

PLURALITY IN A CLASSIFIER LANGUAGE*

This work argues that *-men* in Mandarin Chinese is best analyzed as a plural morpheme realized on an element in Determiner, in contrast to a regular plural on an element in N, such as the English *-s*. A nominal with a classifier has a Classifier projection: [D [Num [Cl [N]]]]. The plural feature in Number can only be realized in D because of the Head Movement Constraint. Without an intervening Classifier, it can be realized in N. This analysis captures the fact that the *-men* type plural morpheme is generally found in classifier languages and the English type plural morpheme in non-classifier languages. The plural analysis of *-men* also captures many generalizations missing from the traditional “collective” analysis, such as (i) *-men* can occur with a proper name/pronoun/definite common noun but not a definite expression of the form [Demonstrative + Classifier + N], (ii) a quantity expression [Number + Classifier] can follow a pronoun/proper name with *-men* but not a common noun with *-men*, and (iii) a quantity expression cannot precede a nominal with *-men*.

1. INTRODUCTION

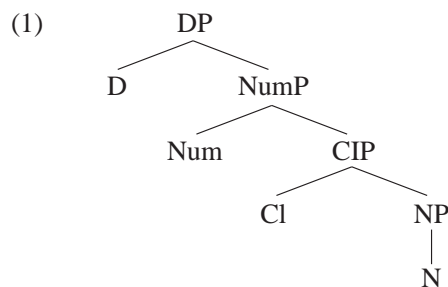
In a language which must use classifiers when nouns combine with numbers (a classifier language), it is generally understood that nouns in this language do not have plural morphology. Indeed, Chierchia in his series of works on the typology of nouns (1996, 1997) argues that nouns in classifier languages are mass nouns. Mass nouns, being inherently plural, do not have plural morphology (see McCawley (1968) and Mufwene (1980) for the similarity between plural count nouns and mass nouns).¹ There exists a correlation between the use of classifiers with nouns and the absence of plural morphology.

This paper argues that a classifier language **can** have a plural morpheme within a nominal expression. Plurality in a classifier language (taking *-men* in Chinese as an example) shares with plurality in a non-classifier language (taking *-s* in English as an example) the position where they are generated: both are generated under the node Number. However, they differ in where they are realized: essentially, plurality is realized by the element generated in Noun in a non-classifier language and by the element in Determiner in a classifier language. The difference in where plurality is realized follows from the difference in the structure of nominal expressions: classifier languages, not non-classifier languages, project a Classifier.²

In addition to arguing for the existence of plural morphology in a classifier language, this work also attempts to provide a unified and adequate



analysis of the Chinese morpheme *-men*, which will be claimed to be a plural morpheme fundamentally. Analyzing *-men* in Chinese as a plural morpheme, however, is not quite in congruence with the existing literature. Some linguists have claimed that the suffix *-men* is a plural morpheme when attached to pronouns and a collective marker when attached to nouns (cf. Chao (1968), Lu (1947), Norman (1988), among many others). There have also been attempts to provide a unifying analysis for the functions of *-men* which excludes its function as a plural marker, such as Iljic's (1994, 1998) proposal that *-men* can be regarded as a collective marker (which refers to a situationally defined or anchored group).³ In contrast to these efforts, this work shows that a "collective" analysis fails to capture many important generalizations concerning the behavior of *-men*, some of which have not been discussed at all in the literature. It is argued that these generalizations can only be captured by the proper characterization of a plurality feature (realized as *-men*), generated under the node Number within the nominal structure in (1). (D is for Determiner, Num for Number, Cl for Classifier, and N for Noun; the irrelevant details are disregarded, such as the Specifier of a projection.)



We will start with the puzzling facts faced by the collective analysis (section 2) and then proceed to illustrate how a hypothesis which places *-men* in D can capture the facts regarding the behavior of *-men*, in contrast to that of the English plural *-s*, which is in N (section 3). In section 4, we will show how the claim that *-men* is in D and *-s* is in N can be derived from a unified analysis which recognizes both *-men* and *-s* as realizations of plurality features in Number according to the nominal structures of classifier and non-classifier languages. We will also extend the analysis to other classifier languages such as Burmese and provide further evidence that nominal expressions in classifier languages can have what amounts to the counterpart of *-men*. A further implication of such an analysis is that nominal expressions in both classifier and non-classifier languages uniformly can have a Number projection. They differ only in the presence or absence of a Classifier projection.

2. SOME PUZZLES ABOUT *-MEN*

Chinese has been known to be a language without much inflectional morphology. It is a language that is quite “bare.” Its nouns, for instance, are not inflected for gender or number or Case. It therefore would be quite surprising to claim that the nominal expression in Chinese can have plural morphology. Indeed, no claims have been made in the literature that *-men* in modern Chinese is just a straightforward plural morpheme. In many works, *-men* has been labeled a “collective” marker. Such reluctance to claim that *-men* is a plural marker has been based mainly on the fact that *-men* is not like a traditionally understood plural morpheme. Compare it with a regular plural morpheme such as the plural suffix *-s* in English. Unlike *-s*, which can be suffixed to nouns quite productively, the morpheme *-men* generally is attached only to a pronoun or a human noun,⁴ as indicated in various dictionaries (e.g., *A Chinese-English Dictionary* (1979), *Xiandai Hanyu Cidian* [Modern Chinese Dictionary] (1983) and grammar works (such as Chao (1968), Li and Thompson (1981), Lu (1980), Zhu (1982), among many others). More precisely, there are the following considerations that argue against analyzing *-men* as a straightforward plural marker and for analyzing *-men* as a collective marker.

(i) Unlike those languages with a true plural morpheme, the occurrence of a quantity [number+classifier] expression is not compatible with the occurrence of *-men*.⁵

- (2) **sange xuesheng-men*
 three-Cl student-MEN
 ‘three student+*men*’

A quantity expression expresses the quantity of individuals. A collective refers to a group as a whole. The “whole” and the “individual” expressions are not compatible.

(ii) The occurrence of *-men* makes a nominal expression definite. Quoting Rygaloff (1973) and Yorifuji (1976), Iljic (1994) wrote that “N-*men* always refers to the definite. As a rule, one can neither posit nor negate the existence of N-*men*.”

- | | |
|---|---|
| (3) a.*you ren-men
have person+MEN | cf. you ren
have person
‘there is/are some person(s)’ |
| b.*mei you ren-men
not have person+MEN | cf. mei you ren
not have person
‘there is nobody’ |

This observation can be further supported by the contrast found in the following sentences, which differ minimally in the occurrence of *-men*. The one with *-men* must refer to a definite group, but the one without *-men* is vague (also vague regarding number):

- (3) c. wo qu zhao haizi-men
 I go find child-MEN
 'I will go find the children.'
- d. wo qu zhao haizi
 I go find child
 'I will go find the/some child/children.'

