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Explaining variation in classifier dependency in Mandarin and Cantonese nouns[1]

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1 A well-trodden issue revisited

1.1 The issue

In comparing the noun phrase structures of Mandarin and Cantonese, one of the most widely discussed issues comes from the following contrastive grammaticality pattern.

(1) [Cantonese]

a.	proper name (PN)	Siuming *'Siuming'*		/	
b.	common noun used as a PN	louban *'boss'*		/	
c.	*common noun (N)	*matfong *'bee'*	**maai-zo** *buy-PERF* *'bought'*	?dango *'cake'*	c'. ?N
d.	CL+N	zak matfong CL bee *'the bee'*		go dango CL cake *'the/a cake'*	d'. CL-N
e.	*one*+CL+N	yat zak matfong one CL bee *'a bee'*		yat go dango one CL cake *'a cake'*	e'. *one*-CL-N

(2) [Mandarin]

a.	proper name (PN)	Xiaoming *'Xiaoming'*		/	
b.	common noun used as a PN	laoban *'boss'*		/	
c.	common noun (N)	mifeng *'(the) bee'*	**mai-le** *buy-PERF* *'bought'*	dangao *'(the) cake'*	c'. N
d.	*CL+N	*zhi mifeng CL bee *'the bee'*		ge dangao CL cake *'the/a cake'*	d'. CL-N
e.	*one*+CL+N	yi zhi mifeng one CL bee *'a bee'*		yi ge dangao one CL cake *'a cake'*	e'. *one*-CL-N

1.2 Observations

From the pattern shown in (1) and (2), there are two note-worthy observations:
(i) SUBJ: Mandarin *[CL+N]; Cantonese *common bare noun
(ii) OBJ: Mandarin [CL+N] *+definite; *+specific

Related issues:
❖ semantic nature of Chinese nouns: argumental ($<e>$) or predicative ($<e,t>$)?
❖ subject-hood licensing conditions
❖ definiteness and specificity licensing
❖ role of classifiers
❖ DP or not?

Some existing proposals:

Chinese nouns	Definiteness licensing	Role of classifiers	DP or not
+arg: Chierchia 1998a,b **+pred:** Cheng & Sybesma 1999; Li & Bisang 2012	**ClP projection:** Cheng & Sybesma 1999 **CL-to-D raising:** Simpson 2005; Li & Bisang 2012 **N-to-D raising:** Longobardi 1994, 2005, 2008	**Individuation:** Chierchia 1998 a,b **Portioning:** Borer 2005 **Creating unit of measurement:** (massifiers) Cheng & Sybesma 1999; (Cl-$_U$) Cheng 2012; (all unit words except individual CL) Zhang 2013 **Naming unit of measurement:** count-classifiers (Cheng & Sybesma 1999); individual CL (Zhang 2013) **Facilitating enumeration:** (Cl-$_C$) Cheng 2012	**Yes:** Borer 2005; Huang, Li & Li 2009; Zhang 2013 **No:** Chierchia 1998 a,b; Cheng & Sybesma 1999, 2012; Sio 2006; **Doesn't matter:** Cheng & Sybesma 2014

Table 1: existing theories on Chinese nominals
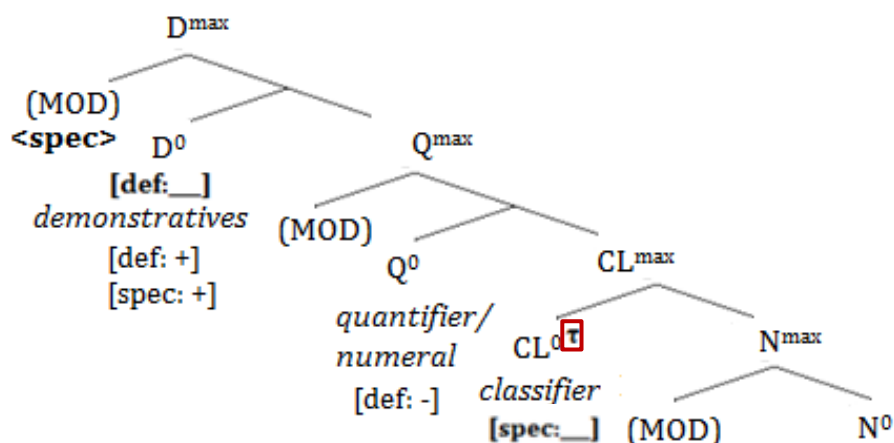
2 My proposal

2.1 Basic assumptions

From the above mentioned (and many other) analyses of Chinese nominals, my proposal draws certain fundamental assumptions from them as well as those assumed in the Minimalist Program.

