

NUMERAL CLASSIFIERS, PLURAL/COLLECTIVE ELEMENTS, AND NOMINAL ELLIPSIS*

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1. Introduction

There are many important theoretical issues surrounding the syntax of noun phrases in classifier languages such as Chinese and Japanese. For example, because the numeral classifier (NC) occurs in several syntactic environments in Japanese (e.g., prenominally, postnominally, and floating), a question arises with regard to their relations, that is, whether or not they should be analyzed as arising from the same underlying source (see Watanabe 2006). More broadly speaking, the question about the presence (or absence) of ‘extended’ projections in Japanese, both in the clausal and nominal domains, has been a topic of intense debate for several decades (see Fukui 1986, Fukui and Sakai 2003, Chierchia 1998a,b, and a series of recent papers by Bošković among many others). Against this background, I will investigate the syntax of noun phrases in Japanese, by primarily focusing on the ways in which the NC interacts with the plural/collective element and the universal quantifier. I will discuss three issues in this connection. First, following Li (1999), I will motivate a syntactic dependency involving the plural/collective element and an abstract functional head in Chinese and Japanese. Second, I will discuss how the NC interacts with a universal quantifier inside and outside the nominal domain (see also Kawashima 1998). Finally, I will discuss some nominal ellipsis paradigms in light of the syntax of classifiers explored in this paper. It should be noted at the outset of this paper that each of the issues to be discussed below deserves much more careful scrutiny. What is reported here is preliminary in a number of respects.

The NC in Japanese is known to appear in several environments, including a prenominal position and a postnominal one, as illustrated in (1). When it appears prenominally, it is accompanied by the particle *-no*, unlike when the NC appears postnominally.

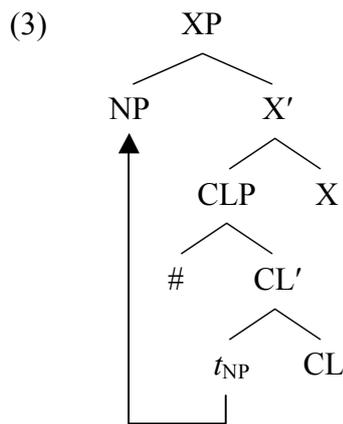
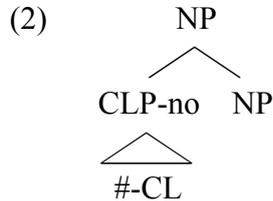
- (1) a. taroo-wa **go-ko-no** gyooza-o tabe-ta. (prenominal NC)
 Taro-TOP 5-CL-GEN dumpling-ACC eat-PAST

‘Taro ate five dumplings.’

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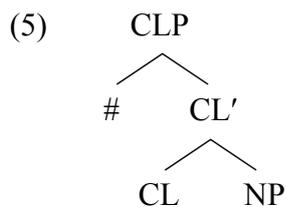
- b. taroo-wa gyooza go-ko-o tabe-ta. (postnominal NC)
 Taro-TOP dumpling 5-CL-ACC eat-PAST

Following Huang and Ochi (2011), I will explore a non-uniform approach to the two NC constructions.¹ In particular, I assume, following Saito et al. (2008) and Miyamoto (2009), that the prenominal NC is an NP-level modifier (or an adjunct), as shown in (2). I also assume that the postnominal NC has the structure shown in (3) (which is based on Watanabe (2006)).



Although the main focus of this paper is on Japanese, I will also make crucial reference to the nominal structure of Chinese. Following Tang (1990) and Cheng and Sybesma (1999), I will assume, without any further discussion, that the NC construction in Chinese instantiates a structure like the one in (5), where the classifier is a head selecting NP as its complement.

- (4) san-ben(*-de) shu (Chinese)
 3-CL book
 ‘three books’



¹ See Sauerland and Yatsushiro (2004) and Miyamoto (2009) for a non-uniform treatment of the NC constructions in Japanese. See also Shlonsky (2004) for a non-uniform treatment of prenominal and postnominal numerals in Hebrew.

One point worth mentioning here is that, under this line of approach, the NC construction in Chinese (5) and the postnominal NC construction in Japanese (3) essentially share the same structure, except that the latter involves overt movement of NP. This point will be taken up in section 2. Before turning to the three issues mentioned earlier, let me briefly introduce two arguments from Huang and Ochi (2011) in support of this line of hypothesis (for a fuller discussion, I advise the reader to consult Huang and Ochi (2011)).

1.1. Scope

One of the implications of the approach sketched above is the following. Comparing (2) and (3), we can see that the position of the postnominal classifier is structurally higher than that of the prenominal classifier: the former selects NP as its complement whereas the latter is an adjunct to NP. Generalizing this point, we might argue that a postnominal element, be it a classifier or something else, is structurally higher than any prenominal element. The contrast in (6) confirms this point. As discussed by Watanabe (2006) and others, universal quantifiers like *subete* also occur both prenominally and postnominally. Crucially, (6a) is ungrammatical. This contrast follows from the structures in (2) and (3), assuming that the universal quantifier cannot be in the scope of numerals, as illustrated by the English data in (7). I therefore assume that a postnominal element is structurally higher than a prenominal one.