(iii) A proper name can be suffixed with *-men* to mean the group consisting of the person denoted by the proper name and others. An example given in Iljic (1994) is *XiaoQiang-men*, which can mean the person XiaoQiang and others in his group,⁶ as in (4).

- (4) XiaoQiang-men shenme shihou lai?
 XiaoQiang-MEN what time come
 'When are XiaoQiang and the others coming?'

The fact in (i–iii) present very good reasons to doubt that *-men* can be considered a plural marker. However, *-men* does exhibit some of the properties of a plural marker. Recall that Chao (1968), for instance, claims that *-men* is a plural marker when suffixed to pronouns. Indeed, *-men* is suffixed to a pronoun if the pronoun refers to a plural entity.⁷ This immediately raises the question of why *-men* cannot be suffixed to nouns to indicate plurality when it can do so with pronouns. In fact, we do see some plurality usage of *-men* with nouns. Modulo the definiteness restriction, a common noun can be suffixed with *-men* to express plurality. A proper name denoting a person can be suffixed with *-men* to mean a group of people with the same name or characteristics as that person (the “plural reading,” in contrast to the interpretation of referring to that person and others, the “collective reading”).

Not only are there some “plurality properties” of *-men*, but there are also some other facts that do not seem to follow immediately from the claim that *-men* is a collective marker. For instance, even though a “collective” *-men* can be suffixed to a definite expression such as a proper name (as well as a pronoun), referring to a group of people anchored or defined by a particular person, cannot be suffixed to definite expressions consisting of a demonstrative.

- (5) a.*zhege/nage ren-men
 this-Cl/that-Cl person-MEN
 ‘this/that person and the others’
- b.*nide nage penyou-men
 your that-Cl friend-MEN
 ‘that friend of yours and the others’

These expressions, with *-men* attached to a definite expression containing a demonstrative, e.g., *zhege/nage+N* ‘this/that+Cl+N’, intended to mean a group of people containing this/that person and the others, are not acceptable. Under an analysis that tries to capture the distribution of *-men* in terms of a “collective” meaning (vs. plural interpretation), it is difficult to see what the difference is between a proper name and another type of definite expression such as ‘this/that N’ which may account for the difference in the acceptance of a co-occurring *-men*.

Another puzzling fact about the collective analysis of *-men* is the seemingly chaotic co-occurrence restrictions on quantity expressions. Recall that one of the arguments for the collective analysis of *-men* is the incompatibility of *-men* with quantity expressions. However, the restrictions on *N-men* occurring with quantity expressions are even more complicated than what has been presented. Even though (6a) is unacceptable with ‘three Cl them’, (6b) is acceptable with ‘them three Cl’. However, in a sentence such as (6c), which is comparable to (6b) except for the replacement of the pronoun with a common noun, the use of *-men* becomes unacceptable again.

- (6) a.*wo qing sange ta-men chifan.
 I invite three-Cl them eat
 ‘I invited three thems for a meal.’
- b. wo qing ta-men sange (haizi) chifan.
 I invite them three-Cl (child) eat
 ‘I invited them three-Cl (children) for a meal’
- c.*wo qing pengyou-men sange (ren) chifan.⁸
 I invite friend-MEN three-Cl person eat
 ‘I invited three friends for a meal.’

To complete the paradigm, (6d) is not acceptable either, with the same word order as (6a).

- (6) d.*wo qing sange pengyou-men chifan.
 I invite three-Cl friend-MEN eat

What adds to the puzzle is that, when a proper name with quantity expressions is suffixed with *-men*, it yields only the collective reading of ‘a group of people containing the person denoted by the proper name and other people related to him’, without the plural reading of ‘a group of people with the characteristics or the name of the person’:

- (6) e. wo qing XiaoQiang-men/xiaozhang-men sange (ren)
 I invite XiaoQiang-MEN/Principal-MEN three-Cl person
 chifan.⁹
 eat
 ‘I invited XiaoQiang/Principal and two others (in the group)
 for a meal.’
 (*‘I invited 3 principals/3 people all named/all with the char-
 acteristics of XiaoQiang.’)

By contrast, (6f) is not acceptable at all, under either reading:

- (6) f.* wo qing sange XiaoQiang-men/xiaozhang-men chifan.
 I invite three-Cl XiaoQiang-MEN/Principal-MEN eat
 ‘I invited XiaoQiang/Principal and two others (in the group)
 for a meal.’
 ‘I invited 3 principals/3 people all named/all with the char-
 acteristics of XiaoQiang.’

In brief, even though there might be reasons to doubt that *-men* is just a regular plural morpheme, such as those arguments for treating *-men* as a collective marker (2–4), there are interesting facts leading us to believe that *-men* has properties of a plural morpheme. It can be attached to pronouns to indicate plurality. It can be attached to a proper name in the same way a true plural morpheme makes a plural proper name more like a common noun (the plural reading). In addition, there are difficulties in simply claiming that *-men* is a collective marker. The unacceptability of *-men* suffixed to a definite expression with a demonstrative is not expected. The seemingly chaotic co-occurrence restrictions on quantity expressions with *-men* are not captured. Moreover, as noted by Yafei Li (p.c.), the fact that a *N-men* expression can co-occur with the distributive marker *dou* (as in *xuesheng-men dou likai le* ‘each of the students has left’) raises questions as to exactly what “collective” (referring to a group) means. Recall that an argument for the “collective” status of *-men* is that a quantity expression cannot occur with *N-men*. A collective group is not concerned with or not compatible with individuals. The use of the distributive marker *dou* must involve individuals (the example *tamen liangge dou jiehun le* ‘they

two have been married' must be about two marriages, rather than the two of them married to each other). The use of *dou* with N-*men* contradicts directly the semantic account of *-men* as a "collective" marker.

Adding to the concern over a collective vs. plural analysis is that a plural marker seems generally to be found in languages without classifiers, and a "collective" marker found in languages with classifiers.¹⁰ This observation, again, does not follow directly from an account of establishing a category of "collective" markers without any relation to plural markers.

Rather than relying on the "meaning" difference between "plural" and "collective," we will, in the following sections, attempt to provide a structural account for the behavior of *-men*, contrasting with *-s* in English. We will show how the puzzles discussed in this section can be captured in structural terms.

