

On the Noun Phrase Structure of Jingpo^{*}

Candice Chi-Hang Cheung

University of Southern California
chihangc@usc.edu

This paper examines nominal expressions in Jingpo – a less-studied classifier language belonging to the Tibeto-Burman family, with attention to the function of the plural morpheme together with the relatively ‘free’ distribution of the demonstratives. Demonstratives can occur before or after the noun, giving rise to two different word orders: (i) [Dem(onstrative) + N(oun) + Cl(assifier) + Num(eral)] and (ii) [N + Dem + Cl + Num]. Assuming that the noun phrase structure of Jingpo is essentially head-final, I argue that a demonstrative can be base-generated in a position different from the head position of a Determiner Phrase (DP) in classifier languages. I propose that a demonstrative is base-generated in Specifier position of Locative Phrase (LocP), where Loc^0 is the locus of [deictic] feature. Assuming LocP is subcategorized by D^0 , where the former takes Numeral Phrase (NumP) as its complement, I further suggest that the demonstrative must raise to Spec-DP before Spell-Out in order to check off the [+def(inite)] feature. The proposal is in accordance with the different feature compositions of demonstratives and definite articles. I further show that the two word orders in (i-ii) can be correctly captured under a head-final approach.

1. Introduction

It has been generally recognized that classifier languages (especially for those belonging to the Sino-Tibetan family) are articleless languages in that they typically do not possess definite or indefinite articles. Despite the lack of definite or indefinite articles, classifier languages usually have demonstratives. The absence of articles and the use of demonstratives have led much controversy in the recent literature as to whether the noun phrase structure should be uniform across classifier languages. Essentially, the central question is whether noun phrases of all classifier languages must have a Determiner Phrase (DP) structure (see, for instance, Fukui 1986, among others, who argued that the functional category D^0 is absent in Japanese. See also Li 1998 for arguments that noun phrase of Mandarin should have a DP structure). While a vast majority of previous works is based on well-studied classifier languages like Japanese, Mandarin, Cantonese, etc., which have a fixed position for the demonstrative, this paper focuses on a far less-studied language, Jingpo – a Tibeto-Burman language that allows the demonstrative to appear either prenominal or postnominal. One of the major goals of this paper is to accommodate the different distribution of the demonstrative in Jingpo. Our examination of the Jingpo data will also reveal that Jingpo behaves like Mandarin, and thus the noun phrase structure of Jingpo is best-analyzed as having a DP structure.

This paper is organized as follows: in the following section, some background information about Jingpo will be provided, and I will demonstrate that two major types of classifiers can be distinguished in the language. In section 3, the distribution of the demonstrative in Jingpo will be closely examined, and I

^{*}I am especially indebted to Hagit Borer, Richard Larson, Audrey Li, Stephan Matthews, Roumyana Pancheva, Andrew Simpson, Jean-Roger Vergnaud and Maria Luisa Zubizarreta for their valuable comments, discussions and suggestions on the earlier versions of this paper. I would also like to give my special thanks to my Jingpo informants in Yunnan and Burma who have been very helpful in providing me with the Jingpo data. Part of this paper was presented at the Western Conference on Linguistics, University of Southern California, November 2004, the 16th North American Conference on Chinese Linguistics, University of Iowa, May 2004, and the 36th International Conference on Sino-Tibetan Languages and Linguistics, La Trobe University, Australia, November 2003. I would like to thank the audience for their helpful comments. All errors are of course my own.

will present evidence showing that Jingpo noun phrases have a DP structure in section 4. In section 5, I will provide a unified account for the intriguing properties of the plural morpheme *-ni* as well as the different placements of the demonstrative under a head-final approach. Some concluding remarks will be given in section 6.

2. Nominal elements in Jingpo

2.1 Some background information about Jingpo

Jingpo belongs linguistically to the Kachinic group within the Tibeto-Burman family, and is spoken by the Jingpo ethnic group, who mainly reside in three different regions, including the northeastern part of Myanmar (formerly Burma), the contiguous areas of India (Arunachal Pradesh and Nagaland), and China (Yunnan).¹ The greatest number of Jingpo lives in Myanmar (roughly 590,000), but around 120,000 live in China (according to the 1990 census) and several thousand in India. Like most languages belonging to the Tibeto-Burman family, Jingpo is a SOV language.

The Jingpo data presented in this paper are of two principal types: written and oral. The written data are drawn from a number of different sources, including Jingpo-Chinese dictionary (Xu et. al. 1983), grammar books (Liu 1984, Dai & Xu 1992) and current research on the grammar of Jingpo (Dai 1996, 1997, 1998, 1999, Dai & Gu 2003, among many others). As for the oral data, they are principally collected from my native informants who reside in Dehong Dai-Jingpo autonomous prefecture in Yunnan province and Burma. In Jingpo, two registers can be formally distinguished: the colloquial spoken Jingpo, which is mainly used in daily conversations; and literary Jingpo, which appears exclusively in poetry and literary writings (see, in particular, Dai & Xu 1992: Ch. 4). The data presented in this paper are primarily based on colloquial spoken Jingpo unless otherwise specified.

2.2 Linear ordering and the optionality of classifiers

Jingpo is generally recognized as a classifier language, despite the fact that it has far fewer classifiers than other languages within the Tibeto-Burman family (Dai & Xu 1992: 109-138). Although it is plausible to provide a more fine-grained categorization of classifiers according to their meanings or functions (for instance, sortal, collective, mesural and container classifiers are typically identified in grammar books by traditional grammarians), I suggest that the classifiers can be roughly subdivided into two different types, namely, count classifiers and massifiers. While both terms are adopted from Cheng & Sybesma (1999), the definitions of these terms here are slightly different from theirs. By the term ‘count classifiers’, I refer to those which co-occur exclusively with nouns whose referents have natural partitioning, i.e., count nouns (e.g., *student*, *book*, etc.). In contrast, ‘massifiers’ refer to those which can solely appear with mass nouns, i.e., those types of nouns whose referents do not have natural semantic partitioning (e.g., *wine*, *water*, etc.).²

Before turning to the properties of these two types of classifiers, I would like to present some evidence indicating that the count/mass distinction plays an important role in the grammar of Jingpo. I have argued elsewhere (Cheung, forthcoming) that the presence of count/mass distinction in Jingpo can be substantiated by the existence of a co-occurrence restriction between common nouns and the plural morpheme *-ni*. As shown below, while *-ni* can be suffixed to all common count nouns, including those denoting human (1a),

¹ Note that the term ‘Jingpo’ is the official Chinese Romanization of what is spelled elsewhere in the literature as ‘Jinghpaw’ or ‘Jinghpaw’.

² In order to provide formal definitions of count and mass nouns, I follow Bunt (1985) and Landman (1989, 1991) and assume that count nouns are those which have a built-in semantic partitioning, i.e., the count noun domain is a complete, atomic, join semilattice, whereas mass nouns refer to those which do not have such natural partitioning, i.e., the extension of mass nouns corresponds to a join semilattice which does not have minimal parts.

animate (1b) and inanimate referents (1c), the suffixation of *-ni* on mass nouns like *ntsin* ‘water’ is always barred, as shown in (1d).³

- | | | | | | | | |
|--------|------------|----|----------|----|---------|----|-------------|
| (1) a. | jongma-ni | b. | gumra-ni | c. | hpun-ni | d. | ntsin(*-ni) |
| | student-PL | | horse-PL | | tree-PL | | water-PL |
| | ‘students’ | | ‘horses’ | | ‘trees’ | | ‘water’ |

Given that the count/mass distinction does exist in Jingpo, let us turn to the distinctive properties of the two types of classifier. In contrast to many well-studied classifier languages like Mandarin, Cantonese, and Japanese, where the presence of classifier is always mandatory in enumeration, count classifiers can always be optionally omitted in Jingpo, as demonstrated in the following examples:

- | | | | | | | | |
|--------|------------------|---------|-------|----|--------------|--------|-------|
| (2) a. | sara | (marai) | masum | b. | udi | (hkum) | sanit |
| | teacher | Cl | three | | egg | Cl | seven |
| | ‘three teachers’ | | | | ‘seven eggs’ | | |

In contrast, massifiers can never be deleted in enumeration. Some illustrative examples are given below:^{4,5}

- | | | | | | | | | |
|--------|---------------------------------|---------------------|--------------|----|--------------------------------------|----------------------|------------|-------|
| (3) a. | n-gu | *(tum) | hkun | b. | shat | *(lanap) | sumshi | manga |
| | rice | Cl _{grain} | twenty | | cooked rice | Cl _{pinch} | thirty | five |
| | ‘twenty grains of rice’ | | | | ‘thirty five pinches of cooked rice’ | | | |
| (4) a. | n-gu | *(sing) | shi kru | b. | jum | *(kyin) | sumshi kru | |
| | rice | Cl _{litre} | ten six | | salt | Cl _{catty} | thirty six | |
| | ‘sixteen litres of rice’ | | | | ‘thirty six catties of salt’ | | | |
| (5) a. | ntsin | *(gom) | hkun sanit | b. | chyaru | *(dinghkru) | shi mali | |
| | water | Cl _{glass} | twenty seven | | wine | Cl _{bottle} | ten four | |
| | ‘twenty seven glasses of water’ | | | | ‘fourteen bottles of wine’ | | | |

Note that both types of classifiers always appear between the noun and numeral, giving rise to the relatively rigid order [N(oun) + Cl(assifier) + Num(eral)]. In addition, it should be noted that this order is the only permissible word order.

3. The distribution of demonstratives

Jingpo, similar to other classifier languages, does not possess definite or indefinite articles. However, in contrast to most languages which have only two or three demonstratives locating the referents at

³ The data from Jingpo are presented in the following format: in the first line, I present the Jingpo script followed by the gloss in the second line, and the English translation in the third line. In addition, the following abbreviations are used in glossing examples: Adj=adjective; AM=agentive marker; AOM=animate object marker; ASP=aspect; AUX=auxiliary; Num=Numeral; Cl=classifier; Dem=demonstrative; GEN=genitive marker; Loc=Locative marker; MOD=modifying marker; N=noun; NEG=negation; PERF=perfective aspect; PL=plural; REDUP=reduplication; SG=singular; TOP=topic marker.