- (6) a. *taroo-wa **subete**-no gyooza **go-ko-o** tabe-ta. (* \forall -no N NC)
 Taro-TOP \forall -GEN dumpling 5-CL-ACC eat-PAST
 ‘Taro ate all (of the) five dumplings.’
- b. taroo-wa **go-ko**-no gyooza **subete**-o tabe-ta. (NC-no N \forall)
 Taro-TOP 5-CL-GEN dumpling \forall -ACC eat-PAST

- (7) all three books vs. *three all books

1.2. Specificity

The structures in (2) and (3) also indicate that the postnominal NC construction involves more structure than the prenominal NC, since the former always involves projections on top of NP. This point receives potential support from a particular line of approach to specificity, taken up by Hudson (1989), Ritter (1995) and Muromatsu (1998). The gist of this approach is summarized in (8), which Huang and Ochi (2011) argue is confirmed by the Chinese pattern shown in (9). The point about (9) is that in order for Chinese to express a specific indefinite reading, it needs more material than it does for expressing a non-specific indefinite reading.

- (8) Specific indefinites have a larger structure than non-specific indefinites (see Hudson 1989, Ritter 1995, and especially Muromatsu 1998).

- (9) Chinese indefinites (setting aside the definite vs. indefinite issue; see Cheng and Sybesma (1999))

	non-specific	specific
Bare N (e.g., <i>shu</i> 'book')	√	*
CL + N (e.g., <i>ben shu</i> 'CL book')	√	*
Num + CL + N (e.g., <i>san-ben shu</i> '3-CL book')	√	√

Now let us compare this table with the one in (10), which is for Japanese. As discussed by Huang and Ochi (2011), whose discussion is based on Downing (1994), there is an interpretive difference between the prenominal NC and the postnominal NC in Japanese. Specifically, the postnominal NC strongly prefers a specific indefinite reading.

- (10) Japanese (see Downing 1994, Huang and Ochi 2011)

	non-specific	specific
Prenominal NC + N (e.g., <i>san-satsu-no hon</i> ...)	√	√
N + Postnominal NC (e.g., <i>hon san-satsu-o</i> ...)	??	√
Floating NC (e.g., <i>hon-o kinoo san-satsu</i> ...)	√	*

We can demonstrate this point by placing prenominal and postnominal NCs in a context that forces a non-specific reading. As shown below, the postnominal NC sounds fairly degraded in such contexts (see Huang and Ochi 2011 for a detailed discussion of such paradigms).

- (11) Non-specific context (√ prenominal; *postnominal NC; √ floating NC)

heikin-suru to, kono byooin-de-wa maishuu ...
 average-do, this hospital-at-TOP every week

‘On average, every week in this hospital, ...’

- a. **san-nin**-no akanboo-ga umare-teiru.
 3-CL-no baby-NOM be born

‘... three babies are born.’

- b. *akanboo **san-nin**-ga umare-teiru.
 baby 3-CL-NOM be born

- cf. akanboo-ga **san-nin** umare-teiru.
 baby-NOM 3-CL be born

Note that among the various nominals listed in (9) and (10), the postnominal NC in Japanese is exceptional in that it resists a non-specific reading. This curious property of the postnominal NC in Japanese follows under a particular approach to specificity summarized in (8), assuming that the postnominal NC in Japanese is always sufficiently ‘large’, as discussed

above.² The postnominal NC structure shown in (3) is even larger than the Chinese NC structure in (5); the former involves an additional projection on top of the classifier projection, which is needed to host the moved NP. Now let us turn to the three issues mentioned earlier.

2. Classifiers and Collective/Plural Elements

As mentioned earlier, our approach to numeral classifiers treats the postnominal NC in Japanese and the NC structure in Chinese alike: both involve the classifier head that takes NP as its complement. But there is an interesting difference between the two. Let us examine some data containing plural/collective suffixes in the two languages: *-men* in Chinese and *-tachi* (*-ra* etc.) in Japanese. As pointed out in the previous literature (see in particular Kurafuji 2004), these suffixes share a number of inherent semantic properties. For example, they yield two different readings, depending on the type of the noun to which they are attached. When attached to common nouns, they typically yield the plural reading, as illustrated in (12). In this respect, *-men* and *-tachi* are similar to *-s* in English.

- (12) a. xuesheng-men
 student-MEN
 ‘the students’
- b. gakusei-tachi
 student-TACHI
 ‘(the) students’

When attached to proper nouns, these suffixes yield the so-called ‘collective’ reading (“... and others”).

- (13) a. Xiao Qiang-men
 Xiao Qiang-MEN
 ‘Xiao Qiang and others’
- b. taroo-tachi
 Taro-TACHI
 ‘Taro and others’

There are additional similarities between *-men* and *-tachi*. As noted by Li (1999), attachment

² Alternatively, NP-movement to the nominal edge as depicted in (3) may be directly responsible for this apparent specificity effect, the idea being that the landing site of NP-movement counts as a criterial position, a position dedicated to express some scope/discourse property, in the left edge of a nominal domain, akin to criterial positions in the left edge of a clause (thanks to Luigi Rizzi (p.c.) for the suggestion).

of *-men* forces the resulting nominal expression to be definite, as shown in (14b).