3. FIRST HYPOTHESIS: *-MEN* AS A PLURAL IN D

In order to understand the behavior of *-men*, we start with a summary of the important generalizations:

- (7) **P1:** *-Men* is suffixed to pronouns, proper names, and some common nouns.
P2: Common nouns with *-men* must be interpreted as definite.
P3: Attachment of *-men* to proper names yields two different interpretations, a "plural" or a "collective" reading.
P4: A pronoun/proper name with *-men* can be followed, but not preceded, by a quantity expression (number + classifier) and even another noun. In the cases with proper names, only the "collective" reading is possible when a quantity expression follows. With common nouns, quantity expressions are generally impossible.¹¹

In order to capture these generalizations, we need to digress briefly to discuss the internal structure of nominal expressions in Chinese, in particular, the analysis in Li (1997) (cf. Tang (1990)). Li (1997) argues that even though Chinese does not have an equivalent of the definite article *the* in English, it still has a DP structure for argument nominal expressions. Among the important motivations for this argument, the one that is directly related to our discussion is the co-occurrence and ordering possibilities of common nouns, pronouns, proper names, and quantity (number + classifier) expressions. It was argued there that, if we adopt the structure in (1), i.e., [D [Num [Cl [N]]]], facts like those in (8a–c) fall out naturally:

- (8) a. ta dui **tamen liangge (ren)** tebie hao
 he to they two-Cl person especially good
 ‘He is especially nice to them two (people).’
- b. ta dui **XiaoMing, XiaoHua liangge (ren)** tebie hao.
 he to XiaoMing Xiaohua two-Cl person especially
 good
 ‘He is especially nice to XiaoMing, XiaoHua (them) two people.’
- c.*ta dui **xuesheng liangge (ren)** tebie hao.¹²
 he to student two-Cl person especially good
 ‘He is especially nice to the two students.’

Pronouns and proper names, being definite expressions, can be generated in D,¹³ which can be followed by a Number, Classifier, and Noun (N can be lexical or empty), according to the nominal structure in (1). By contrast, a common noun such as *xuesheng* ‘student’ is base-generated in N. It is not base-generated in D and cannot be followed by the expressions of Number, Classifier, and Noun. Common nouns, however, can be interpreted as definite if they are raised from N to D:

- (9) xuesheng lai le.
 student come Par
 ‘The students came.’

The raising process from N to D is not possible when there is an intervening head between N and D, such as when Num and Cl are present (the Head Movement Constraint forbidding a head crossing another head in the movement process, Travis (1984), Chomsky (1986)). (8c) therefore is neither base-generated nor derived by movement.

With this, let us turn to the account for the properties listed in (7). One of the more clear and prominent facts about *-men* is that it is productively attached to a pronoun to express plurality. A pronoun is the prototypical element that is base-generated in D.¹⁴ Take [Pronoun *-men*] as the canonical case. We may therefore think of *-men* as an element that is attached to an element in D. If *-men* is attached to an element in D, instead of N, it is expected that it can be suffixed to proper names as well as pronouns but not common nouns in general ((P1) in (7)), given that proper names and pronouns are base-generated in D, and common nouns are generated

in N, as just presented regarding (8). There are cases where common nouns are in D, as a result of movement from N to D, being interpreted as definite. When a common noun is in D, it can be suffixed with *-men*. This derives the second property in (7) that common nouns with *-men* must be interpreted as definite.

The claim that *-men* is suffixed to a common noun only when it is raised from N to D also accommodates the facts concerning the incompatibility between *N-men* and quantity expressions. Since *-men* is suffixed to a common noun only when the noun is moved up to D, a common noun staying in the N position cannot be suffixed with *-men*. A quantity expression [Num +Cl] therefore cannot precede *N-men*, according to the phrase structure [D [Num [Cl [N]]]].

- (10) a. *wo dui **sange xuesheng-men** tebie hao.
 I to three-Cl student-MEN especially good
 'I am especially nice to three students'

Moreover, because a common noun is base-generated in N, not in D, and because N to D raising is impossible when a Number or Classifier head intervenes between N and D, it is expected that [Num + Cl] expressions (with or without a N) cannot follow a common noun suffixed with *-men* (cf. the unacceptability of (8c)).

- (10) b. *wo dui **xuesheng-men sange (ren)** tebie hao.
 I to student-MEN three-Cl person especially good
 'I am especially nice to three students.'

By contrast, if an element can be base-generated in D, it can be suffixed with *-men* and still be followed by a quantity [Num +Cl] expression (and a lexical N). This indeed is the case, as illustrated by the acceptability of pronouns and proper names suffixed with *-men* and followed by [Num + Cl] (and a lexical N):

- (10) c. wo dui **ta-men sange (ren)** tebie hao.
 I to them three-Cl person especially good
 'I am especially nice to them three.'
- d. wo dui **XiaoQiang-men sange (ren)** tebie hao.
 I to XiaoQiang-MEN three-Cl person especially good
 'I am especially nice to XiaoQiang (them) three persons'.

To complete the paradigm it is quite expected that [Num + Cl] expressions cannot precede pronouns or proper names suffixed with *-men*.

- (10) e. *wo dui **sange ta-men** tebie hao.
 I to three-Cl them especially good
- f. *wo dui **sange XiaoQiang-men** tebie hao.
 I to three-Cl XiaoQiang-MEN especially good

This captures all the properties listed in (P4) of (7) except the exclusive collective reading of proper names followed by a quantity expression, which will follow from our account so far and the account for the third property in (7). The third property is related to the ambiguity of proper names. A proper name can be base-generated in D to refer to a definite individual by name. In addition, it can function like a common noun, base-generated in N, and denote person(s) with the same name (*I met two Bills at the party. I like the Bill you like*) or denote person(s) with the same characteristics. *A-Q*, for instance, can simply mean the kind of persons with the characteristics of A-Q (a famous character in the works by the modern writer Lu Xun): *He will be an A-Q*. An English example: *He will be an Einstein*. When a proper name is base-generated in D (referring to a definite individual), it can be suffixed with *-men*. A collective reading (the particular individual and others in the group) is derived. When a proper name is base-generated in N (referring to the people with the same characteristics or the same name) and moved to D, it yields the plurality reading of a group of people with the same characteristics or the same name. A proper name with *-men* therefore is ambiguous.¹⁵ However, the ambiguity is lost when a quantity expression occurs (cf. (10d)). This lack of ambiguity can be accommodated by our account earlier in the text for why common nouns with *-men* must be interpreted as definite. Recall that, in order to be suffixed with *-men*, a common noun must be raised to D. The raising process is not possible when there is an intervening Number or Classifier head. This suggests that, if a proper name is suffixed with *-men* and has a co-occurring [Num +Cl] expression, the proper name should not be base-generated in N and then raised to D. In other words, *XiaoQiang-men sange* should not have the plural reading, referring to three people with the same name or with the characteristics of XiaoQiang. The unambiguity of (10d) is thus accounted for. Moreover, this may also explain the oddity of (11a–b), which use the name of famous people who are not present now, strongly favoring the interpretation of likeness in characteristics (plural reading). The plural reading is not available when a quantity expression follows.