⁴ For clarity, the meaning of the classifiers is indicated in superscripts (see, for instance, (3)-(5) in the main text).

⁵ Dai & Xu (1992) that the classifiers can be optionally deleted with numerals over ten, as shown in (i) and (ii):

- | | | | | | | | |
|-----|-------------|------|-----|------|---------------------|--------|----------------------|
| (i) | bolung | hkum | kru | (ii) | bolung | sumshi | manga |
| | ball | Cl | six | | ball | thirty | five |
| | ‘six balls’ | | | | ‘thirty five balls’ | | (Dai & Xu 1992: 128) |

However, I have argued elsewhere (Cheung, forthcoming) that the optionality of classifier cannot be due to the numeral it appears with but the count/mass distinction of the nouns. This is supported by the fact that deletion of classifiers is barred with mass nouns, as in (3-5), even though the numerals are all greater than ten.

different points on a distance scale, e.g., a proximal demonstrative such as *this* in English and its corresponding distal demonstrative *that*, Jingpo has three additional demonstratives, which indicate whether the referent is at a higher, level or lower elevation relative to both speaker and hearer. In other words, there are altogether five demonstratives in the language, with two of them indicating the relative distance of the referent with respect to the speaker and the hearer (i.e., related to the deictic dimension of distance), while the remaining three are relevant to another deictic dimension, namely, elevation. A summary of the semantic properties of these five demonstratives is given in Table 1 below:

Table 1: Demonstratives in Jingpo

Proximal (Near Speaker)	ndai
Distal (Near Hearer)	dai
Up (Away from Speaker and Hearer)	htora
Level (Away from Speaker and Hearer)	wora
Down (Away from Speaker and Hearer)	lera

The demonstratives in Table 1 can all appear in topic position, as in (6). This indicates that they are independent elements.

- (6) Dai go nye a n re.
 that TOP my GEN NEG be
 ‘That is not mine.’ (Dai & Xu 1992: 193)

Extensive documentation on the grammar of Jingpo (see Liu 1984, and Dai & Xu 1992) has shown that the distribution of the demonstrative is relatively free, as it can occur in either prenominal or postnominal positions (see (7a-b)). For expository purpose, the demonstratives are put in boldface in the following examples.

- (7) a. **Dai** marau hpun grai tu tsom ai.
 that pine tree very grow beautiful 3SG(Subj)STA
 ‘That pine tree grows up beautifully.’ (Dai & Xu 1992: 368)
- b. Marau hpun **dai** grai tu tsom ai.
 pine tree that very grow beautiful 3SG(Subj)STA
 ‘That pine tree grows up beautifully.’ (Dai & Xu 1992: 368)

Note that the same distribution applies to other demonstratives in Table 1 above. In other words, all the demonstratives shown in Table 1 can occur before or after the noun.

The fact that the demonstrative can either precede or immediately follow the noun is also apparent when it co-occurs with other elements in the noun phrase, including prenominal adjectives, classifiers, numerals and the noun itself, as demonstrated by the contrast in well-formedness between (8a-b) and (8c-d). (for clarity, whole noun phrases are underlined, and the demonstratives are in boldface).⁶ Note that (8a-b) have exactly the same interpretation despite differing placement of the demonstrative. The contrast between (8a) and (8e) further indicates that the prenominal demonstrative can only precede, but not follow, the adjective. Put differently, the adjective must be adjacent to the noun (8a-b, 8e). Also note that the presence of the topic marker *go* is always optional in Jingpo.⁷

⁶ Note that the data presented in this section (especially with regard to the distributions of the demonstrative) are slightly different from those in Cheung (2003a, b) but I strongly believe that the data presented in this paper are closer to the truth.

⁷ The particle *ai* in (8a-e) is often called the ‘sentence final particle’ (SFP), and it shows number and person agreement with the subject. A natural question arises concerning the examples in (8a-e), since while the subject in these examples refers to a plural referee, the SFP encodes singular agreement. Dai Qingxia (personal communication) and other native informants observe that SFPs show plural agreement with the subject only when the latter refers to human beings or inanimates that have been anthropomorphized or personified.

- (8) a. Ndai (gaja ai) n-gu kyin masum (go) grai hpro ai.
 this good MOD rice Cl^{catty} three TOP very white 3SG(Subj)STA
 ‘These three catties of good rice are very white.’
- b. (Gaja ai) n-gu **ndai** kyin masum (go) grai hpro ai.
 good MOD rice this Cl^{catty} three TOP very white 3SG(Subj)STA
 ‘These three catties of good rice are very white.’
- c. *(Gaja ai) n-gu kyin **ndai** masum (go) grai hpro ai.
 good MOD rice Cl^{catty} this three TOP very white 3SG(Subj)STA
- d. *(Gaja ai) n-gu kyin masum **ndai** (go) grai hpro ai.
 good MOD rice Cl^{catty} three this TOP very white 3SG(Subj)STA
- e. *(Gaja ai) **ndai** n-gu kyin masum (go) grai hpro ai.
 good MOD this rice Cl^{catty} three TOP very white 3SG(Subj)STA

Note that the prenominal distributions of the demonstrative or the noun as shown in (8a-b) cannot be attributed to topicalization. This is substantiated by the fact that while the topic marker *go* may optionally appear after the whole noun phrase (as in (8)), it cannot immediately follow the demonstrative or the noun alone, as illustrated in the following examples:

- (9) a. Ndai (*go) n-gu kyin masum n gaja ai.
 this TOP rice Cl^{catty} three NEG good 3SG(Subj)STA
 ‘These three catties of rice are not good.’
- b. N-gu (*go) ndai kyin masum n gaja ai.
 rice TOP this Cl^{catty} three NEG good 3SG(Subj)STA
 ‘These three catties of rice are not good.’

The position of the demonstrative is likewise not attributable to other kinds of movements, such as object shift. For instance, according to Dai & Xu (1992: 366-367), object shift is fairly common in Jingpo, and the movement is normally triggered by focus in the sense that the preposed object noun phrase is emphasized, as demonstrated in (10) (for clarity, the direct objects in (10a-d) are underlined):

- (10) a. Shi dai jongma marai masum *(hpe) mu yu sai.
 s/he that student Cl three AOM see PERF 3SG(Sub)DYN
 ‘S/he saw those three students.’
- b. Dai jongma marai masum *(hpe) shi mu yu sai.
 that student Cl three AOM s/he see PERF 3SG(Sub)DYN
 ‘S/he saw those three students.’
- c. Shi jongma dai marai masum *(hpe) mu yu sai.
 s/he student that Cl three AOM see PERF 3SG(Sub)DYN
 ‘S/he saw those three students.’
- d. Jongma dai marai masum *(hpe) shi mu yu sai
 student that Cl three AOM s/he see PERF 3SG(Sub)DYN
 ‘S/he saw those three students’

However, preposing of the demonstrative or the head noun alone from the object noun phrase is always barred, as shown in (11) (for clarity, the preposed demonstrative or noun in (11a-b) is put in boldface):

- (11) a. ***Dai** shi jongma marai masum hpe mu yu sai.
 that s/he student Cl three AOM see PERF 3SG(Sub)DYN
- b. ***Jongma** shi dai marai masum hpe mu yu sai.
 student s/he that Cl three AOM see PERF 3SG(Sub)DYN

Furthermore, similar to the topic marker *go*, the animate object marker *hpe* can only appear after the whole object noun phrase (c.f., (10) above) but it can never immediately follow the demonstrative or the

noun, as shown in the following examples (for clarity, the preposed demonstrative or noun in (12a-b) is put in boldface):

- (12) a. ***Dai** hpe jongma marai masum shi mu yu sai.
 that AOM student Cl three s/he see PERF 3SG(Sub)DYN
 b. ***Jongma** hpe dai marai masum shi mu yu sai.
 student AOM that Cl three s/he see PERF 3SG(Sub)DYN

Since *go* and *hpe* function to mark the boundary of topic and object noun phrases respectively, the fact that the demonstrative or the head noun cannot be the topic or object by itself when co-occurring with other elements within the noun phrase provides crucial evidence that the position of the demonstrative relative to the head noun cannot be attributed to movement of either one of them to a position outside the noun phrase. For concreteness, (9a, 11a, 12a) and (9b, 11b, 12b) are schematically represented as (13) and (14), respectively, which show that raising of either the demonstrative or the head noun alone to the topic or object position always results in unacceptability. It follows that the different placements of the demonstrative in (8a-b) must be due to movement internal to the noun phrase.

- (13) Movement of Dem alone from object noun phrase (=11a/12a):
 a. *[XP Dem_i [x' go/hpe ([IP Subject ...][_{vP} ~~Dem_i~~ + N + Cl + Num [VP V]]]]]
 b. *[XP Dem_i [x' go/hpe ([IP Subject ...][_{vP} N + ~~Dem_i~~ + Cl + Num [VP V]]]]]
 (14) Movement of N alone from object noun phrase (=11b/12b):
 a. *[XP Ni [x' go/hpe ([IP Subject ...][_{vP} Dem + ~~N_i~~ + Cl + Num [VP V]]]]]
 b. *[XP Ni [x' go/hpe ([IP Subject ...][_{vP} ~~N_i~~ + Dem + Cl + Num [VP V]]]]]

Thus far, we have established that the relatively free distribution of the demonstrative can neither be due to topicalization of the demonstrative or the head noun (see (9)) nor can it be attributed to movement of either element outside of the noun phrase (c.f., (11-12)). Based on these facts and the data in (8) above, we can now confirm that Jingpo noun phrases allow only two possible orders, which are listed below:

- (15) a. [Dem + (Adj + *ai*) + N + Cl + Num] (=8a)
 b. [(Adj + *ai*) + N + Dem + Cl + Num] (=8b)

In what follows, I will provide evidence that the noun phrase structure of Jingpo is in essence the same as that of Mandarin in that both should be analyzed as having a DP structure.