- (14) a. Wo qu zhao haizi.
I go find child
'I will go find some/the child(ren).'
- b. Wo qu zhao haizi-men.
I go find child-MEN
'I will go find the children.'

According to Kurafuji (2004), the same property is observed with *-tachi* in Japanese.³ For example, while (15a) is fully felicitous in a situation in which finding any child(ren) will fulfill the speaker's desire, (15b) sounds strange in a situation in which the speaker has no particular group of children in mind.

- (15) a. boku-wa kodomo-o sagashiteiru.
I-TOP child-ACC look for
'I'm looking for some/the child(ren).'
- b. boku-wa kodomo-tachi-o sagashiteiru.
I-TOP child-TACHI-ACC look for
'I'm looking for the children.'

There is one striking difference between *-men* and *-tachi*, however. According to Iljic (1994) and Li (1999), *-men* and the classifier cannot co-occur when the former is attached to the common noun. No such restriction applies in the corresponding case in Japanese.⁴

- (16) a. Wo qing [san-ge xuesheng(*-men)] chifan.
I invite 3-CL student -MEN eat
'I invited (the) three children for a meal.'

³ But see Nakanishi and Tomioka (2004) for a different view. While they offer several arguments to the effect that *-tachi* is not inherently definite, what is crucial for me here is that these suffixes share some property P (be it definiteness or something else) and that P is tied to the syntactic dependency between *N-men/-tachi* and a higher functional head. It is therefore necessary to examine whether or not the points and observations made by Nakanishi and Tomioka for *-tachi* also hold for *-men*, a task that I have to leave for another occasion.

⁴ Previous analyses of this phenomenon include Borer's (2005) morpho-syntactic account and Bale & Khanjian's (2008) semantic account. The former works well for Chinese but fails to extend to Japanese. The latter discusses some interesting fact about Armenian vs. English; but it fails to capture the fact about Japanese.

- b. boku-wa [san-nin-no gakusei-tachi / gakusei-tachi san-nin]-o
 I-TOP 3-CL-GEN student-TACHI / student-TACHI 3-CL -ACC
 maneita.
 invited

‘I invited (the) three students for a meal.’

As pointed out by Li (1999), there is no inherent incompatibility between *-men* and the classifier. They can co-occur when *-men* is attached to the proper noun/pronoun occurring in the left edge of the nominal phrase, as shown in (17a). We find a parallel example in Japanese, shown in (17b).

- (17) a. Wo qing [ta-men / Xiao Qiang-men san-ge (ren)] chifan.
 I invite (s)he-MEN / Xiao Qiang-MEN 3-CL person eat

‘I invited [them three children/the three people including Xiao Qiang] for a meal’

- b. boku-wa [kanojo-tachi / hanako-tachi san-nin-no josei]-o maneita.
 I-TOP she-TACHI / Hanako-TACHI 3-CL-GEN lady -ACC invited

‘I invited [them three ladies/the three ladies including Hanako]’

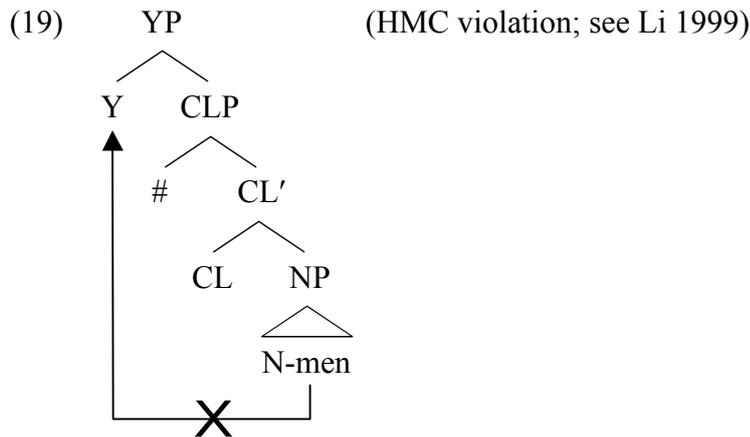
What would account for the contrast in (16)? Adopting Li’s overall proposal, let us assume (18).

(18) Properties of *-men* and *-tachi* (see Li 1999)

- a. They are suffixes attached to the nominal head.
- b. They bear some feature relevant for definiteness (but see also footnote 3), which needs to be checked against a higher functional head.

For Li (1999), the relevant functional head of (18b) is D, but I will not commit myself as to the exact label of this functional head, simply referring to it as Y.⁵ I will also assume, following Li (1999), that the head movement of N to a higher functional head is blocked by the presence of the CL head, as shown in (19).