❖ Chinese nouns are predicative → require type-shifting to occupy argument positions.
❖ DP hypothesis holds.
❖ Bare Phrase Structure (Chomsky 1995), except that there are always two basic obligatory layers to be projected: D and N, but everything in between is flexible.
❖ Definiteness, Specificity and Genericity are three separate though related concepts (Lyons 1999; Krifka 1995; Krifka et al. 1995)
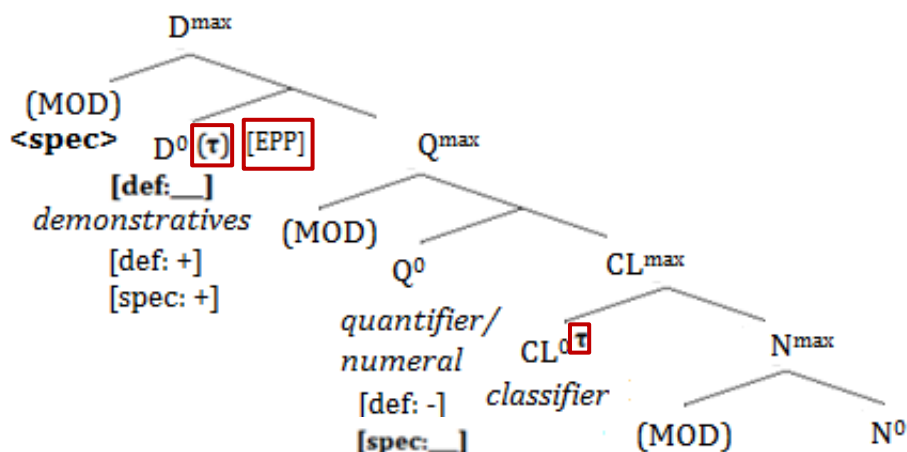
2.2 My proposed Chinese nominal structure

In a construction where all the functional heads and the head noun are overt, I argue that the configurations in (3) and (4) are present in Cantonese and Mandarin respectively.

(3) [Cantonese]

D^{max}
(MOD)
<spec> D^0
          [def:__]
          demonstratives Q^{max}
          [def: +]
          [spec: +]   (MOD)
                       Q^0 CL^{max}
                       quantifier/
                       numeral CL^0 [τ] N^{max}
                       [def: -]   classifier
                                   [spec:__]   (MOD) N^0

(4) [Mandarin]

D^{max}
(MOD)
<spec> D^0 [τ] [EPP]
          [def:__]
          demonstratives Q^{max}
          [def: +]
          [spec: +]   (MOD)
                       Q^0 CL^{max}
                       quantifier/
                       numeral CL^0 [τ] N^{max}
                       [def: -]   classifier
                       [spec:__]   (MOD) N^0

The major arguments made in these two configurations are the following parametric variations between Cantonese and Mandarin:

(5) **CLassifier^0 :**
    a. houses a type-shifter (τ) in BOTH languages.
    b. carries an unvalued specificity feature ([spec:__]) in Cantonese.

(6) **Determiner^0 :**
    a. carries an unvalued definiteness feature ([def:__]) in BOTH languages.
    b. houses an additional type-shifter[2] in Mandarin.
    c. has an [EPP] diacritic in Mandarin.

(7) **Quantifier^0 :**
    a. carries an unvalued specificity feature ([spec:__]) in Mandarin.