- (11) a. ??wo dui A-Q-men sange you pianhao
 I to A-Q-MEN three-Cl have preference
 ‘I especially like A-Q them three.’

- b. ??wo dui Aiyinsitan-men sange hen jingzhong.
 I to Einstein-MEN three-Cl very respect
 ‘I am very respectful of Einstein them three.’

In brief, if *-men* is attached to a nominal element in D, the properties in (7) are captured, according to the Chinese nominal structures and the N to D movement for definite Ns discussed in Li (1997). This compares with a commonly recognized plural morpheme such as *-s* in English, which has traditionally been recognized as a suffix to N. When such a plural morpheme is suffixed to N, there is no constraint on the definiteness of the plural nominal because the N does not have to be raised to D to realize the plural morphology. With a nominal structure of [D [Num [N]]] (Chinese nominal structure without Classifier, see discussions in the next section), it also captures the fact that the order *three students* is possible, in contrast to the unacceptability of (10a). Furthermore, it follows that *(the) students three* is not possible. In the case of a pronoun, normally base-generated in D, *-s* cannot be suffixed to the D pronoun. However, a quantity expression can follow it. A pronoun can sometimes behave like a common noun and be base-generated in N. When it is in N, *-s* suffix is acceptable, and a quantity expression can precede it.

- (12) a. *hims three
 b. them three (cf. I like them three.)¹⁶
 c. three hims (cf. I saw three hims in the mirror.)
 d. *three them
 e. three thems (cf. I need more than three thems for this project.)

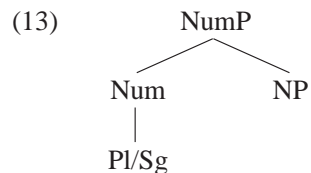
Completing the range of possibilities with the English plural *-s*, we expect that a proper name allows only the form *three Bills* (**Bills three*) when *Bill* functions like a common noun.

Briefly summarizing, the hypothesis that *-men* is suffixed to an element in D and *-s* to an element in N captures many interesting facts of Chinese and English. It also allows us to state the difference between the two kinds of plural morphemes in a minimal way: the difference lies in where the plural morpheme is realized.¹⁷ The languages with a “collective” plural morpheme and those with a “regular” plural morpheme have not much more than a minimal structural difference. The two plural morphemes are almost one and the same “plural” morpheme (see note (17)). Differences in their distribution and effects on their semantic interpretation are the result of different positioning of the plural morpheme. However, important questions should be raised: what does it mean to have two different positions, one

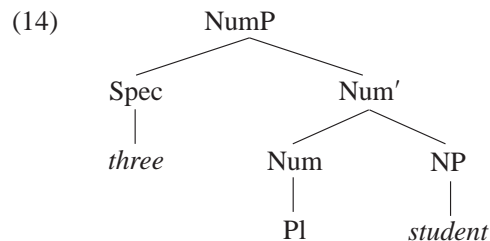
in D and the other in N, for the plural morpheme? Is there any way to relate the same morpheme in two different positions?

4. A UNIFICATION

The question may be answered by deciding first on what a plural morpheme is and where it is generated within a nominal structure. The notion of plurality is the notion of quantity, which is generally expressed as Number. Following the insights of Carstens (1991), Valois (1991), Ritter (1991, 1995) and a good number of other references cited in Ritter (1995), we may assume that the singular (Sg) or plural (Pl) marking of a noun is analyzed as a functional syntactic category which heads an independent projection dominating NP, a Number Phrase:

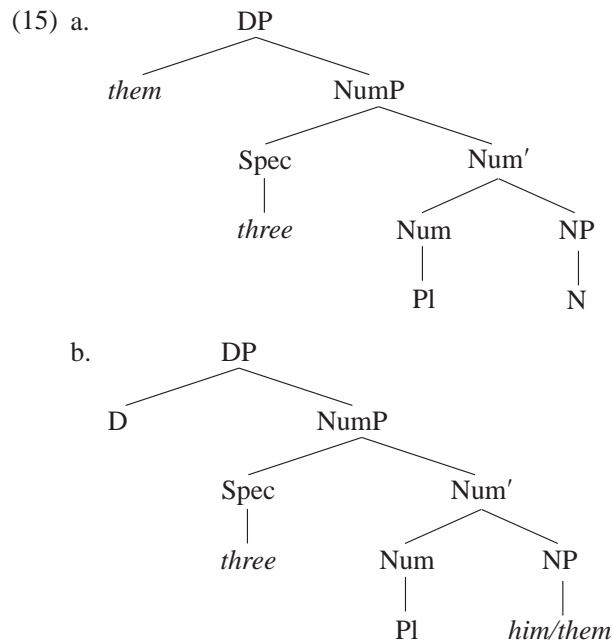


What is the structure for an expression like the English *three students*, then? If the head Num indicates singularity or plurality, the number *three* cannot be in the Num position. It can be in the Spec of Num position (the Num is Plural in (14) because the quantity expression in Spec of Num is more than one).¹⁸



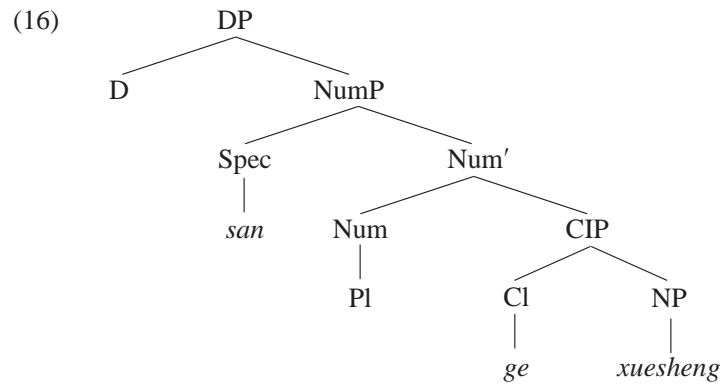
The plural feature, which surfaces as a suffix *-s* generally, needs to be realized on a nominal element. *Student* can move up to Num to realize the plural feature. Alternatively, it can be said that *three* and the head noun need to agree in singularity/plurality (*one student* vs. *three students*). *Student* needs to move to Num in order to agree with *three* via Spec-head agreement.¹⁹

For the various forms in (12), the structure will be what follows (*them three* can be taken to be a null variant of *them three (students)*, possibly via deletion).²⁰



A pronoun is generally base-generated in D ((15a)).²¹ It can also be generated in N if used as a common noun ((15b)), as in *I saw three hims/thems in the mirror*. Since the plural feature is always realized on the noun (N moved to Num), (12a–e) are captured.