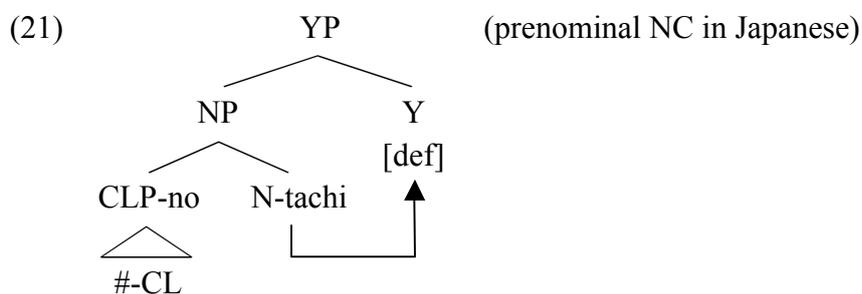
⁵ This Y head may or may not be identical to X in (3). As briefly discussed in section 1.2, the postnominal NC construction always has an extra projection on top of CLP (labeled as XP) and it is typically interpreted as a specific nominal. YP, the locus of definiteness, may be projecting on top of XP, a possibility which is compatible with the analysis in the main text.



Although I essentially adopt Li's (1999) overall analysis, there is one point of departure. I assume that this head movement in Chinese is covert. As shown in (20), adnominal adjectives always precede the head noun in Chinese, which would be unexpected if the N head moved up in overt syntax.

- (20) a. Wo zhaodao-le kaile-de haizi-men le.
 I found-ASP happy-DE child-MEN le.
 'I found the happy children.'
- b. *Wo zhaodao-le haizi-men kaile(-de) le.
 I found child-MEN happy

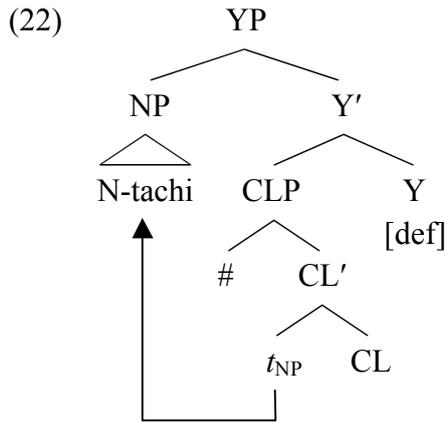
I will assume that this covert head movement of N is also available in Japanese. (21) illustrates this point for the prenominal NC structure with *-tachi*. Given our earlier assumption that the prenominal NC is an adjunct to NP, it is no surprise that it does not block the head movement of N (see also Ueda and Haraguchi 2008 on this point).



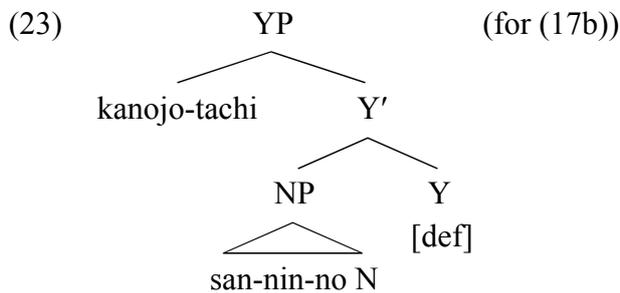
The real interesting issue here is why the postnominal NC and *-tachi* can co-occur. Recall our assumption that the postnominal CL structure in Japanese is parallel to the Chinese CL structure. In both cases, the CL head takes NP as its complement.

I believe that the structure shown in (3) would give us an answer. As shown in (22), NP, to whose head *-tachi* is attached, moves out of CLP and lands in the spec of YP, upon which *-tachi* and the functional head Y are in a local relation. In essence, *-tachi* moves as a free rider, carried along with the rest of NP, which moves for an independent reason (see Huang

and Ochi 2011).



The fact about (17), i.e., that *-men* and *-tachi* can be attached to proper nouns/pronouns that occur in the left edge of the nominal which includes the classifier, follows from Li's (1999) proposal that such phrases can be base-generated fairly high (e.g., in the spec of YP) in the nominal domain. As shown in (23), *-tachi* and Y can enter into a checking relation "as is."



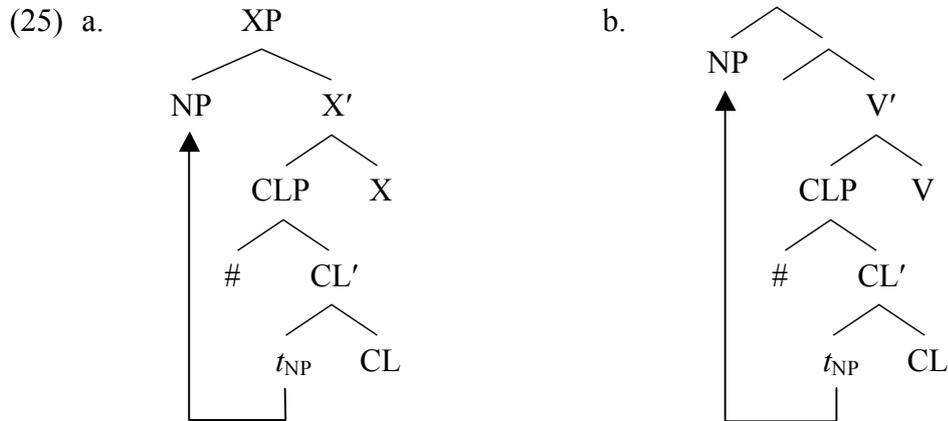
3. Floating/Stranded \forall + Numeral

The second issue that I would like to take up here concerns the relation between adnominal classifiers and floating classifiers. The connection between them has been intensely debated in the literature. One prominent view, going back to Miyagawa (1989), holds that the floating NC and the noun it modifies are "together" in the underlying structure. Let us refer to this view as the 'stranding' view. There are scholars who question this view, especially those who take the floating NC to be adverbial in nature. See, for example, Nakanishi (2007) for a recent work along this line. In this section, I present some data pointing to the view that at least some instances of floating classifiers must involve stranding.