4. Evidence for the DP structure of Jingpo noun phrases

4.1 Distributions of pronouns and noun phrases with demonstratives

In recent studies on Mandarin noun phrases, Li (1997, 1998) provides extensive evidence showing that the noun phrase of Mandarin is best-analyzed as having a DP structure with the assumption that D⁰ is the locus of definiteness which can house not only definite articles but also demonstratives. Due to the limit of space, my discussion will center on the existential construction.

In the literature, it has been widely recognized that number expressions in the form of [Numeral + Classifier + Noun] in Mandarin are generally disallowed in the subject position, regardless of whether the numeral equals 'one' or more than 'one' (see, for instance, Chao 1968, Lee 1986, Li 1998, Li and Thompson 1981, Tsai 1994, 1996, 2001, among many others). Instead, these number expressions must be preceded by the existential *you*, as shown in the following examples:

- (16) a. *(You) yi-ge xuesheng lai-le.
 have one-Cl student come-PERF
 ‘There was a student (who) came.’
 b. *(You) san-ge xuesheng lai-le.
 have three-Cl student come-PERF
 ‘There were three students (who) came.’

Evidence that *you* ‘exist/have’ serves as a existential binder in Mandarin comes from the fact that pronouns – elements which are generally classified as ‘definite’ (see, for instance, Milsark 1977) – can never be preceded by *you* (17a-b). Likewise, for noun phrases with demonstratives, the same contrast is observed (18a-b). The exclusion of [+def(inite)] elements such as pronouns, proper names, etc. from existential constructions is generally known as the ‘definiteness effect’ in the literature (Huang 1987).

- (17) a. *You wo/ni/ta/women/nimen/tamen lai-le.
 have I/you/he/we/you(PL)/they come-PERF
 Intended reading: ‘There were me/you/him/us/you(PL)/them (who) left.’
 b. wo/ni/ta/women/nimen/tamen lai-le.
 I/you/he/we/you(PL)/they come-PERF
 ‘I/you/he/we/you(PL)/they came.’
- (18) a. *You zhe san-ge ren lai-le.
 have this three-Cl person come-PERF
 Intended reading: ‘There were those three people (who) left.’
 b. Zhe san-ge ren lai-le.
 this three-Cl person come-PERF
 ‘These three people came.’

A similar contrast can be observed in Jingpo. As shown in (19), Jingpo, like Mandarin, possesses an existential element *nga* ‘exist’ (in boldface in (19)), and the pronoun must be scrambled to the topic position in the existential construction (19b); otherwise, it will yield ungrammaticality (19a).

- (19) a. *Jong e shi **nga** ai.
 school Loc s/he exist 3SG(Subj)STA
 Intended: ‘There is him/her who is at school.’
 b. Shi jong e **nga** ai.
 s/he school Loc exist 3SG(Subj)STA
 ‘S/he is at school.’

(Dai & Xu 1992: 263)

Based on the above contrast, it is plausible to construe the scrambling of the pronoun as triggered by the need to escape from the existential element *nga*. More precisely, assuming *nga* ‘exist’ as the head of vP, and the sentence final particle as the head of IP, we may analyze (19a-b) as having the structures in (20a-b)

(with irrelevant details omitted).⁸ It follows that (20a), but not (20b), is ruled out because the pronoun *shi* ‘s/he’ is within the scope of the existential in the former:

- (20) a. *[IP [vP ... *shi* *nga*] ai]
 b. [IP *shi* [vP ... ~~*shi*~~ *nga*] ai]

Noun phrases with demonstratives pattern like pronouns in that they are also barred from appearing within the scope of the existential. Instead, they must be scrambled to the topic position, outside the scope of *nga* ‘exist’ (21-23):

- (21) a. **Jong e jongma dai (marai) masum nga maai.*
 school Loc student that CL three exist 3PL(Subj)STA
 Intended: ‘There are those three students at school.’
 b. *Jongma dai (marai) masum (go) jong e nga maai.*
 student that CL three TOP school Loc exist 3PL(Subj)STA
 ‘Those three students are at school.’
- (22) a. **Maling e gumra dai masum nga ai.*
 forest Loc horse that three exist 3SG(Subj)STA
 Intended: ‘There are those three horses in the forest.’
 b. *Gumra dai masum (go) maling e nga ai.*
 horse that three TOP forest Loc exist 3SG(Subj)STA
 ‘Those three horses are in the forest.’

⁸ Since sentence final particles (SFPs) in Jingpo have the function of marking number and person agreement with the subject (and sometimes also with the object) (see also fn. 7), I suggest that it occupies the head IP position, with the latter assumed to be a cover term for both the Tense and Agr(ement) Projections under the Agr-less model proposed in Chomsky (1995: Chapter 4). Evidence in support of our claim comes from Gu & Gu (2002), who note that while clauses expressing a realis situation can contain the SFPs (ia-b), those expressing an irrealis situation cannot (iia-b). For clarity, I have put the embedded clauses within the square brackets ‘[]’, and the SFPs in the embedded clauses in boldface.

- (i) a. [Num lera ra go shi hkrai sha tsom **ai**] zonnon sam
 woman that.lower REDUP TOP she alone only pretty 3SG(Subj)STA think perhaps
 uai.
 3SG(Subj)3SG(Obj)STA
 ‘The woman down there might think that only she is pretty.’ (Dai & Xu 1992: 57)
- b. Shi [nampam hkye **sai**] mu sai.
 s/he flower red 3SG(Subj)DYN see 3SG(Subj)DYN
 ‘S/he saw that the flower was getting red.’ (Gu & Gu 2002: 8)
- (ii) a. [Lamawa hpotni nang gaga de n sa yang], an jahta chyai hkat
 If tomorrow you other place NEG go if we(dual) chat play together
 ga!
 CONS (Dai & Xu 1992: 394)
 ‘If you are not going to other places tomorrow, we two can have a chat together!’
- b. [Lago hta tsi chya ton tim], wot no jung ai.
 foot top medicine smear on even.if leech again bite 3SG(Subj)STA
 (Lit.) ‘Even if one applies medicine on the feet, the leech will still bite them.’ (Dai & Xu 1992: 395)

Following Gu and Gu, I assume that the SFPs share a similar function as tense, given that tense is a crucial notion which permits a situation or state of affairs to be located or situated in temporal space (Smith 1997). It then follows that sentences or clauses having SFPs must be tensed clauses (i.e., they must have the structure of an IP), assuming the latter refer to those which allow predications to be located in space, despite the fact that tense is not overtly marked in Jingpo.

- (23) a. *Shinggan e hpun dai mali nga ai.
 outside Loc tree that four exist 3SG(Subj)STA
 Intended: 'There are those four trees outside.'
- b. Hpun dai mali (go) shinggan e nga ai.
 tree that four TOP outside Loc exist 3SG(Subj)STA
 'Those four trees are outside.'

Based on the observation that noun phrases with demonstratives in both Mandarin and Jingpo are alike in that they can never show up within the scope of existential, I argue that they have essentially the same structure, i.e., they both have DP as their highest functional projection.

4.2 Distributions and interpretations of number expressions

While I have shown that elements with [+def] feature, such as pronouns and noun phrases with demonstratives, behave alike in Mandarin and Jingpo in that they must be outside the scope of existential, a natural question arises concerning the distribution of number expressions in Jingpo. In contrast with Mandarin where number expressions must be within the scope of the existential (see (16a-b) above), those in Jingpo can be interpreted as either definite or indefinite, depending on their scopal relation with the existential binder *nga*. When the number expressions occurring inside the scope of the existential, they are consistently interpreted as indefinite, as evidenced by the fact that they can be used as answers to 'how many' questions (24a-c). By contrast, if the number expressions appear outside the scope of *nga*, they have the definite reading, as shown in (25a-c):

- (24) How many students/horses/trees are at school/in the forest/outside?
- a. Jong e jongma (marai) masum nga maai.
 school Loc student Cl three exist 3PL(Subj)STA
 'There are three students at school.'
- b. Maling e gumra masum nga ai.
 forest Loc horse three exist 3SG(Subj)STA
 'There are three horses in the forest.'
- c. Shinggan e hpun mali nga ai.
 outside Loc tree four exist 3SG(Subj)STA
 'There are four trees outside.'
- (25) Where are the students/horses/trees that we saw yesterday?
- a. Jongma (marai) masum (go) jong e nga maai.
 student Cl three TOP school Loc exist 3PL(Subj)STA
 '(The) three students are at school.'
- b. Gumra masum (go) maling e nga ai.
 horse three TOP forest Loc exist 3SG(Subj)STA
 '(The) three horses (specific) are in the forest.'
- c. Hpun mali (go) shinggan e nga ai.
 tree four TOP outside Loc exist 3SG(Subj)STA
 '(The) four trees (specific) are outside.'

In addition, contrary to Mandarin where number expressions not preceded by existential *you* are non-referential, and fail to enter into a co-referential relation with the following nominal expressions (see Li 1998 for more detailed discussion), those in Jingpo are always referential, regardless of the availability of *nga*. Evidence in favor of treating number expressions without the existential *you* in Mandarin as purely 'quantity-denoting' expressions comes from the fact that they cannot bind a following pronoun, as shown in (26a-b).

- (26) a. *San-ge reni tai-bu-dong ni gei tameni de gangqin.
 three-Cl person lift-not-move you give them DE piano
 Intended: ‘Three people cannot lift up a piano you gave to them.’
 b. You san-ge reni tai-bu-dong ni gei tameni de gangqin.
 have three-Cl person lift-not-move you give them DE piano
 ‘There are three people (who) cannot lift up a piano you gave to them.’ (Li 1998: 700)

In contrast, the number expressions in Jingpo can readily bind a following pronoun, hence suggesting that they are referential:

- (27) masha masumi go nang shanhte: hpe ya ai laika sadek shi hpe
 person three TOP you them AOM give MOD book Cl^{box} ten AOM
 nlu hpai maai.
 cannot lift 3PL(Subj)STA
 ‘(The) three people cannot lift up the ten boxes of books you gave to them.’

