a pair of socks’, *yī dá jīdàn* 一打雞蛋 ‘a dozen of eggs’, *yī dá pījiǔ* 一打啤酒 ‘a dozen of beers’.

The most salient feature that the three have in common is that they most likely are the only measure words that apply to count nouns, but not to mass nouns. But one may point out how “beer” in the phrase above is a mass noun. Nonetheless, I still support my claim that *dǎ* 打 ‘dozen’ is a numeral classifier that applies solely to count nouns, because this is a case of metonymical ellipsis, and what actually stands behind the phrase ‘twelve beers’ is ‘twelve BOTTLES of beer’ or ‘twelve CANS of beer’ (or whatever container present in context) and ‘bottles’ and ‘cans’ are count nouns³¹. This effect is also known as the Universal Packager (Zhang 2013: 22-24). A question arises then whether they should be treated as classifiers, for it is classifiers but not measure words that take count nouns exclusively. However, even though *duì* 對 ‘pair, couple’, *shuāng* 雙 ‘pair’ and *dǎ* 打 ‘dozen’ do resemble classifiers in that they take count nouns but not mass nouns, and they cannot be followed by *de* 的 like any other measure word, these three, firstly, do not fulfill the categorization function attributed to classifiers, and secondly, can be combined with a variety of nouns because they remain a means of measurement, except that the measurement goes in specific numbers: two or twelve. Therefore, even if these measure words are not bound with any specific noun, they are limited to classifier phrase combinations involving count nouns only. And that comes from the peculiar nature of *duì* 對 ‘pair, couple’, *shuāng* 雙 ‘pair’ and *dǎ* 打 ‘dozen’, namely, that they are paranumeral numeratives, i.e. derivatives of numerals (Yi 2014: 509), thus inevitably by nature they must apply to count nouns, since only those refer to countable entities. Also,

³¹ English counterparts of measure words are nouns, but in Chinese not every measure word may also be a noun (see above).

I suggest renaming this type of measure words as “paranumeral collective measure words”.

According to Cheung’s classification (2016: 278-279), there is the fourth type of measure words identified as ‘generic measure’, which I would like to treat as a subtype of collective measures, since they somehow group the nouns. Three examples are listed: *zhǒng* 種 ‘kind’, *lèi* 類 ‘category’, *yàng* 樣 ‘type’, all of which are used with count nouns, mass nouns and abstract nouns.

Partitioning measure words

This group of measure words does not occur in Cheung’s (2016: 274ff) classification of measure words, but they are a separate group in Chao’s typology (1968: 598). On Chao’s enclosed list of partitive measure words there are 39 of them (Chao 1968: 598-601), and some of the examples are: *yè* 頁 ‘page’, *wèi* 味 ‘taste’, *dī* 滴 ‘drop’, *duàn* 段 ‘section, part’, *jié* 節 ‘section’, *jié* 截 ‘section, chunk’, *piàn* 片 ‘slice, piece’, *kuài* 塊 ‘lump, piece’. In a way, partitive measure words stand in opposition to collective measure words (Chao 1968: 598), since both are related to the basic-level cognitive categories as a point of reference, to which they hold a part-whole relation and the relation of superordination, respectively. They also show the possible ways of segmenting and clustering things in human cognition. In other words, forming classifier phrases with these measure words would not be possible without the basic categories.

In sum, there is still some work to be done regarding the typology of numeral classifiers, especially measure words. The difficulty in classification may be a consequence of the large number of measure words, which in addition form an open class, neither syntactically nor semantically homogenous (Yi 2014: 509). Moreover, some measure words may not only act as a different part of speech, but also as a different type of measure word, or even a classifier (Chao 1968: 585). For example, according to Tai and Chao (1994: 74-75), *piàn* 片 may appear in a classifier phrase with the noun *cháyè* 茶葉 ‘tea leaf’ (*yīpiàn cháyè* 一片茶葉 ‘a tea leaf’) and the noun *niúròu* 牛肉 ‘beef’ (*yīpiàn niúròu* 一片牛肉 ‘a slice of beef’). In both examples the numeral classifier *piàn* 片 is treated as a sortal classifier, but it is a classifier only in the first phrase, while it is a measure word in the latter.