As a starting point of discussion, let us introduce Jenks' (2011) cross-linguistic generalization concerning floating/stranded NC.

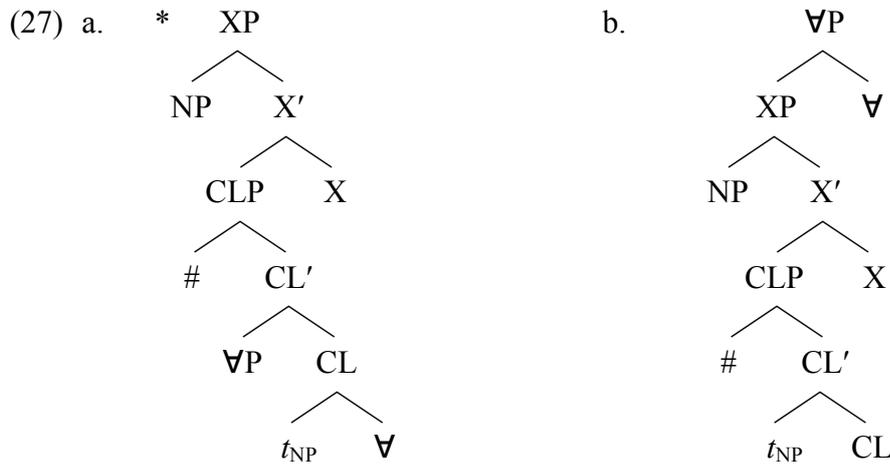
- (24) Only those classifier languages that have (or allow) the Noun-NC order allow NC-float (head-final languages: Burmese, Japanese, and Korean; head-initial languages: Thai, Khmer).

To the extent that the stranding view is correct, (24) has an implication that it is the postnominal NC, not the prenominal NC, that should be related to the stranded NC. The idea is that NP-movement takes place in both cases, but they differ with respect to the final position of NP. If NP ends up in the left edge of the nominal domain, we get the postnominal NC construction, as shown in (25a). If NP moves out of the nominal domain, into the VP domain or further up, we get the floating/stranded NC construction, as shown in (25b).



With this idea in mind, let us consider the examples in (26), which, like our earlier examples in (6), contain the NC and the universal quantifier *subete*. But, this time, the NC and *subete* both occur postnominally, and only the order in (26b) is allowed. Given our earlier discussion based on (7), we can conclude that, as far as the postnominal domain is concerned, the element that occurs to the right takes in its scope what occurs to its left. (26a) is ungrammatical because the universal quantifier is within the scope of the numeral, as illustrated in (27a). (26b) is fine because the universal quantifier is not in the scope of the numeral, as shown in (27b).

- (26) a. *taroo-wa gyooza **subete** go-ko-o tabe-ta. (*N \forall NC)
 Taro-TOP dumpling \forall 5-CL-ACC eat-PAST
 ‘Taro ate all (of the) five dumplings.’
- b. taroo-wa gyooza **go-ko** **subete-o** tabe-ta. (N NC \forall)
 Taro-TOP dumpling 5-CL \forall -ACC eat-PAST



Let us now turn to some related cases where classifiers and/or *subete* are stranded.⁶ In (28a) and (28b), the adverbial phrase *sono toki* ‘that time’ is inserted in such a way to separate *go-ko* ‘5-CL’ and *subete* ‘V’, respectively, from the rest of the object noun phrase. The contrast in acceptability between the two examples mirrors the word order restriction that we witnessed in (26). The same remark applies to (29), where the noun (phrase) *gyooza* ‘dumpling’ is separated from *go-ko* ‘5-CL’ and *subete* ‘V’ by the adverbial phrase.

- (28) a. *taroo-ga gyooza **subete-o** sono toki **go-ko** tabe-ta (koto)
 Taro-NOM dumpling V-ACC that time 5-CL eat-PAST fact
 (*N V NC)

‘(the fact that) Taro ate all of the five dumplings at that time’

- b. taroo-ga gyooza **go-ko-o** sono toki **subete** tabe-ta (koto)
 Taro-NOM dumpling 5-CL-ACC that time V eat-PAST fact
 (N NC V)

‘(the fact that) Taro ate all of the five dumplings at that time’

- (29) a. *taroo-ga gyooza-o sono toki **subete** **go-ko** tabe-ta (koto)
 Taro-NOM dumpling-ACC that time V 5-CL eat-PAST fact
 (*N V NC)

‘(the fact that) Taro ate all of the five dumplings at that time.’

- b. taroo-ga gyooza-o sono toki **go-ko** **subete** tabe-ta (koto)
 Taro-NOM dumpling-ACC that time 5-CL V eat-PAST fact
 (N NC V)

‘(the fact that) Taro ate all of the five dumplings at that time.’