To capture the (in)definiteness of the number expressions and their binding properties in Jingpo, I assume that numeral expressions within or outside the scope of existential have a DP structure, with the only difference being that those within the scope of existential (as in (24)) are headed by a null D^0 bound by the existential, hence giving rise to an indefinite reading. Those outside the scope of existential (as in (25)), by contrast, have the head DP position filled by the numeral raised from the head of NumP, assuming D^0 as the locus of definiteness (Li 1999a). Note that the definite reading is derived not only by the movement of Num⁰-to- D^0 but also the phrasal movement of the whole noun phrase into Spec-IP, since recall that definite elements like pronouns are barred from occurring inside the scope of the existential (see (20a-b) above). On this view, the indefinite number expressions like (24a) would be schematized as (28), and the definite ones like (25a) as (29):⁹

- (28) [IP [_{vP} ∃ [DP [NumP [CIP [NP jongma] marai] masum] ∅] ...nga...]] (indefinite)
 (29) [IP [DP [NumP [CIP [NP jongma] marai] ~~masum~~] masum] [_{vP} ...nga...]] (definite)

The proposed structures clearly suggest that number expressions with either indefinite or definite reading consistently have a DP structure.

4.3 Distribution and Interpretation of common nouns with plural morphemes

Indirect evidence in support of the DP analysis of Jingpo noun phrases comes from the distributional restrictions and interpretation of common nouns (henceforth, CNs) suffixed with the plural morpheme *-ni*. Both Mandarin and Jingpo possess plural morphemes, *-men* and *-ni*, respectively,

⁹ A natural question arises is why the number expressions appearing in subject position in Mandarin cannot have a definite reading. A suggested answer from Tsai (2001) is that Mandarin lacks V^0 -to- I^0 movement due to its impoverished agreement morphology, and thus number expressions are forced to stay in Spec-VP, and check their nominative Case feature VP-internally while the EPP feature on I is checked by an empty expletive *pro* in Spec-IP (see also Huang 1987, Huang et. al. 1998, Li 1999b). In the same vein as Huang (1988) and Cheng (1991), Tsai further assumes that the existential *you* base-generated as the head of Modal Phrase (ModP), which takes VP as its complement, and it serves as an existential binder of the number expression in Spec-VP. This explains why a number expression appearing in the subject position must have an indefinite reading. Note that Tsai’s analysis is entirely compatible with my proposal, since I have argued that the definite reading of a number expression is derived not only by DP-internal movement of Num⁰-to- D^0 but also the raising of the whole noun phrase outside the scope of the existential. Given that a number expression is prohibited to appear outside of the existential *you* in Mandarin according to Tsai, my proposal correctly predicts that it can only be interpreted as indefinite.

which can be suffixed onto CNs.¹⁰ However, the target of suffixation of *-men* in Mandarin is more restricted, as it can only be suffixed to CNs denoting human referents (30), whereas *-ni* in Jingpo can be suffixed to any lexical/ontological count CNs although it can never attach to lexical/ontological mass CNs (31).

- (30) xuesheng-men, *gou-men, *qiche-men, *shui-men (Mandarin)
 student-PL dog-PL car-PL water-PL
 ‘students’
- (31) jongma-ni, gumra-ni, hpun-ni, *ntsin-ni (Jingpo)
 student-PL horse-PL tree-PL water-PL
 ‘students’ ‘horses’ ‘trees’

In addition, CNs suffixed with plural morpheme in both Mandarin and Jingpo are incompatible with cooccurring numerals, as shown in (32) and (33), respectively (see Li 1999a for more detailed discussion on the properties of *-men* in Mandarin):

- (32) san-ge xuesheng(*-men) (Mandarin)
 three-CL student-PL
 ‘three students’
- (33) a. jongma(*-ni) (marai) masum b. gumra(*-ni) masum c. hpun(*-ni) masum
 student-PL CL three horse-PL three tree-PL three
 ‘three students’ ‘three horses’ ‘three trees’

Furthermore, [CN + *-men*] in Mandarin is always interpreted as definite, as evidenced by the fact that it can never occur in existential constructions (34). Similarly, [CN + *-ni*] in Jingpo must be interpreted as definite, as it is required to scramble outside the scope of existential *nga* (35-37), which patterns like elements with [+def] feature such as pronouns and noun phrases with demonstratives (see (19) and (21-23) above):

¹⁰ The status of *-men* has been a hotly-debated issue in the literature, since in addition to CNs denoting human referents, *-men* can be suffixed onto pronouns (see Table 1) and proper names (see (i)), hence it has been suggested by some authors that *-men* is best-analyzed as a ‘collective marker’ rather than a plural morpheme (see Ijic 1994, 2001). According to Corbett (2000), a ‘collective marker’ has the function of allowing the nouns suffixed with *-men* to be construed together, i.e., as a unit.

Table 1: Pronouns of Mandarin (c.f., Li & Thompson 1981: 41)

	Singular	Plural
1 st person	Wo	Wo-men
2 nd person	Ni	Ni-men
3 rd person (human, fem./masc.)	Ta	Ta-men
3 rd person (inanimate)	Ta	*Ta-men/ta

- (i) Wo qing XiaoQiang-men san-ge (ren) chifan. (Chinese)
 I invite XiaoQiang-PL three-CL person eat
 ‘I invited XiaoQiang and two others (in the group) for a meal.’
 NOT: ‘I invited three people all named XiaoQiang.’ (Li 1999a: 80)

The fact that *-men*, but not *-ni*, can give rise to a collective reading when attached to proper names can be ascribed to the lexical properties of the plural morpheme. *-Men* is homophonous in the sense that it has a dual function: it serves as a plural marker when attached to elements base-generated in N⁰, and a collective marker when attached to D⁰ elements. Therefore, it is more accurate to call *-men* in Mandarin as a collective/plural marker. In contrast, *-ni* is restricted to attach to CNs to express plurality, and thus it has simply the status of a plural marker in Jingpo.

- (34) a. *You ren-men lai-le. vs. You ren lai-le. (Mandarin)
 have person-PL come-Perf. have person/people come-Perf.
 ‘Someone came.’
 b. *Mei you ren-men vs. Mei you ren
 not have person-PL not have person/people
 ‘There is no one.’
- (35) a. Jongma-ni jong e nga maai. (Jingpo)
 student-PL school Loc exist 3PL(Subj)STA
 ‘The students are at school.’
 NOT: ‘(Some) students are at school.’
 b. *Jong e jongma-ni nga maai. (Jingpo)
 school Loc student-PL exist 3PL(Subj)STA
- (36) a. Gumra-ni maling e nga ai.
 horse-PL forest Loc exist 3SG(Subj)STA
 ‘The horses are in the forest.’
 NOT: ‘(Some) horses are in the forest.’
 b. *Maling e gumra-ni nga ai.
 forest Loc horse-PL exist 3SG(Subj)STA
- (37) a. Hpun-ni shinggan e nga ai.
 tree-PL outside Loc exist 3SG(Subj)STA
 ‘The trees are outside.’
 NOT: ‘(Some) trees are outside.’
 b. *Shinggan e hpun-ni nga ai.
 outside Loc tree-PL exist 3SG(Subj)STA

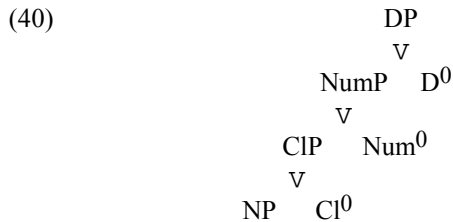
Additional evidence supporting that CNs with plural morpheme are always interpreted as definite comes from the interpretational difference between bare CNs and CN with the plural morpheme, and their scopal relations with intensional verbs in both Mandarin and Jingpo. CNs suffixed with plural morpheme are always interpreted as definite, and consistently take wide scope over the intensional verb, as exemplified in (38b, 39b), whereas bare CNs can have either definite or indefinite reading (38a, 39a):

- (38) a. Wo qu zhao haizi. (Mandarin)
 I go find child
 ‘I will go find the/a/some child/children.’
 b. Wo qu zhao haizi-**men**.
 I go find child-MEN
 ‘I will go find the children.’ (Li 1999: 78)
- (39) a. Tsirung dai go tsi sara tam nga ai. (Jingpo)
 hospital that Top nurse look.for Prog 3SG(Subj)STA
 √look-for > nurse(s): ‘That hospital is looking for a nurse/nurses (to hire).’
 *nurse(s) > look-for: ‘There is/are a nurse/nurses that hospital is looking for.’
 b. Tsirung dai go tsi sara-**ni** tam nga ai.
 hospital that Top nurse-PL look.for Prog 3SG(Subj)STA
 *look-for > nurse-NI: ‘That hospital is looking for nurses (to hire).’
 √nurse-NI > look-for: ‘That hospital is looking for the nurses.’

Assuming Li’s (1999a) proposal that the definite reading of [CN + *-men*] is derived by raising of CN through the (empty) Cl^0 and Num^0 to the head DP position in order to check off the [+def] feature in D^0 , the definite reading of [CN + *-ni*] in Jingpo indirectly supports the existence of DP projection as the locus of definiteness.