By contrast, Chinese, being a Classifier language, has an additional Classifier projection between the Number projection and N:



Xuesheng ‘student’ cannot move up to Num in order for the PI feature to be realized (as a suffix *-men*) because the head Noun cannot move across another head Cl.²² The only option left is for the PI feature to be raised to

D and suffixed to the nominal element in D, deriving the generalization that the PI feature is suffixed (realized as *-men*) to the element in D.²³

This account captures the facts discussed earlier and reduces the two plural morphemes in two different projections (N and D) into one generated in only one position (Num). That is, this account derives the analysis presented in the previous section (*-men* attached to the element in D in Chinese and *-s* attached to the element in N in English). However, this account makes a further prediction: it predicts that, even in Chinese, the plural morpheme can be realized in N when there is no intervening CI. The prediction is partially born out. There exists a contrast between the following two cases: (a) is better than (b).

(17) a. laoshi dui zhexie/naxie xuesheng-men tebie hao.
 teacher to these/those student-MEN especially good

‘The teacher is especially nice to these students.’

b. *laoshi dui zhe/na ji-ge xuesheng-men
 teacher to these/those several-CI student-MEN

tebie hao.

especially good

‘The teacher is especially nice to these/those couple of students.’

-xie is a quantity suffix attached to the demonstrative *zhe* or *na* to express a larger quantity of something.²⁴ It seems to be one of the rare quantity expressions that do not require the presence of a classifier: *zhexie* and *naxie* can be followed directly by a noun without a classifier.²⁵ The lack of a classifier can be shown by the fact that these expressions can be followed directly by a count noun as well as a mass noun (nouns without natural units), such as *shui* ‘water’ or *qian* ‘money’.²⁶

(18) a. qing ni xian ba zhexie shui yong guang zai
 please you first BA these water use up then

qu na.²⁷

go fetch

‘Please use up this water first before going for more.’

b. naxie qian hen you yong.

those money very have use

‘That money is quite useful.’

The lack of a classifier makes it possible for the suffix *-men* to be attached

to the noun: there is no Classifier projection intervening between Noun and Number ((17a)). By contrast, if a classifier is present, the plural feature cannot be suffixed to N, as in (17b) and (17c).²⁸

- (17) c. *laoshi dui zhexie/naxie ge xuesheng-men tebie
 teacher to these/those Cl student-MEN especially
 hao.
 good
 ‘The teacher is especially nice to these students.’

Even though the contrast between (17a) on the one hand and (17b–c) on the other confirms the prediction of the analysis discussed in this section, this revised account also creates a seemingly serious problem. The possibility of *-men* attaching to N in case there is no intervening classifier raises the question of why a bare noun cannot be suffixed with *-men* even when it is interpreted as indefinite. We have mentioned that a bare noun interpreted as definite can be suffixed with *-men* because it is in D. In Li’s (1997) account, the only difference between a definite and an indefinite bare noun lies in what the D is filled with. A definite bare noun has the D filled by the bare noun raised from N through Cl and Num (which are empty, unlike the cases discussed earlier with the overt number and classifier expressions). An indefinite bare noun has the D filled by a default (null) existential operator, as proposed in Longobardi (1994). N does not move to D, but nothing prevents N from moving through Cl to Num. In other words, for the same reason that *zhexie/naxie xuesheng-men* is possible (no overt classifier is present to block the combination of Num and N), *xuesheng-men* should also be possible with an indefinite interpretation. This obviously is not a correct extension of the analysis.

A possible solution is to take a closer look at the structures for a bare noun interpreted as indefinite and as definite. As mentioned earlier, a noun must be moved to D in order to be interpreted as definite. Under what conditions does this movement take place? It is possible to suggest that this movement takes place because there is a [+Def] feature in D that needs to be checked (by the raised N which also has a [+Def] feature, adopting the mechanism of feature checking in the Minimalism). It is not far-fetched at all to claim that a D contains a [+Def] feature, D being the locus of definiteness. Since a feature [+Def] must be in D, D is projected in the case of definite expressions.²⁹ The general internal structure of Chinese nominals can project Num and Cl if D is projected (Num can carry the Pl feature).

In the case of bare nouns interpreted as indefinite, there does not exist

a [+Def] feature. In earlier works (Li (1997)), it was assumed that the D of an indefinite nominal is a default existential operator, following Longobardi (1994), and that the N is bound by (or providing the restriction for) the default existential operator in D.³⁰ This is not the only option, however. It is possible that the existential operator is not in D but is outside the nominal, such as adjoined to VP (i.e., the existential closure adjoined to VP discussed in Diesing (1992)). In other words, we can maintain the idea that N must be bound by an operator without assuming that the operator is in D. The independently motivated existential closure adjoined to VP serves as an operator. More precisely, we can claim that projections are minimal: only the projections that are interpreted are projected. An indefinite bare noun (without an overt Number and Classifier) is simply generated as NP, without a D and the intervening empty Num and Cl. This being the case, an indefinite bare noun will not be suffixed with *-men*.

This approach has the advantage of keeping the contents of D constant: D is always [+Def]. Recall that only demonstratives, pronouns, and proper names are base-generated in D. All are definite inherently. They are therefore quite compatible with a D specified with [+Def]. D need not serve as a position hosting a “default existential operator” at the same time (which does not bear much similarity with the [+Def] feature and which stands as a stipulation).³¹

However, there might be a concern theoretically over projecting an indefinite bare noun as an N(P) bound by an operator outside the nominal. In the recent generative literature, many have assumed that an N(P) is a predicate; yet in the case under consideration, the indefinite N(P) is an argument. It is possible that the indefinite bare noun is always incorporated with the head V or P (typical positions for indefinite bare nouns are objects of V and P in Chinese), a general case of complex predicate formation.³² Another alternative is to assume with Chierchia (1996) that an N(P) in Classifier languages can be ambiguously an argument and a predicate. Indefinite bare nouns in argument position thus can be projected as NPs, not DPs. (However, we still maintain the claim that the interpretation of the bare N is determined by the available operator such as the existential closure adjoined to VP³³). Where we differ from Chierchia is that we require a definite nominal to still be represented as a DP, with D specified as [+Def] attracting the movement of a bare noun from N to D (through the intermediate Num and Cl).³⁴

Alternatively, we may not even need to resort to Chierchia’s claim that an NP in Chinese can be an argument. Note that, in an NP analysis, we maintain the claim that the indefinite bare noun is bound by an existential closure outside the NP. The interpretation problem will not arise if the

indefinite NP need not be interpreted with other elements first before being interpreted with the existential closure. If the latter can apply first, proper interpretation can be derived.