This is quite suggestive that examples such as (28b) and (29b) involve stranding. I will thus explore the possibility that such examples are derived from a structure like the one in (27b)

⁶ See Kawashima (1998) for related data and discussion.

(except that its subpart moves out of the nominal domain). To be more specific, if it is just the NP that moves out of the nominal domain, we will get the word order in (29b). If XP, a larger chunk, moves out of the nominal domain, we can derive (28b). Crucially, there is no way to yield (28a) or (29a) from the structure in (27b). For example, *gyooza* ‘dumpling’ and *subete* ‘ \forall ’ do not form a constituent to the exclusion of *go-ko* ‘5-CL’. Also, *subete* ‘ \forall ’ and *go-ko* ‘5-CL’ cannot form a unit in this order. In what follows, I would like to focus on data like (29b), where NP is separated from NC + *subete*.

It is worth introducing Cirillo’s (2010) discussion of examples corresponding to (29b) in Dutch, Romanian, and Italian. In the Dutch example given in (30b), *all drie* ‘all three’ modifies the subject *de studenten* ‘the students’. Following Cirillo, I will refer to this type of construction as the “universal numeric quantifier” (UNQ) construction. All the Dutch examples below are taken from his work.⁷

- (30) a. Alle drie de studenten hebben het boek gelezen.
 all three the students have the book read
- b. De studenten hebben alle drie het boek gelezen.
 the students have all three the book read

Cirillo (2010) points out that that the stranded UNQ is clearly not adverbial. When the universal quantifier in Dutch is stranded on its own, it may (or it often does) take the adverbial form, as shown in (31b). But it cannot appear in the adverbial form in the UNQ construction, as shown in (32b). Once again, this is a good indication that such examples are derived via stranding.

- (31) a. Al de studenten hebben het boek gelezen.
 all the students have the book read
- b. De studenten hebben allen / allemaal het boek gelezen.
 the students have all / all (adv.) the book read
- (32) a. Alle drie de studenten hebben het boek gelezen.
 all three the students have the book read
- b. De studenten hebben alle / *allemaal drie het boek gelezen.
 the students have all / all (adv.) three the book read

To this we can add evidence from Japanese that the floating UNQ is not a base-generated complex quantifying expression of the kind shown in (33a) for English, which has often been presented in the relevant literature as evidence against the stranding view. In particular, I

⁷ Although I accept Cirillo’s (2010) conclusion that the UNQ construction is derived via stranding, there may be some questions about the specifics of his analysis, in particular, his claim that the numeral and the universal are base-generated as a complex head.

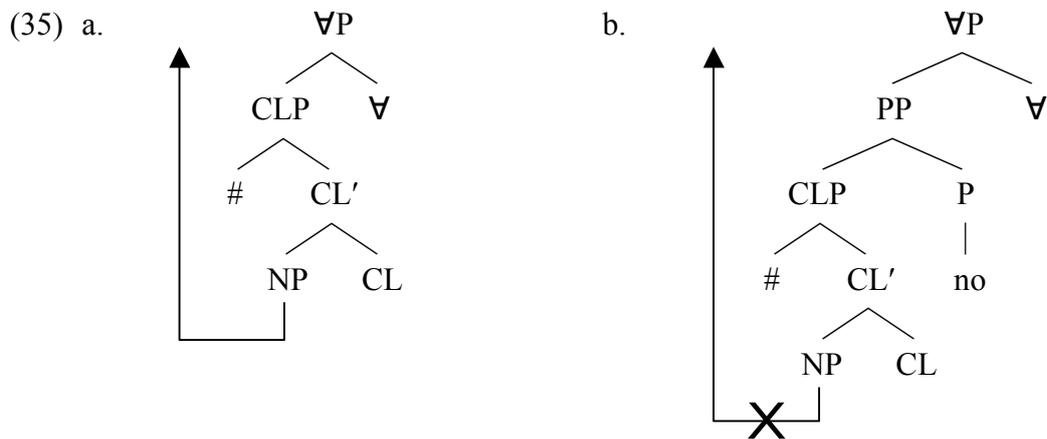
show below that examples like (29b) are not derived in the manner shown in (33b), with the ellipsis of the pronominal part of a base-generated, appositive-like nominal.

- (33) a. The students have all three of them passed the exam.
- b. gyooza-o taroo-ga s~~ore~~-ra go-ko subete tabe-ta (koto)
 dumpling-ACC Taro-NOM them 5-CL \forall eat-PAST fact
 ‘(the fact that) Taro ate the dumplings, all five of them’

The crucial data is (34). As shown in (34a), when NP, numeral, and *subete* are together, it is possible to insert *-no* between them, e.g., between the NC and *subete*. We could analyze such examples as instances of a partitive construction, with the meaning ‘all of the five dumplings.’ In the context of stranding, however, insertion of *-no* is impossible, as shown in (34b). This shows that (29b) does not contain a base-generated, appositive-like NP.