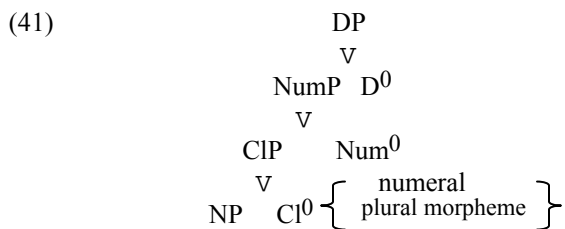
5. The noun phrase structure of Jingpo: a head-final approach

This section aims to provide a unified account for the two intriguing properties of Jingpo noun phrases, including (i) the definite reading of [CN + *-ni*] and its complementarity with [CI + Num]; (ii) the relatively ‘free’ distribution of the demonstratives. To begin with, I would like to spell out the three assumptions I have made regarding the noun phrase structure of Jingpo: first, based on the three pieces of evidence given in Section 4.1, I follow Li (1997, 1998) and assume that the noun phrase of Jingpo, similar to that of Mandarin, always has a DP structure, where D⁰ functions as the locus of definiteness. Second, I follow Tang (1990), and assume that the noun phrase structure of Mandarin (and classifier languages in general) is composed of four distinct layers: (i) DP as the locus of definiteness (a la Li 1999a) (ii) NumP as the host of numerals, (iii) CIP as the host of classifiers, and (iv) NP which serves as the lexical or substantive layer.¹¹ The assumption that NP is subcategorized by CIP has the merit of characterizing the classifier-noun ‘agreement’ relation’ as a selectional restriction of the classifier, since in Jingpo (and classifier languages in general), the nouns cannot be randomly associated with any classifier. Third, given that Jingpo is widely accepted as a strictly head-final language (Dai & Gu 2003), I assume that its noun phrase also has a head-final structure, as schematized in (40) (irrelevant details are set aside):



5.1 Account for the complementarity of [CN + *-ni*] and numerals

In order to capture the definite reading of [CN + *-ni*] and its complementarity with [CI + Num], two possible executions are suggested. Based on Dryer’s (1989) observation that OV languages often have numerals and number morphemes (singular, plural, dual, etc.) occur to the right of the noun, a possible way to capture the complementary distribution would be to assume that both numeral and number morpheme (essentially *-ni* in Jingpo) are based generated in the same position – the head position of NumP, as shown in (41):



This analysis has the merit of rendering a unified account for the ungrammaticality of [mass CN + *-ni*]. Recall that *-ni* is only compatible with lexical count nouns and count classifiers can always be optionally deleted in Jingpo. When the head NumP is filled with *-ni*, the count classifier must be deleted in order to allow *-ni* to be ‘supported’ by the noun. Since massifiers can never be omitted in Jingpo, this provides a natural explanation for the lack of [mass CN + *-ni*], since head movement of N⁰-to-Num⁰ is expected to be

¹¹ See Simpson (2005) for arguments that Num and Cl should be heads of separate projections (as in (40)). However, I remain neutral as to whether NumP can be in the Spec position of Cl, as suggested in Huang (1982), among many others. Also, for many studies on Japanese noun phrases, it has been quite widely accepted that [Num + Cl] can be head of a single projection, be it under CIP (as argued in Ishii 2000) or NumP (see, for instance, Kawashima 1998, Fukui & Takano 2000).

blocked by the filled Cl^0 (HMC). In order to account for the definite interpretation of [count CN + *-ni*], I argue that it must further raise before Spell-Out to D^0 to check off the [+def] feature (a la Li 1999a), as schematized in (42):

(42) [DP [NumP [CIP [NP ~~jongma~~] ~~jongma~~] ~~jongma-ni~~] jongma-ni]

Given (42), it can be concluded that [CN + *-ni*] in Jingpo always end up in the head position of DP in order to derive the definite reading.¹²

5.2 Account for the relatively ‘free’ order of demonstratives (Dems)

In this section, I will attempt to account for the relatively ‘free’ distribution of the demonstratives in Jingpo, namely, the two orders given in (15a-b) (repeated below as (43a-b)), and the impermissible orders are listed in (44a-c) (see (8c-e) above for concrete examples):

(43) a. [Dem + (Adj + *ai*) + N + Cl + Num]
b. [(Adj + *ai*) + N + Dem + Cl + Num]

(44) a.*[(Adj + *ai*) + N + Cl + Dem + Num]
b.*[(Adj + *ai*) + N + Cl + Num + Dem]
c.*[(Adj + *ai*) + Dem + N + Cl + Num]

Given our assumption that Jingpo noun phrases have a head-final structure (see (62) above), it is predictable that the demonstrative cannot be base-generated in the head DP position. Otherwise, we would expect (44b) to be grammatical, contrary to the fact. However, this is not too surprising after all, since recall that in Section 4.1.2, I have shown that number expressions in Jingpo, unlike those in Mandarin, can carry a definite reading provided that they are outside the scope of existential *nga*. In addition, I have suggested that for number expressions that are interpreted as definite, the numeral can raise to the head DP position (see (29), repeated below as (45)), hence providing a natural account for inability of demonstrative to be base-generated in D^0 in Jingpo:

(45) [IP [DP[NumP[CIP[NP ~~jongma~~] marai] ~~masum~~] masum] [_{VP} ...nga...]] (definite)
‘(the) three students’

5.2.1 DemP as base-generated in Spec-DP position

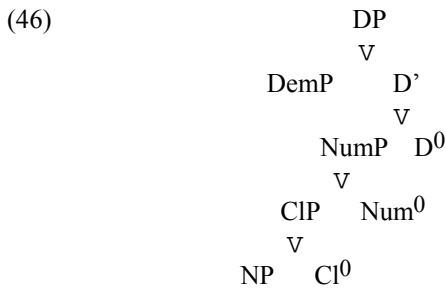
Recall that in section 5.1, I have shown that noun phrases with demonstratives, similar to those in Mandarin, cannot appear inside the scope of existential, hence providing strong evidence that demonstratives in both languages encode [+def] feature. Based on this fact, one may argue that

¹² An alternative account would be to follow Borer’s (2005) proposal the plural marker in English-type languages and the classifier in classifier languages both function as a syntactic marker of a ‘divisive structure’ base-generated under the CIP projection. It follows that both count classifier and the plural morpheme *-ni* can arguably be base-generated in the head CIP position. When Cl^0 is filled by *-ni*, the count noun must raise to Cl^0 in order to support *-ni*, given that the latter is a bound morpheme. In order to further capture the complementary distribution of [CN + *-ni*] with the quantity expressions as well as its definite interpretation, the plural morpheme is suggested as a portmanteau element, and it assigns value to both Cl^0 and $\#^0$, hence the head of $\#P$ can never be filled with other quantity expressions. The motivation of [CN + *-ni*] to raise further into D^0 is to assign value or check off the [+def] feature. Under this analysis, the definite reading of [CN + *-ni*] would be derived as follows:

(i) [DP [$\#P$ [CIP [NP ~~jongma~~] ~~jongma-ni~~] ~~jongma-ni~~] jongma-ni]

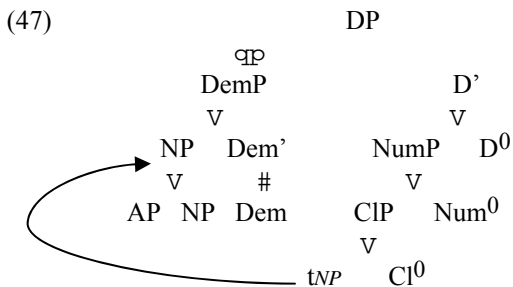
Given this analysis requires the slight additional complexity of assuming portmanteauhood for *-ni*, I will adopt the proposed analysis in the main text for conceptual simplicity. The decision is a minor one, however, and in principle, the analysis in (i) should be equally plausible.

Demonstrative Phrase (DemP) is located at Spec-DP position, as schematized in (46), assuming that both Spec and head position of the DP projection are loci of [+def] feature. This provides a natural account for the [Dem + N + Cl + Num] order.



The advantage of the proposed analysis in (46) is that it can maintain a uniform status of demonstratives in classifier languages, namely, they are always base-generated in the DP projection.

Given (46), it is obvious that the [N + Dem + Cl + Num] order cannot be derived by head movement of N^0 to Dem^0 , since it would incur the violation of HMC. It follows the postnominal distribution of the demonstrative must be due to NP movement. Since I have provided extensive evidence showing that the postnominal distribution of the demonstrative cannot be due to the movement of NP outside of the DP (see section 3), a possible solution of deriving the [N + Dem + Cl + Num] order would be to assume that NP undergoes phrasal movement to Spec-DemP, as schematized in (47).¹³ In addition, given that the NP movement does not induce any difference in terms of interpretation (see Section 3), one may assume that it takes place at PF, and is optional.



Moreover, under the current analysis, an additional stipulation needs to be made, i.e., when raising applies to NP, the higher adjunct AP must be moved along with the NP, since as shown in (48), the adjoined AP can never be stranded:

- (48) a. hpro ai n-gu dai kyin masum
 white MOD rice that/those Cl^{catty} three
 ‘Those three catties of white rice.’
 b. *n-gu dai hpro ai kyin masum
 rice that/those white MOD Cl^{catty} three

To briefly summarize, I have shown in this subsection that if DemP is assumed to be base-generated in Spec-DP given the fact that demonstratives in Jingpo encode [+def] feature, then it can provide a natural account for the prenominal distribution of the demonstrative. However, in order to capture the postnominal distribution of the demonstrative, it is required to stipulate that the NP (along with its higher adjoined AP) can somehow undergo Spec-DemP, despite the lack of morphological evidence supporting that there is a Spec-head agreement relation between the NP and Dem. Given all these problems, I am going to explore an

¹³ Alternatively, one may postulate that the NP raises and left-adjoins to DemP.

alternative analysis by examining the different properties of definite articles and demonstratives in natural languages, and see whether the relatively free distribution of the demonstratives can be captured under a unified account.

5.2.2 *The feature composition of demonstratives*

Before turning to the question of how the relatively ‘free’ distribution of the demonstrative can be captured under a principled account, I would like to discuss the feature composition of demonstratives, which are clearly distinct from definite articles. First, as argued in Bennett (1978), when one says *this/that book*, one is actually saying *the book here* or *the book there*. This can be attributed to the general properties of demonstratives in natural languages that require demonstration, and this can be done by an actual pointing gesture or it can be made explicit in the discourse by the addition of locative elements such as *here* or *there* that makes clear which place/location is intended, as demonstrated in the following examples:

- (49) a. this here book (nonstandard English)
 b. that there book (Kayne 2004)
- (50) a. cette femme-ci (French)
 this woman-here
 ‘this woman’
 b. ce livre-là
 that book-there
 ‘that book’ (Bernstein 1997: 91)

Following Bennett’s insight, it is logical to conceive that demonstratives in natural languages are composed of three different features, including (i) a [+def] feature, (ii) a [deictic] feature, and (iii) a ‘place’ or ‘location’ [feature] that can be identified with the locative elements like *here* or *there* that can be either overt or covert for simplex noun phrases containing demonstratives. In contrast, definite articles in simplex noun phrases like ‘the book’ simply have the [+def] feature.¹⁴ Note that the different feature compositions of demonstratives vs. definite articles are also reflected in their behaviors in different types of expressions, including *type* expressions (51), resultative expressions (52), as pointed out in Schmitt (2000).