5. CONCLUSION AND IMPLICATIONS

Let us briefly summarize the account for the behavior of the Chinese plural morpheme *-men*, in contrast to the English plural *-s*, and the relevant nominal structures.

- (19) a. Plurality is specified in the head of the Number projection in both English and Chinese.
- b. A Classifier projection does not occur between the Number and Noun projection in English. Moreover, English has an obligatory agreement relation between Number and Noun. The noun is obligatorily raised to Num, and the plural is realized on N (alternatively, see notes (19) and (23)). Chinese does not have the obligatory Num-N agreement relation. Indeed, a N cannot be raised at all to Num when there is a Classifier projection between Num and N to block the movement from N to Num, according to the nominal structure [D [Num [Cl [N]]]].³⁵
- c. The plural morpheme in Chinese therefore is generally suffixed to an element in D, which is not separated from Num by any projection.
- d. The nominal structure [D [Num [Cl [N]]]] in Chinese, with the plural feature in Num, also accounts for the fact that, when the plural feature is realized as a suffix to an element in D, the element in D cannot be raised from N, crossing the intervening head Num and Cl. Moreover, a quantity [Num+Cl] expression is possible only when it follows the element suffixed with *-men* (which is D), not when it precedes it.
- e. The interesting contrast between the acceptability of expressions like (16a) and the unacceptability of a bare noun with *-men* interpreted as indefinite is captured structurally: a bare noun, when interpreted as indefinite, in fact is only projected as an N(P), without further projections.
- f. The implication of (e) is that what we see is generally what is projected (minimal projection). When a nominal expression contains a demonstrative, a pronoun, a proper name, or a [+Def] supplied by the contexts, the D is projected. Otherwise, a bare N can be simply projected as N(P), without further projections through Cl, Num to D.

- g. Point (f) implies that an indefinite bare noun is not individuated into separate units and is not marked in terms of singularity or plurality. This is quite true, as the bold-faced nouns in the following cases are quite vague in meaning. They do not express any notion of quantity or individuation.

- (20) a. ta bei **ren** da-shang le.
 he by person hit-hurt Par
 'He was hurt by some person(s).'
- b. ta yao dai **ren** lai.
 he will bring person come
 'He will bring some person(s).'

As concluding remarks, it should be pointed out that this proposal makes a clear prediction regarding the structures of nominal expressions: in both Classifier and non-Classifier languages, nominal expressions can be represented by a DP with a D dominating a NumP which contains the singular/plural feature. Moreover, even though there is only one position for Plurality, which is always under the node Number, Plurality can be realized by different elements depending on whether a language has a classifier. If a classifier occurs in the Classifier projection, the plural morpheme behaves like *-men* in Chinese: it is generally realized on the element in D, resulting in the definiteness requirement on common nouns and the different patterns of quantity expressions with pronouns, proper names, and common nouns. If a Classifier projection does not exist, the plural morpheme behaves like *-s* in English. It is realized in the element in N, the traditionally understood plural morpheme. Such predictions are borne out in many South East Asian classifier languages. Take Burmese for example.³⁶ Mostly in colloquial Burmese, the equivalent of *-men*, pronounced as /-do/ as in the English *sour dough* with a high creaky tone, is suffixed to common nouns, pronouns, and names, as in the following examples. They indicate a "collective" interpretation, and a common noun with /-do/ must be interpreted as definite:

- (21) a. cama-do pronoun
 I-female-DO
 'we/I and my group of friends/family.'
- b. thuu-do pronoun
 he/she- DO
 'they-he/she and her group of friends/those people'

- c. Ko-Thein-Tun-do proper name
 Ko Thein Tun and his group/family/friends/colleagues
- d. khalee-do common noun
 child- DO
 ‘the children’

The following sentence illustrates the definiteness requirement on a common noun with /-do/.³⁷

- (22) canaw-thii zee-hnaiq khalee-do twee-thii
 I-Subject-marker marker-at child- DO see-verb-particle
 ‘I saw the children at the market.’
 *‘I saw children at the market.’

NOTES

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¹ J. McCawley (1968, p. 568) notes that “plural count nouns pattern like singular mass nouns in all significant respects – they take a zero indefinite article, they both participate in a partitive construction, and in English they both take a zero generic article rather than the generic use of *the* of singular nouns”. McCawley (p.c.) brought my attention to the interesting work by Mufwene (1980) on Lingala (a Bantu language), which has the same morpheme for the prefix of mass nouns and plural count nouns for the *li/ma* class.

² It should be made clear from the very beginning that this work does not attempt to predict **when** a plural morpheme is realized overtly in a language. This work attempts only to answer the question of **where** a plural morpheme is realized within a nominal in languages when they overtly realize the plural morpheme on some element within a nominal. We therefore do not predict that all languages should be like English or Chinese discussed here. For instance, there may exist languages that do not have classifiers, and yet the counterpart of the Chinese expression in (2), appearing shortly in the text, is also bad (nouns modified by a numeral are still singular, in contrast to English), such as Finno-Ugric languages (J. McCawley, p.c.). And there may be languages that have overt plural marking in many other categories than nominals, such as adverbials in Korean (Sungdai Cho, p.c.). Moreover, a language may require overt plural marking on all elements within a nominal (agreement or concord phenomena).

³ According to Iljic (1994, p. 91), *-men* is not a plural but a collective marker. It “constructs a group from several already posited elements.” It “basically marks a subjective location: several individuals are grouped together relative to the speaker or some other subjective origin. In so far as it implies an intersubjective relationship, *men* pertains to the grammatical category of person.” Iljic (1998) summarizes the main property of *-men* as a

combination of number and person. Anticipating our discussion, it will be shown that *-men* is a plural feature generated in Number and realized on an element in D. Since D is the canonical position for pronouns, which include the feature for person, this analysis can capture Iljic's insight structurally.

⁴ A generally recognized constraint on the use of *-men* is that it is suffixed to a human-denoting expression. Norman (1988, p. 120) suggests that the most likely explanation of this restriction is the result of historical development: *-men* being evolved from the fusion of *mei* 'every, each' and *ren* 'person'.

⁵ Iljic noted some counterexamples to the traditional observation that quantity expressions do not occur with an N-*men*. See note (11).