- (34) a. taroo-ga gyooza go-ko(-no) subete-o tabe-ta (koto).
 Taro-NOM dumpling 5-CL -GEN \forall -ACC eat-PAST fact
 ‘(the fact that) Taro ate all five of the dumplings’
- b. taroo-ga gyooza-o sono toki go-ko(*-no) subete tabe-ta
 Taro-NOM dumpling-ACC that time 5-CL -GEN \forall eat-PAST
 (koto)
 fact

This is a good indication that examples like (29b) are derived via stranding. Consider (35) in this light. Our discussion indicates that stranding (i.e., NP movement out of the nominal domain) is possible in (35a), but not in (35b). But why does the presence of *-no* make such a difference? Several possibilities come to mind. For example, comparing the two structures in (35), we see that NP is more deeply embedded in (35b), due to the presence of an extra projection, PP. This might have something to do with the contrast between the two. Alternatively, extraction may be impossible because of Last Resort. Suppose that *-no* is a postposition, assigning Case to its CLP complement. Now, CLP needs Case precisely because it is an extended projection of NP. If NP-movement is motivated for Case reasons (as Huang and Ochi (2011) speculate), then there should be no motivation for NP to move out of the nominal domain, and by economy reasoning, it cannot move out.



4. Ellipsis

The general picture laid out so far has implications for nominal-internal ellipsis paradigms. As discussed by Saito et al. (2008) and Tsai (2011), the NC construction in Chinese allows nominal-internal ellipsis (by which I mean nominal ellipsis to the exclusion of the NC part). In the following example, *shu* ‘book’ in the second clause is missing.

- (36) Suiran Zhangsan mai-le [san-ben shu], dan Lisi mai-le [wu-ben ~~shu~~]
 though Zhangsan buy-PERF 3-CL book but Lisi buy-PERF 5-CL book
 ‘Lit. Zhangsan bought three books, but Lisi bought five.’

As for Japanese, the postnominal NC does allow nominal-internal ellipsis, as shown in (37) (see Takahashi 2008). The Chinese NC construction and the postnominal NC constructions in Japanese thus behave on a par in this respect.

- (37) busshu-wa [jibun-ni kansuru hon] ni-satsu-o yonda.
 Bush-TOP self-DAT related book 2-CL-ACC read
 obama-wa e 3-satsu-o yonda.
 Obama-TOP 3-CL-ACC read
 ‘Bush read two books about himself. Obama read three e.’ (√ sloppy)

The prenominal NC nominal in Japanese, on the other hand, does not allow ellipsis, as discussed extensively by Saito et al. (2008).

- (38)*taroo-wa [san-satsu-no hon]-o katta ga, hanako-wa
 Taro-TOP 3-CL-GEN book-ACC bought though Hanako-TOP
 [go-satsu-no ~~hon~~]-o katta.
 5-CL-GEN book-ACC bought
 ‘Taro bought three books, but Hanako bought five.’

One could say that this fact follows from the postulated structure in (2), according to which

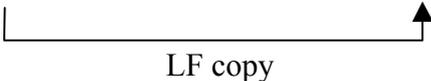
the prenominal NC is an NP-adjunct. For concreteness, let us adopt an LF copying approach to nominal ellipsis (see Saito 2007). On the assumption that a syntactic operation can affect a maximal projection or a head, but not a segment of a projection, (38) would not be derivable because a syntactic operation cannot copy the object noun in the first conjunct in such a way to exclude *san-satsu-no* ‘3-CL-GEN’ from being copied along with the lower segment of the object noun phrase.

But things are not so simple. Consider the following example from Watanabe (2010).

- (39) taroo-wa san-satsu-no hon-o katta ga, hanako-wa go-satsu
 Taro-TOP 3-CL-GEN book-ACC bought though Hanako-TOP 5-CL
 katta.
 bought

‘Taro bought three books, but Hanako bought five.’

The first clause contains the prenominal NC, and the nominal *hon* ‘book’ is missing from the second clause. One potential source of the latter clause is the stranded NC construction, with the deletion of NP (i.e., argument drop).

- (40) taroo-wa [_{NP} san-satsu-no [_{NP} hon]]-o katta ga, hanako-wa [_{NP} hon]-o go-satsu katta
- 
- LF copy

Watanabe rejects this line of analysis on the basis of the familiar parallelism requirement imposed on ellipsis. But whether or not parallelism is violated in this case needs to be carefully examined. Note that ellipsis is in general sensitive to the presence or absence of an adjunct element associated with the elliptical site. Consider the following example.

- (41) taroo-wa jiroo-ga kaita hon-o katta ga, hanako-wa
 Taro-TOP Jiro-NOM wrote book-ACC bought though Hanako-TOP
 kawa-nak-atta.
 buy-NEG-PAST

‘*Lit.* Taro bought the book(s) that Jiro wrote, but Hanako didn’t buy.’

The most salient reading of the second clause is that Hanako did not buy the book(s) that Jiro wrote. Crucially, it does not mean that Hanako did not buy a book/books, which indicates that a relative clause cannot be ignored upon copying the object of the first clause. The following VP-ellipsis example, taken from Oku (1998), points to the same conclusion.

- (42) John washed a car carefully, but Mary didn’t.

The second clause means that Mary washed a car but not in a careful manner, according to Oku (1998). Again, it does not mean that Mary did not wash a car. Thus, a VP-level adverb must be included in the interpretation of the elided VP. Seen in this light, (40) does not seem

to be an adequate analysis of (39).