¹⁴ While I have suggested that both definite articles and demonstratives share the common feature [+def], as evidenced by the fact that they often exhibit the so-called ‘definiteness effect’, i.e., they are normally barred from appearing in the ‘coda’ position of the existential construction (see, for instance, Milsark 1977), it should be noted that there are exceptions. As pointed out in Lyons (1999: Ch. 6), typical [+def] elements such as definite articles and proper names are acceptable in existential constructions especially in what he terms a ‘list reading’ (the following examples are originally adopted from Lyons 1999: 239 with slight modification):

- (i) Speaker A: What have we got to eat?
 Speaker B: Well, there’s the chicken, the bacon, and that cheese you bought.
- (ii) Speaker A: Is there anyone still in the garden?
 Speaker B: There’s Fred by the pond.

According to Lyons, the prohibition of definites in non-list uses in English is far from categorical, and it shows considerable variation between dialects and individuals. For instance, he notices that the following examples are perfectly acceptable for many native speakers of English:

- (iii) a. There’s John waiting at the door for you.
 b. There’s that man on the phone again.
 c. Go and open the door; there’s the postman coming up the drive. (Lyons 1999: 239)

I follow Lyons and assume that the above exceptions may be attributed to pragmatic or semantic factors. See also McNally (1992) who argues that definiteness effect is pragmatic.

- (51) a. John bought that type of house.
 b. *John bought the type of house.

- (52) a. John painted the house that color.
 b. *John painted the house the color. (Schmitt 2000: 321)

In addition, it has been noted in Bernstein (1997) that while definite articles are allowed in restrictive relative clauses, demonstratives with definite interpretation are not, as illustrated in the following examples ((53b) and (54b-c) are adopted from Bernstein (1997: 102)):

- (53) a. the guy that I know (nonstandard English)
 b. this here guy that I know¹⁵
 'a guy that I know' (NOT: 'this guy that I know')

- (54) a. le livre que j'ai acheté (French)
 the book that I-have bought
 'the book that I have bought'
 b. *ce livre que j'ai acheté ci
 this book that I-have bought here
 Intended: 'this book that I have bought' (NOT: 'a book that I have bought')
 c. *ce livre-ci que j'ai acheté
 this book-here that I-have bought
 Intended: 'this book that I have bought' (NOT: 'a book that I have bought')

In English, the demonstrative can either be interpreted as definite or indefinite specific, and it is the indefinite reading that is compatible with the restrictive relatives (see (53b) above). In contrast, the demonstrative in French (especially when accompanied with the locative enclitic *-ci* or *-la*) must be interpreted as definite, hence it always yields ungrammaticality when appearing in restrictive relatives (54b-c). Note that the French data are particularly revealing, since it clearly shows that definite articles cannot be treated on a par with definite demonstratives. More precisely, following Kayne's (1994) analysis of relative clauses, which assumes that the definite article is base-generated in the head DP position (see also Aoun & Li 2003: section 4.1.3.3 for specific arguments), and the NP is raised independently from within IP to Spec-CP position (see (55) below),¹⁶ the stark contrast in well-formedness between (54a) and (54b-c) provides important support that demonstratives with a definite interpretation must be base-generated in a position distinct from the head DP position:

- (55) [DP the [CP [NP guy]_i [C' that [IP I know t_i]]]]

In addition, according to Bernstein, the locative element can show up only with the presence of the demonstrative but not vice versa, as demonstrated in (56-57):

- (56) a. this/that (here) book vs. *here/there book (nonstandard English)

¹⁵ Note that there are discrepancies as to whether examples like (53b) are grammatical. While Bernstein (1997) reports that the demonstrative (with or without locative elements) is grammatical with restrictive relative clauses as long as the demonstrative is interpreted as [-def], Schmitt (2000: 321) marks (i) as marginally acceptable (as indicated by '?*'):

(i) ?*this here man we met

The discrepancy may be due to the fact that Schmitt considers the demonstrative in (i) as having a definite reading, since there is no discussion of the indefinite vs. definite reading of demonstratives in Schmitt (2000).

¹⁶ Note that the original proposal that the head is moved from within the relative clause, i.e., the so-called 'promotion' analysis, dates back to Schachter (1973) and Vergnaud (1974).

- (57) a. *cette femme(-ci)* vs. **femme-ci* (French)
 this woman-here
 ‘this woman’
- b. *ce livre jaune(-la)* vs. **livre jaune-la*
 that book yellow
 ‘that yellow book’

In order to capture the dependency relation between the locative element and the demonstrative, Bernstein proposes that the locative element occupies the head of a function projection that I label as LocP (assuming that the head LocP position is the locus of [deictic] feature), and the demonstrative is always base-generated in Spec-LocP position, whether or not the locative is present (see also Schmitt 2000 for similar proposal). Moreover, she assumes that the LocP takes the Number Phrase (NumP), i.e., the host of [singular/plural] feature, as its complement, as shown in (58-59):

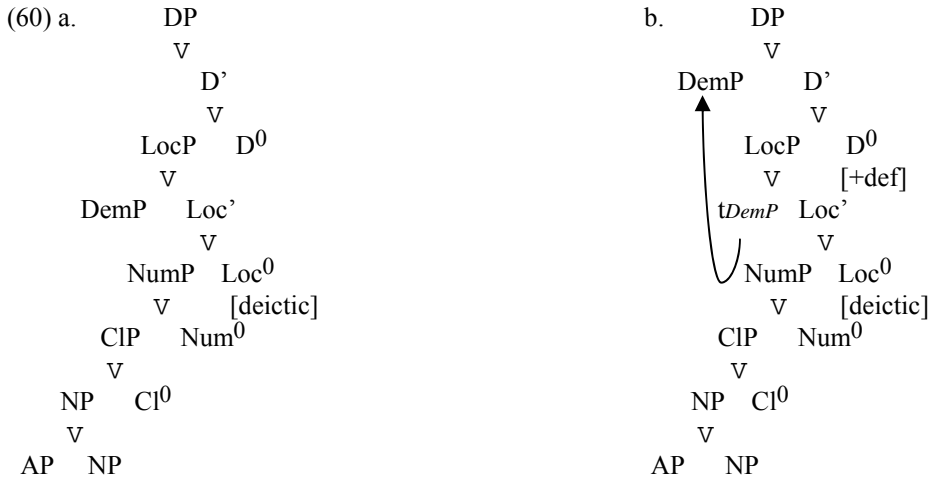
(58) [LocP this [Loc' here] [NumP [Num' bookk] [NP tk]]] (nonstandard English)

(59) [LocP ce [Loc' -la] [NumP [Num' livrek] [AP jaune] [NP tk]]] (French)

Adopting Bernstein's proposal that the demonstrative occupies the Spec of LocP, where the head position of LocP can be filled or empty, I suggest that Loc⁰ is the locus of [deictic] feature, and thus locative elements can optionally appear in such position. Additionally, assuming that demonstratives have a uniform structure in natural languages, I propose that the demonstrative in Jingpo occupies the Spec-LocP position, and Loc⁰ subcategorizes NumP as its complement, similar to the case found in English and French (see (58-59) above).¹⁷ Coupled with our earlier assumption that Jingpo noun phrases always have a head-final structure, noun phrases with demonstrative would then have the underlying structure schematized in (60a). Since I have provided evidence from the existential constructions that demonstratives in Jingpo must be interpreted as definite, I further propose that the demonstrative must raise to Spec-DP before Spell-Out to check off the [+def] feature through Spec-head agreement, as demonstrated in (60b).¹⁸

¹⁷ The proposal that demonstratives can be generated in the Specifier position of a functional projection below DP is not new (see for instance, Bernstein 1993, 1997, Brugè 1996, Giusti 1997, among many others). In particular, Giusti (1997) argues that the demonstratives and the 'real' articles should not be considered as constituting a homogeneous group, since these two types of elements are distinct in many crucial respects: for instance, demonstratives can co-occur with the definite articles in many languages (e.g., Rumanian and Modern Greek), which suggests that these two types of element should not occupy the same position. In addition, it is noted that for some languages without articles, the demonstratives can occur freely in either prenominal or postnominal positions, as reported in Kiswahili (see Carstens 1991). Given all these facts, Giusti further proposes that the demonstratives should be generated in Spec-AgrP, where AgrP is subcategorized by D. The different distributions of the demonstratives can then be accounted for by assuming that the demonstrative can raise from Spec-ArgP to Spec-DP in order to license the referential features residing in the DP projection. However, since there is no prima facie evidence supporting the presence of AgrP in the noun phrase structure of Jingpo (and in general, the noun phrases of other classifier languages), I assume that DemP is base-generated in Spec-LocP position.

¹⁸ Note that the proposal that demonstratives are base-generated in Spec-LocP would not affect my earlier analyses for the definite reading of number expressions and [common count noun + -ni], since a demonstrative is not involved in those cases, and thus it is plausible to assume that the LocP is not present. In other words, I assume that the projection of LocP is required only when a demonstrative is present.



As shown in (60b), the proposed analysis has an additional advantage of nicely accommodating the prenominal distribution of the demonstrative as manifested in the [Dem + (AP) + N + Cl + Num] order.