⁶ As noted by Iljic (1994, p. 111, note 5), even though many works in the literature mention the possibility of interpreting *XiaoQiang+men* as 'XiaoQiang and the others', the preference now is to use *XiaoQiang tamen* 'Xiao Qiang them'. In fact, a small survey of my own indicates that a great majority of speakers accept only the latter form to mean XiaoQiang and the others. The former form, *XiaoQiang+men*, is used only to denote a group of people with the same characteristics or the same name as XiaoQiang. This is equivalent to the plural form of a proper name used as a common noun in English such as *I have met three Edisons in my life*. In this case, *-men* is used as a plural marker in the way *-s* is in English. Anticipating the later discussions, *XiaoQiang tamen sange* 'XiaoQiang them three' will be acceptable in the same way *tamen sange* is acceptable. *XiaoQiang* occurs in the Spec of D, with D being the pronoun. Also noted is that the "collective" reading is not possible with common nouns: *xuesheng-men* means a plurality of students rather than the student and the others. Again, anticipating the discussions later in the text, this will follow from the fact that common nouns are base-generated in N and receive a "regular" plural reading.

⁷ However, there are some very interesting but quite marked cases which allow a singular third person pronoun *ta* to co-refer with a plural nominal, discussed in detail by Xu (1998). Such usage has unique pragmatic and semantic constraints, which are not considered in this work.

⁸ The following sentence is quite acceptable with *pengyou-men sange*, which is better analyzed as consisting of two separate units: the whole *pengyou-men* and the part *sange*:

- (i) pengyou-men sange hui lai.
friend-MEN three-CL will come
'Three of the friends will come.'

⁹ If a speaker prefers to use *XiaoQiang-tamen* in place of *XiaoQiang-men* (cf. note (6)), this sentence is not acceptable. Address terms such as *xiaozhang* 'Principal' are also regarded as a proper name (see Li (1997)).

¹⁰ The Japanese *tachi* seems to be comparable to *-men* in Chinese, both having the effect of making an indefinite interpretation of the relevant nominal impossible (Keiko Miyagawa, p.c., also Takano (1992)). The Japanese data, however, are much more complicated because of the possibility of quantifier floating and scrambling, which are lacking in Chinese. Moreover, Japanese can have a marker *no* between a quantity expression and a head noun, which is generally not the case in Chinese.

¹¹ Iljic (1994, p. 93) notes that there do exist cases where a quantity phrase precedes N-*men*, such as *ni-men si wei taitai xiaojie-men* 'you four Madames and Ladies' (better translated as 'mesdames mesdamoiselles' in French (McCawley, p.c.)). He also notes that this is a case of double apposition: *-si wei* is apposed to *nimen*, both being in turn (after a prosodic pause) referred to by *taimai xiaojie-men* (cf. the expressions in (8), which are quite acceptable without a pause). Note that the said pattern is quite limited. It is mostly used when addressing the hearers. The following sentence, for instance, is not possible:

- (i) * wo kanguo ta-men siwei taitai xiaojie-men.
I saw them four-CL Mrs. lady-MEN

¹² Tang (1996) argues that in cases like (i), the N and the following [Num +CI] do not form a constituent: the expression [Num +CI] is a predicate, separated from the N.

- (i) wo maile bi san zhi.
 I bought pen three CI
 ‘I bought three pens.’

¹³ Longobardi (1994) claims that proper names are base-generated in N and moved to D. This work assumes with Li (1997) that proper names can be base-generated in N or D, depending on their interpretation. For the relevant arguments, see Li (1997). J. McCawley brought to my attention that in McCawley (1998, pp. 475–476 and 487, notes (40–41)) English bare proper names can be analyzed as having a zero definite article (therefore dominated by N, rather than D), on the grounds that when they have a restrictive modifier, an article is obligatory. Some of the examples are: *the future King Henry IV*, *the former Jacqueline Bouvier*, and *Bill Clinton is the same Bill Clinton that he’s always been*. It is possible that such proper names function like common nouns, generated in N. Note that, if a proper name is base-generated in D, it should not have a restrictive modifier, just like a pronoun in D. In the cases discussed here, the use of an article is obligatory with proper names only when restrictive modifiers occur. In other words, proper names can be base-generated in D (not occurring with an article or a restrictive modifier) or base-generated in N (occurring with an article and a restrictive modifier).

¹⁴ Thanks to J. McCawley (p.c.) for reminding me that the first to show that personal pronouns are determiners was Paul Postal (1966), who claimed that pronouns are articles. Postal also proposed to treat the pronouns in such examples as *you great ones*, *we children* as articles.

¹⁵ The speakers who accept only [Proper name + Pronoun-*men*] (*A-Q tamen* ‘A-Q them (A-Q and the others)’) for the collective reading do accept *A-Q-men* ‘A-Q’s’ for the plural reading (cf. note (6), (8)). It is possible that A-Q as a proper name is in Specifier of D position, a possibility that was entertained in Li (1997) and independently suggested by Dylan Tsai (p.c.).

¹⁶ There are some very interesting facts about an English nominal followed by a number. Firstly, a proper name or a common noun cannot occur in such pattern. Secondly, the pronoun must be plural (**him one*, **me one*). Thirdly, the first and second person are easier in this pattern: *we/you three* are better than *they three*. Finally, morphology seems to also play a role: *them three* is better than *they three*. See Postal (1966) for some idiosyncrasies in English and the prediction that languages without the idiosyncrasies (like Chinese) should exist. J. McCawley (p.c.) also notes that there are variations in native speaker’s judgment of such expressions in terms of degrees of acceptability and that such a pattern can only denote persons: *them three* cannot refer to three books or bicycles. I will follow Postal (1966) and assume that the English restrictions need to be stipulated.

¹⁷ We disregard the differences that *-men*, but not *-s*, requires a human expression and that *-s* is obligatory in English to express plurality, but *-men* in Chinese is not. See notes (19) and (23), below.

¹⁸ A very interesting conclusion emerged from discussions over chips and drinks with Shi-zhe Huang, Shu-ing Shyu, and Dylan Tsai, namely, that an expression denoting quantity and an indefinite expression can be represented differently. The former expresses the notion of quantity; the number expression such as *three* occupies the head of the Number projection. The latter is an individual-denoting expression; the Number head is the singular or plural feature, expressions like *three* taking the Spec of Num position (14). This structural difference may capture the fact that an expression denoting quantity does not need to have a plural number agreement when the number is more than one (*Three students IS not sufficient*). However, an indefinite expression must have the number agreement: *Three students WERE knocking at the door*.

¹⁹ If it is indeed agreement and agreement is obligatory in English, it captures the fact that English must have a plural suffix on the noun when the number in Spec of Num is more than one. Alternatively, it may be specified that nouns in English must carry a feature [+Sg] or [+PI], which must be checked off by the relevant feature in Number, in the spirit of the Minimalist program (see Chomsky (1995)).

²⁰ The head noun following a number in English can be deleted: *I want three (apples)*.