According to Watanabe, (39) is instead derived from the prenominal NC source, as schematically shown below. The idea is that *-no* of *san-satsu-no* ‘3-CL-GEN’ is a linker, inserted by a *-no* insertion rule of the kind discussed by Kitagawa and Ross (1982). Crucially, Watanabe argues that this insertion rule is sensitive to the overt realization of the head noun: it is inoperative when the head noun is elided.

- (43) ... hanako-wa [go-satsu ~~hon~~]-ø katta
 ... Hanako-TOP 5-CL book-ACC bought

This is an interesting argument. Nevertheless, there is some indication that examples like (39) are in fact derived from the stranded NC construction, not from the prenominal NC construction. According to Nakanishi (2007), the stranded NC typically has the forced distributive reading, which is clear when a predicate like *koros-* ‘kill’ is employed.

- (44) a. **san-nin-no** otoko-ga taroo-o koroshita. (prenominal NC)
 3-CL-GEN man-NOM Taro-ACC killed
 ‘Three men killed Taro.’
- b. otoko **san-nin-ga** taroo-o koroshita. (postnominal NC)
 man 3-CL-NOM Taro-ACC killed
- c. *otoko-ga **san-nin** taroo-o koroshita. (stranded NC)
 man-NOM 3-CL Taro-ACC killed

Now, let us consider the following example using *koros-* ‘kill’, which, like (39), contains a prenominal NC in the first clause and lacks an overt nominal associated with the NC in the second clause. The unacceptability of this example indicates that such examples necessarily come from the stranded NC construction. If such an example could come from the prenominal NC source, it would be unclear why it is unacceptable.

- (45) kyonen san-nin-no otoko-ga jiroo-o koroshita.
 last year 3-CL-GEN man-NOM Jiro-ACC killed
 *kotoshi go-nin taroo-o koroshita.
 this year 5-CL Taro-ACC killed

‘Last year three men killed Jiro. This year, five men killed Taro.’

The example is fine without ellipsis.

- (46) kyonen san-nin-no otoko-ga jiroo-o koroshita.
 last year 3-CL-GEN man-NOM Jiro-ACC killed
 kotoshi go-nin-no otoko-ga taroo-o koroshita.
 this year 5-CL-GEN man-NOM Taro-ACC killed

‘Last year three men killed Jiro. This year, five men killed Taro.’

Thus, I conclude that (39) involves the stranded NC, not the prenominal NC.

But, then, we need to explain the difference between (39) (as analyzed in the manner shown in (40)) on the one hand and (41) and (42) on the other. Recall that the (im)possible interpretations of the latter examples indicate that an adjunct element modifying the target of ellipsis cannot be ignored for the purpose of LF copying operations, be it NP-ellipsis or VP-ellipsis. But this is exactly what we find in (40), as we are assuming with Saito et al. (2008) and Miyamoto (2009) that the prenominal NC is an adjunct to NP.

In this context, I would like to introduce Oku’s (1998) subset copy principle, which basically states that a (proper) subset of the antecedent can be copied and supplied as the content of the elided material under LF-copying operations. Among other things, Oku’s proposal is intended to deal with what Fiengo and May (1994) calls ‘vehicle change’ phenomenon, exemplified by (47) below.

- (47) Mary will admire *John*, and *he* thinks Susie will, too.

This example allows co-reference of *John* and *he*. But, as noted by Fiengo and May, if the antecedent VP is copied into the second clause “as is”, as shown in (48a) below, it should lead to a Condition C violation. Following Fiengo and May, Oku argues that (47) has (48b) as well as (48a) as a possible LF representation. Of course, there are no binding condition violations in (48b).

- (48) a. Mary will [_{VP} admire *John*], and *he* thinks Susie will [_{VP} admire *John*], too.
 b. Mary will [_{VP} admire *John*], and *he* thinks Susie will [_{VP} admire *him*], too.

This is made possible by the subset copy principle, and by the idea that a pronoun is merely a collection of ϕ -features while an R-expression contains ϕ -features and some additional features (relevant for their intrinsic referential property) (see Burzio 1991): simply put, the set of features for the pronoun *he* is a subset of the feature set for R-expressions like *John*.

Now, Oku’s subset copy principle should allow the representation in (40). The LF copying operation should be able to copy the segment of the object NP, *hon* ‘book’, ignoring the upper segment, i.e., *san-satsu-no* ‘3-CL-GEN’. Of course, the same reasoning should apply to (41) and (42). But I suspect that the parallelism constraint would interfere with ignoring the adjunct in such cases. Note that (38) can still be ruled out under this line of analysis. There is no attachment site for the NP-adjunct *go-satsu-no* ‘5-CL-GEN’ before a copying operation creates the object nominal in the second clause.

5. Conclusion

To summarize, adopting Huang and Ochi's (2011) analysis, I have discussed three issues in connection with classifiers inside and outside the nominal domain. First, the contrast between Chinese and Japanese with respect to the (in)compatibility of *-men/-tachi* and the classifier can receive a simple, syntactic account. Second, there is a good indication that the floating universal numeric quantifier involves stranding. Finally, some asymmetries in the domain of ellipsis follow rather naturally from the postulated structures for Japanese/Chinese NC constructions.

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