Since the proposal that demonstratives should be base-generated in a position different from the head DP position is primarily based on the data from languages with (in)definite articles, one might query whether there is independent evidence from articleless and classifier languages like Jingpo in favor of such a proposal. In fact, there is considerable evidence for assuming that demonstratives in classifier languages are not simply base-generated in the DP projection. First, recall that Jingpo has altogether five demonstratives, with two of them indicating the relative distance of the referent with respect to the speaker and the hearer (i.e., related to the deictic dimension of distance), and the remaining three relevant to the elevation dimension. Also, close examination of the Jingpo nominal data reveals that when the demonstratives occur alone, they not only carry a definite reading but also specify the location of the referents, i.e., they always mean something like [*that + location*]:

- (61) a. Htora go marau hpun re.
 that.upper level TOP pine tree BE
 'That (one) up there is a pine tree.' (Dai & Xu 1992: 30)
- b. Nang lera la ya rit!
 you that.lower level take give 2SG(Subj)IMP
 'You take that (one) down there!' (Dai & Xu 1992: 30)
- c. Nang wora ye kau u!
 you that.same level sweep away 2SG(Subj)IMP
 'You sweep away that (one at the same level as you and me)! (Dai & Xu 1992: 30)

The same applies to proximal and distal demonstratives in the language: *ndai* corresponds to [*this + here*] and *dai* to [*that + there*]. Given this fact, it is reasonable to construe the demonstratives in Jingpo as having both [+def] and [deictic] features. This provides indirect support to the proposed analysis in (60), where the demonstrative is supposed to first pick up the [deictic] feature through Spec-head agreement with the null LocP head, and then raise into Spec-DP to license the definite reading.

In addition, unlike English and French where the demonstratives and the locative elements diverge in form, the locatives in Jingpo (and also other classifier languages) are synthetic compounds formed from a demonstrative plus the morpheme *de* 'place', as shown in Table 2 (see Dai & Xu 1992: 32 for more detailed discussion).

Table 2: Locative elements in Jingpo

Proximal	ndai de	'here'
Distal	dai de	'there'
Up	htora de	'there.upper level'
Level	wora de	'there.same level'
Down	lera de	'there.lower level'

Some illustrative examples for the use of the locatives in Jingpo are given below:

- (62) a. Wora de go gadai mung n sa masai.
 there.same level TOP who also NEG go 3PL(Subj)DYN
 'There (at the same level as the speaker and hearer), nobody went.' (Dai & Xu 1992: 33)
- b. Shi lera de sa wa sai.
 s/he there.lower level go Perf 3SG(Subj)DYN
 'She went down there.' (Dai & Xu 1992: 33)

The fact that the demonstratives and locatives in Jingpo share the common stem may be due to the grammaticalization of locatives, which seem to be derived from demonstratives in Jingpo. If one simply assumes that demonstratives are always base-generated in the DP projection, the similarity in terms of forms between the demonstratives and locatives in Jingpo would be left unexplained.

Similar to Jingpo, the locative elements in Mandarin seem to be derived from the demonstratives, as the locative elements are composed of the demonstrative, i.e., *zhe* 'this' or *na* 'that' followed by the suffix *-r*, as in (63):

- (63) zhe/na + -r → zher/nar
 this/that here/there

Intriguingly, as pointed out by Audrey Li (personal communication), the locative elements *zher* 'here' or *nar* 'there' can be followed by a number expression, and the modifying marker *de* can be optionally added after the locative elements:

- (64) zher (de) liang-ben shu gen nar (de) san-ben shu bu yiyang.
 here MOD two-Cl book and there MOD three-Cl book not same
 '(The) two books here and (the) three books over there are not the same.'

The proposal that demonstratives always involve a more complex structure allows us to provide a unified account for the word order in (64) by assuming that the locative element is base-generated in the head LocP position, which takes NumP as its complement. Since locative elements, unlike demonstratives, do not encode [+def] feature, it follows that locative elements would stay in situ, as schematized in (65) (setting aside the status of the modifying marker *de* in (64)):

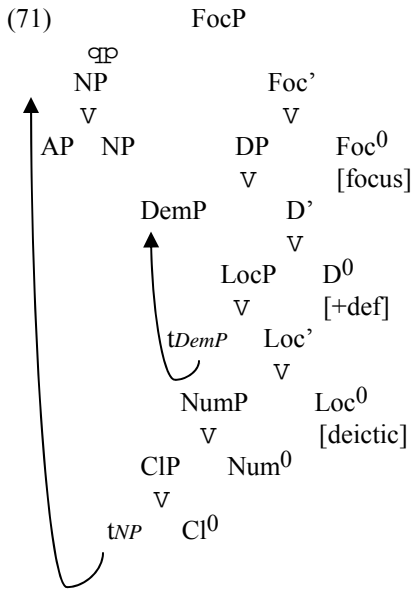
- (65) [DP[LocP [Loc' zher][NumP liang][CIP ben][NP shu]]]

However, if one assumes that demonstratives are always base-generated in the head DP projection, the similarity in forms between demonstratives and locatives, and the word order fact in (64) would fail to be captured under a unified account.

An important support for the current proposal comes from Taiwanese, since unlike other classifier languages I have discussed so far, the locative elements in Taiwanese can be used as demonstratives when followed by the modifying marker *e*, as demonstrated in (66), despite the fact that Taiwanese does possess demonstratives as shown in (67) according to Audrey Li (personal communication):

- (70) Ngai go n-gu ndai kyin masum hpe ra nngai,
 I TOP rice this Cl^{catty} three AOM want 1SG(Subj)STA
 namsi ndai hkum mali hpe n ra nngai.
 fruit this Cl four AOM NEG want 1SG(Subj)STA
 (Lit.) 'I want these three catties of rice, I don't want these four fruits.'

Based on the fact that the N-initial order is always preferred when the referent of the NP is interpreted as new information or when the NP is involved in contrastive focus structure, I suggest that the [(AP) + N + Dem + Cl + Num] order is derived by phrasal movement of NP (along with the prenominal AP) to Spec-Focus Phrase (FocP), and the movement is triggered by Focus. This proposal also conforms with the crosslinguistic survey, which observes that focused elements tend to be fronted (see, in particular, Givón 1990: Ch. 16). Following this proposal, noun phrases with the [(AP) + N + Dem + Cl + Num] order would have the structure shown in (71):



Given the structure in (71), it is expected that phrasal movement of NP only takes place when the FocP is present. Since I have shown that the N-initial order is only preferred in certain specific contexts, it is plausible to assume that FocP is projected only in those contexts, hence explaining the optionality of the NP movement.

In sum, I have suggested that the [(AP) + N + Dem + Cl + Num] order is derived by phrasal movement of NP (along with its adjoined prenominal AP), which is triggered by FocP.

6. Concluding remarks

This paper is primarily concerned with the noun phrase structure of Jingpo, and the central goal is to provide a principled account for the prenominal/postnominal alternation of demonstratives as well as the interesting properties of the plural morpheme *-ni* in the language. I have shown that the plural morpheme *-ni* in Jingpo has two intriguing properties, namely, (i) it can only be suffixed on common count noun, and (ii) the resultant form, i.e., [common count noun + *-ni*] always has a definite reading, and is incompatible the [Cl + Num] sequence. Assuming that the noun phrase structure of Jingpo is always head-final, I have suggested that the numeral and plural morpheme in Jingpo are base-generated in the head NumP position, given the observation from Dryer (1989) that OV languages often have numerals and number morphemes (singular, plural, dual, etc.,) occurring to the right of the noun. The proposal that the plural morpheme and numeral are base-generated in the same position provides a straightforward account of the complementarity

of the two elements. In addition, to account for the definite reading of [common count noun + *-ni*], I have argued that the common count noun must undergo head-movement (though the head CIP and NumP positions) to D⁰ before Spell-Out in order to check off the [+def] feature (a la Li 1999a). The merit of the proposed analysis is that it provides a natural account for the absence of [count mass noun + *-ni*]. This is because mass nouns, unlike count nouns, must be accompanied by an overt classifier in Jingpo, and thus the mass noun would be blocked by the filled classifier before reaching the head NumP position to pick up the plural morpheme (HMC).

To account for the two permutations of the demonstratives, I have proposed that the demonstrative is universally base-generated in Spec-LocP position, with the head LocP position being the locus of [deictic] feature. The LocP is assumed to be subcategorized by the DP, and it in turn takes NumP as its complement. The proposal is supported by evidence from many different sources, including (i) the different feature composition of definite articles vs. demonstratives, (ii) the different behaviors of definite articles and demonstratives in various types of constructions, such as *type* expressions, resultative expressions, and relative clauses, and (iii) the striking similarity of demonstratives and locatives in terms of forms in Jingpo (and many other classifier languages). Following this proposal, I have further assumed that demonstrative must raise into Spec-DP before Spell-Out to check off the [+def] feature. This allows us to capture the [Dem + (AP) + N + Cl + Num] order. In order to accommodate the alternative order, i.e., [(AP) + N + Dem + Cl + Num], I have argued that NP (with its adjoined prenominal AP) undergoes phrasal movement to Spec-FocP position, based on the observation that this order is often preferred in specific contexts. Furthermore, I have shown the proposed analysis fares better than other alternative accounts, such as assuming demonstratives as base-generated in Spec-DP under a head-final approach, since this alternative account involves stipulations or assumptions that are not justified.

On a more general level, the proposal that demonstratives involve a more complex structure in classifier languages has important repercussions for any analyses which attempt to account for word order variations within nominal expressions across this type of language. Unlike the alternative analysis which assumes a universal underlying noun phrase structure, and identifies demonstratives as D⁰ elements in classifier languages, the current proposal calls for attention to the different feature composition of demonstratives and definite articles, despite the fact that classifier languages normally do not possess (in)definite articles. The recognition that demonstratives and definite articles do not necessarily form a homogenous class even in classifier languages can potentially lead to a more satisfactory explanation for the otherwise unexpected variations attested across languages.