²¹ The unacceptability of *him three* should also be due to the failure of agreement between the pronoun and the number. A Spec-Head relation need not be the only configuration that defines agreement. The notion “concord” is also relevant in agreement phenomena.

²² We also need to assume that a classifier cannot realize the PI feature, as a classifier in Chinese is never suffixed with *-men*. This contrasts with a classifier in English which allows a plural suffix: *three glasses of wine*. Nevertheless, the behavior of a classifier in English is quite different from that in Chinese: *of* is required in the English expressions, but there is not such an equivalent in Chinese. An English classifier also patterns with an English count noun in requiring articles or plural morphology. It seems that, morpho-syntactically, a classifier in English is very much like a N, but a Chinese classifier is a separate category from N.

²³ A question that arises is why English does not allow the plural suffix to raise to D, as in Chinese. There may be two ways to capture this fact. One is that English nouns (specifically, count nouns) must be inflected for number morphologically (in terms of Minimalism, nouns have a plural or singular feature that needs to be checked, see note (19)). The other is the earliness principle (Pesetsky (1989)): if N, which is lower in the tree structure, can be combined with the plural suffix, the process must take place, rather than waiting till a later stage at the D projection for the plural feature to be realized on D.

²⁴ *-xie* can be in the Spec of Num (just like a number expression), with the head being a PI feature realized on N in (16a). Alternatively, it is possible to assume that *-xie* in *zhexie/naxie* ‘these/those’ is part of the demonstrative in D, rather than moved from Spec of Num. There is not much significant difference in the choice between the two options here.

-xie in *zhexie/naxie* is different from *xie yixie* in ‘some’. The former can take a classifier (though only a limited set, more general and unstressed ones), but the latter cannot:

- (i) ta dui zhexie ge ren mei hao yinxiang.
he to these CI person not good impression
‘He does not have good impression of these people.’
- (ii) *ta dui yixie ge ren mei hao yinxiang.
he to some CI person not good impression
‘He does not have good impression of some people.’

The unacceptability of (ii) indicates that *-xie* in *yixie* may be a Classifier, which also accommodates the fact that *-men* is not acceptable with *yixie*:

- (iii) *ta dui (zhe) yi-xie ren-men mei hao yinxiang.
he to this some person-MEN not good impression
‘He does not have good impression of some people.’

It is possible to surmise that *zhe/na-xie* developed from *zhe/na-yi-xie*, with *-yi* as a number and *-xie* as a classifier. It became possible for *-yi* to be deleted and *-xie* moved up from CI to Num and even to D to combine with the demonstrative *zhe/na*.

²⁵ The singular form *zhe* and *na* can also be followed directly by a noun without a classifier: *zhe/na ren* ‘this/that person’, cf. *zhe/na ge ren* ‘this/that person’.

²⁶ In fact, the generally accepted translations of *zhexie* as ‘these’ and *naxie* as ‘those’ are not quite correct in the sense that they are not direct equivalents of ‘these’ and ‘those’ in English. The English forms are used only with count nouns, but the Chinese ones can be

used with either count or non-count nouns. A more appropriate translation is just a bigger quantity of something as opposed to *zhedian* 'this-point' or *nadian* 'that-point', which denotes a smaller quantity.

²⁷ *dian* seems to be more like a classifier than *-xie*. No classifier can follow *zhe/na dian*, in contrast to *zhe/na-xie*: **zhe/na dian ge*. Not surprisingly, the N following *zhe/na dian* cannot be suffixed with *-men*: **zhe/na dian ren-men* 'these/those people'.

²⁸ Other quantity expressions not requiring a classifier are modifiers like *haoxie* 'plenty': *haoxie haizi-men zai kongdi shang ni zhui wo gan di pao zhe wan*. 'Many children are chasing each other having fun in the open.' (See Li and Chen (1988)).

²⁹ This can be equivalent to the generation of a definite article in D in English.

³⁰ For Longobardi (1994), D is occupied by *the* or a default existential operator when the expression is indefinite though he did not specify where the indefinite article *a* should be.

³¹ If an indefinite bare noun can be simply projected as an N, without a D (and other intervening projections), the question that immediately arises is what the projection should be for the indefinite [Num+Cl+N], such as *yi+ge+ren* 'one+Cl+person'. There are three options: (i) the existence of a null operator in D is to be assumed, (ii) the empty D in fact is a variable bound by an operator outside the nominal, and (iii) there is no D generated, and, in order to be interpreted as an indefinite argument (in contrast to a quantity expression, see Li (1997)), the [Num+Cl+N] must be bound by an operator. Each of these options has different theoretical and conceptual implications. However, only (iii) is compatible with the analysis proposed in the text.

³² This option will also solve the problem of Case assignment: Case is generally assigned to DPs, not NPs. If indefinite bare nouns are N(P)s and undergo incorporation, Case can be absorbed or eliminated (as in some cases of noun incorporation). Alternatively, it can be assumed that Case is assigned to either DPs or NPs, as long as they are in argument position, according to Chierchia's (1997) typology of nouns.

³³ It can also be a generic operator binding the bare noun. We do not concern ourselves with the generic interpretation in this work.

³⁴ The implication therefore is that, if D is projected, the intermediate categories (Num, Cl) are also projected.

³⁵ In contrast to nouns in Chinese which do not have a [+Pl] or [+Sg] feature to be checked off, Chinese pronouns are more like English count nouns in having a [+Pl] or [+Sg] feature specified. Personal pronouns are singular without *-men* and plural with *-men*. That is, *-men* is obligatory to express plurality in the case of pronouns. However, it is optional in the case of nouns. This difference in obligatoriness probably has some relevance to the fact that a pronoun-*men* can carry a plural meaning but a noun-*men* can have an added "modality" meaning, given the general understanding that two linguistic forms with identical meanings often have different pragmatic or discourse connotations.

³⁶ The discussion on Burmese came via e-mail from Andrew Simpson, to whom I am most grateful for his generous help. Burmese has two styles/registers which are formally distinct in certain ways: colloquial spoken Burmese, which is used in normal conversation and on TV, and literary Burmese, which is used for writing and more formal announcements, sometimes on serious news bulletins. The main difference between the two styles is that literary Burmese has a rather different set of functional elements, case-markers, verb-particles, etc. The *-men* equivalent occurs most clearly in colloquial Burmese. Literary Burmese behaves differently, a fact to which we would like to return in a later work.

³⁷ Even though the data concerning quantity expressions are in line with the claims in this paper, they are not solid evidence for our claim because of the possible predication analysis of the expressions [N-*do* + Num +Cl]. In a separate work in progress, I show that classifier languages should be distinguished into 2 types: [Num+Cl+N] or [N][Num+Cl]. Only the former type disallows plurality to be realized in N.

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