To conclude the relation between numeral classifiers and mass nouns – mass nouns are nouns that associate with measure words exclusively. Given the ontological status of their referents, mass nouns are in need of a means of measurement in a quantifying context. Measure words may be defined as words that provide some temporary measurement, and thus, unlike classifiers, are applicable to different nouns (count, mass, collective, abstract) (Chao 1968: 508-509; Tai & Wang 1990: 37), with the exception of paranumeral collective measure words. Moreover, they hold a function of individuation in the case of mass nouns, but of unit measuring, clustering or partitioning in the case of count nouns. Finally, unlike classifiers, they do not categorize or classify nouns.

5. Conclusions

The main purpose of this study was to refute the Mass Noun Hypothesis and provide a grammatical verification of the Count Noun Thesis in Mandarin Chinese by establishing grammatical rules that may distinguish Chinese count nouns from mass nouns. This would not have been possible without some rectification of the typology of numeral classifiers, which had been perceived as a homogenous group of mensural terms. Thus, the necessity to differentiate classifiers and measure words was shown on syntactic and semantic grounds. Their distinct functions were also emphasized, that is, the categorization function of classifiers, and the mensural function of measure words.

Once the arguments for separating classifiers from measure words were provided, the grammatical count/mass distinction in Chinese could be established. The conclusion can be enclosed in the formula: count nouns have one **default** classifier and may parse with some measure words; mass nouns may only take measure words. Because classifiers lack the mensural function, they do not individuate the noun in a quantifying context, thus cannot be parsed with mass nouns. In human experience referents of mass nouns appear only in some temporary measurable form, that is why it is impossible to grasp their cognitive basis with a classifier category. In fact, classifiers, which in result are exclusive in regard to count nouns, are semantically null³², in the sense that they do not modify the already individuated noun, yet at the same time they may add some connotative meaning or imply a certain polysemous sense of the count noun. In contrast, on account of the ontological status of the referents of mass nouns, mass nouns require measure words precisely for what they are meant to do, that is, measuring, as in every other natural language. However, their mensural function enables them to quantify both count and mass nouns, their peculiar role in the case of mass nouns is to individuate them, providing at the same time formations in all kinds of temporal measurement of both objects (referents of count nouns) and substances (referents of mass nouns).

Grammatical distinction between count and mass nouns in classifier languages is important for two reasons: above all, it cancels the epistemological implication suggesting the inability of grasping the concepts of objects which stand behind the count nouns³³ by users of languages in which there are supposedly no count nouns. It also debunks the

³² This poses a polemic question to Zhang's (2012: 227; 2013: 29ff) claim that no Chinese noun is a count noun (although she makes a distinction between mass and non-mass nouns). By means of the numerability argument, only count nouns may combine with a numeral directly. Consequently, in Chinese, because of the obligatory occurrence of a numeral classifier in a classifier phrase, no noun is a count noun. However, if the classifiers were regarded as semantically null, i.e. adding no quantification value to the classifier phrase, even though they play some syntactic role, then, in this sense, nouns occurring with classifiers do combine with numerals directly. On the grounds of the numerability argument, then, it would follow that Chinese has count nouns. This is one way to challenge the statement that Chinese has no count nouns, but non-mass nouns at most.

³³ Providing the evidence for grammatical distinction between count nouns and mass nouns in Chinese does not exclude the possibility that they are all mass nouns SEMANTICALLY (Hansen 1992: 48). Therefore, the empirical studies whether classifier language users really do not perceive individuate objects are mostly appropriate, despite the fact that they were performed on subjects assumed to bear no knowledge of the count/mass distinction (cf. Soja et al. 1991; Imai & Mazuka 2003).

idea that speakers of classifier languages are nominalists in default (Nakamura 1964: 178-179; Hansen 1976: 191; 1983: 31). Showing that Chinese common nouns encompass count as well as mass nouns nullifies the possibility of raising a false allegation towards the Chinese claiming that their reality consists of rationed portions of substances solely (Hansen 1983: 30). This work, as one would wish, has disproved another, but not the last, myth regarding ‘other’ culture from an Anglocentric point of view.

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