References

- Aoun, Joseph and Y.-H. Audrey Li. (2003). *Essays on the representational and derivational nature of grammar: the diversity of wh-constructions*. Cambridge, Mass.: MIT Press.
- Bennett, Michael. (1978). Demonstratives and Indexicals in Montague Grammars. *Synthese* 39: 1-80.
- Bernstein, Judy B. (1993). Topics in the Syntax of Nominal Structure across Romance. Doctoral dissertation, CUNY.
- Bernstein, Judy B. (1997). Demonstratives and Reinforcers in Romance and Germanic Languages. *Lingua* 102: 87-113.
- Borer, Hagit. (2005). *Structuring Sense. Vol. 1: In Name Only*. Oxford University Press.
- Brugè, Laura. (1996). Demonstrative Movement in Spanish: A Comparative Approach. *University of Venice Working Papers in Linguistics* 6.1.
- Bunt, Harry. (1985). *Mass Terms and Model-theoretic Semantics*. Cambridge: Cambridge University Press.
- Carstens, Vicki. (1991). The Morphology and Syntax of Determiner Phrase in Kiswahili. Doctoral dissertation, UCLA.
- Chao, Yuen-Ren (1968). *A Grammar of Spoken Chinese*. Berkeley: University of California Press.
- Cheng, L.-S. Lisa. (1991). On the Typology of Wh-questions. PhD dissertation, MIT.
- Cheng, L.-S. Lisa and Rint Sybesma. (1999). Bare and not-so-bare nouns and the structure of NP. *Linguistic Inquiry* 30: 509-542.
- Cheung, C.-H. Candice. (2003a). An Investigation of the Noun Phrase Structure of Kachin. In Dai Qing-Xia and Gu Yang, eds., *Modern Linguistic Theory and Minority Languages in China*, 149-169. Beijing: Minzu Chubanshe.
- Cheung, C.-H. Candice. (2003b). An Investigation of the Jingpo Nominal Structure. MPhil. Thesis, Chinese University of Hong Kong.
- Cheung, C.-H. Candice (2003c). The status of plural morphemes in classifier languages: An investigation of the plural morphemes in Jingpo. In Proceedings of the 16th North American Conference on Chinese Linguistics. University of Iowa.
- Cheung, C.-H. Candice. (forthcoming). An investigation of the status of *la²ngai³* and *mi* in Jingpo.

- Corbett, Greville (2000). *Number*. Cambridge Textbooks in Linguistics: Cambridge University Press.
- Dai, Qing-Xia. (1996). Zai Lun Jingpoyu de Juweichuci [Further remarks on Sentence Final Particles in Jingpo]. *Minzu Yuwen* 96.4.
- Dai, Qing-Xia. (1997). A Study on Count-Noun Classifiers in Tibeto-Burman Languages. *Studies on Yi-Burmese Languages*. Sichuan Nationalities Publishing House, 355-373.
- Dai, Qing-Xia. (1998). *Research on Tibeto-Burman Languages II*. Kunming, Yunnan: Yunnan Nationality Press.
- Dai, Qing-Xia. (1999). Jingpoyu Mingci de Leicheng Fanchou [The categories of noun phrases in Kachin language]. *Minzu Yuwen*, 6.
- Dai, Qing-Xia. (2002). On the Formation of Sentence-final Particles in Kachin. Keynote speech at the Workshop on Kachin Grammar, the 35th International Conference on Sino-Tibetan Languages and Linguistics. USA, Tempe: Arizona State University.
- Dai, Qing-Xia and Fu Ai-lan. (1999). Jingpoyu de xinxiu ming yuxu [The order of adjective and noun in Jingpo]. *Minzu Yu Wen*. 6: 9-17.
- Dai, Qing-Xia and Gu Yang. (2003). On the Grammatical Category of Topic: A Morphological Analysis of Topic in Jingpo. In Dai Qing-Xia and Gu Yang, eds., *Modern Linguistic Theory and Minority Languages in China*, 50-69. Beijing: Minzu Chubanshe.
- Dai, Qing-Xia and Xu Xi-Jian. (1992). *The Grammar of Kachin*. Beijing: ZhongYang Minzu Xueyuan Chubanshe.
- Dryer, Matthew S. (1989). Plural Words. *Linguistics* 27: 865-895.
- Fukui, Naoki. (1986). A Theory of Category Projections and its Application. Doctoral dissertation, MIT.
- Fukui, Naoki and Yuji Takano. (2000). Nominal Structure: An Extension of the Symmetry Principle. In Peter Svenonius, ed., *The Derivation of VO and OV*, 219-254. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Giusti, Giuliana. (1997). The Categorical Status of Determiners. In Liliane Haegeman, ed., *The New Comparative Syntax*, 95-123. Longman: London.
- Gu, Yang and Dai Qing-Xia. (2003). A Structural Analysis of the Jingpo [NP + A] Constructions. In Dai Qing-Xia and Gu Yang, eds., *Modern Linguistic Theory and Minority Languages in China*, 70-99. Beijing: Minzu Chubanshe.
- Gu, Yang and Gu Gang. (2002). A Further Exploration on the Sentence Final Morpheme *Ga* in Jingpo. Paper presented in LSHK Annual Research Forum, University of Science and Technology, Hong Kong.
- Gu, Yang, Virginia Yi and Gladys Tang. (2001). On the Grammatical Function of the Morpheme *Hpe* in Jingpo: A Preliminary Analysis. Paper presented in LSHK Annual Research Forum: Baptist University, Hong Kong.
- Huang, C.-T. James. (1982). Logical Relations in Chinese and the Theory of Grammar. Doctoral dissertation, MIT.
- Huang, C.-T. James. (1987). Existential Sentences in Chinese and (In)definiteness. In Eric Reuland and Alice ter Meulen, eds., *The Representation of (In)definiteness*, 226-253. Cambridge, Mass.: MIT Press.
- Huang, C.-T. James. (1988). Shuo Shi he You [On 'Be' and 'Have' in Chinese]. *The Bulletin of the Institute of History and Philosophy* 59, 43-64.
- Huang, Chu-Ren, Gao Zhao-Ming, Kathleen Ahrens and Wei Wen-Jen. (1998). Argument Structures and Empty Expletives: A Study of Three Event-Evaluative Predicates in Chinese. In Benjamin T'sou, ed., *Studia Linguistica Serica*, 401-413. City University of Hong Kong.
- Ishii, Yasuo. (2000). Plurality and Definiteness in Japanese. Ms., Kanda University of International Studies.
- Kawashima, Ruriko. (1998). The structure of extended nominal phrases: the scrambling of numerals, approximate numerals, and quantifiers in Japanese. *Journal of East Asian Linguistics* 7, 1-26.
- Kayne, Richard S. (1994). *The Antisymmetry of Syntax*. Cambridge, Mass.: MIT Press.
- Kayne, Richard S. (2004). Here and There. In C. Leclère, E. Laporte, M. Piot and M. Silberztein, eds., *Syntax, Lexis and Lexicon-Grammar. Papers in Honour of Maurice Gross*, 253-273. Amsterdam: John Benjamins (reprinted in Kayne (2005)).
- Kayne, Richard S. (2005). *Movement and Silence*. Oxford University Press, New York.
- Landman, Fred. (1989). Groups, I. *Linguistic and Philosophy* 12: 559-605.
- Landman, Fred. (1991). *Structures for Semantics*. Dordrecht: Kluwer.
- Lee, H.-T. Thomas. (1986). Studies on Quantification in Chinese. Doctoral dissertation, UCLA.
- Li, Charles N. and Sandra A. Thompson. (1981). *Mandarin Chinese: A Functional Reference Grammar*. Berkeley: University of California Press.
- Li, Y.-H. Audrey. (1997). Structures and Interpretations of Nominal Expressions. Ms., University of Southern California.
- Li, Y.-H. Audrey. (1998). Argument Determiner Phrases and Number Phrases. *Linguistic Inquiry* 29: 693-702.
- Li, Y.-H. Audrey. (1999a). Plurality in a Classifier Language. *Journal of East Asian Linguistics* 8: 75-99.
- Li, Y.-H. Audrey. (1999b). Number Projection. Selected Papers from the Fifth International Conference on Chinese Linguistics. Taipei: The Crane Publishing Co. Ltd, 199-220.
- Liu, Lu. (1984). Jingpozu Yuyan Jianzhi [A brief introduction to the grammar of Kachin]. Beijing: Minzu Chubanshe.

- Lyons, Christopher. (1999). *Definiteness*, New York: Cambridge University Press.
- McNally, Louise (1992). An Interpretation for the English Existential Construction. Doctoral dissertation, University of California, Santa Cruz.
- Milsark, Gary. (1977). Toward an Explanation of Certain Peculiarities of the Existential Construction in English. *Linguistic Analysis* 3:1-29.
- Schachter, Paul. (1973). Focus and Relativization. *Language* 49: 19-46.
- Schmitt, Cristina. (2000). Some Consequences of the Complement Analysis of Relative Clauses, Demonstratives and the Wrong Adjectives. In Artemis Alexiadou, Paul Law, Andre Meinunger, and Chris Wilder, eds., *The Syntax of Relative Clauses*, 309-348. Amsterdam: John Benjamins.
- Simpson, Andrew. (2005). Classifiers and DP structure in Southeast Asia. In Guglielmo Cinque and Richard Kayne, eds., *Parametric Variation in Syntax*. New York: Oxford University Press.
- Tang, C.-C. Jane. (1990). A Note on the DP Analysis of the Chinese Noun Phrase. *Linguistics* 28: 337-354.
- Tsai, W.-T. Dylan. (1994). On Economizing the Theory of A-bar Dependencies. Doctoral dissertation, MIT.
- Tsai, W.-T. Dylan. (1996). Subject Specificity, Raising Models and Extended Mapping Hypothesis. Paper presented at the Symposium on Referential Properties of Chinese Noun Phrases, City University of Hong Kong.
- Tsai, W.-T. Dylan. (2001). On Subject Specificity and Theory of Syntax-Semantics Interface. *Journal of East Asian Linguistics* 10: 129-168.
- Vergnaud, Jean-Roger. (1974). French Relative Clauses. Doctoral dissertation, MIT.
- Xu Xi-Jian, Yue Xiang-Kun, Xiao Ja-Cheng and Dai Qing-Xia. (1983). *Jinghan Cidian* [Kachin-Chinese dictionary]. Yunnan: Yunnan Minzu Chubanshe.