Furthermore, I put forward a subjecthood-licensing condition for object-referring nominals, as formulated below:

(8) **Subjecthood-licensing condition**
    An object-referring nominal can function as subject, iff it has at least one overt functional head which carries a [def] or [spec] feature.

3   How does it work?

3.1 Beware! Bare nouns

Most previous studies on Chinese nominals, especially those that compare Mandarin with Cantonese, tend to make generalizations about 'bare nouns' vs. 'bare classifier phrases'. But this over-simplifies the picture. There are, I suggest, three types of bare nouns, and only Type III is note-worthy (or problematic!) as far as Mandarin-Cantonese comparison is concerned.

(9) Type I: Generic bare nouns [+arg]: base-generated in Spec-D^{max}
    Type II: PN bare nouns [+arg]: base-generated in Spec-D^{max} (as in 1a, b; 2a, b)
    Type III: Object-referring non-PN bare nouns [-arg]: base-generated in N^0 (as in 1c, 2c)

Type III bare nouns are, virtually, only acceptable in Mandarin. And because of that, bare nouns in Mandarin, unlike those in Cantonese, can be directly modified by a demonstrative without the mediation of a classifier. As a result, the three constructions in (10) are exclusive to Mandarin.

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[2] See also Longobardi (2008)'s discussion on the connection between D, individual reference, and the person feature. Besides, the possibility for having two argument-licensing positions is attested in Salish, precisely Lillooet[2] (Wiltschko 2008), which has D- and CL-articles. They are both obligatory in non-coordinated constructions, but the D-article can be dropped in coordination constructions and the CL-article (i.e. the existential clitic) can be omitted when the NP concerned is a PN (Davis 2005).
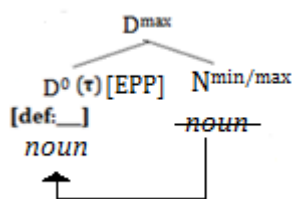
(10)   [Cantonese]   [Mandarin]

a. DEM + N   go^2 *(go^3) hoksaang   na   xuesheng
                             that CL   student   that student
                             Both meaning: 'that student'

b. DEM + MOD-m + N[3]   go^2 *(go^3) daai ngaangeng-ge hoksaang   na   dai yanjing-de xuesheng
                             that CL   wear glasses-M   student   that wear glasses-M student
                             Both meaning: 'that student who wears glasses'

c. MOD-m + DEM + N   daai ngaangeng-ge go^2 *(go^3) hoksaang   dai   yanjing-de na xuesheng
                             wear glasses-M   that CL student   wear glasses-M that student
                             Both meaning: 'that student who wears glasses'

This pattern can be accounted for by the difference in functional-richness at D^0 between the two languages (as summarized in (6)). (11a) and (11b) are schematized representations of Type III bare nouns in Cantonese and Mandarin respectively.

(11) a. [Cantonese]   b. [Mandarin]
        *SUBJ
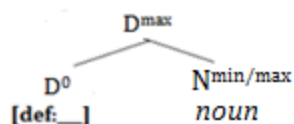
With the [EPP] feature on D^0, Mandarin bare common nouns (i.e. Type III bare nouns) can move from N to D (akin to Longobardi 1994, 2008) to make the definiteness feature bearing D^0 overt which fulfils the subjecthood-licensing condition in (8). Cantonese bare common nouns, on the other hand, cannot be subjects, as there is no type-shifter in D^0 and the D^0 cannot be made overt since there is no [EPP] feature to trigger such N-to-D movement.

Also, since demonstratives are "individual-referring" (Longobardi 2008:191) they cannot modify predicative nouns, i.e. Cantonese Type-III bare nouns; hence the ungrammaticality of the constructions in (10) in Cantonese.
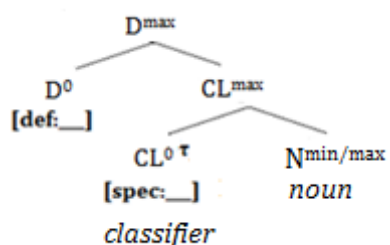
Question: why are [CL+N] subjects exclusive to Cantonese?

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[3] Abbreviations: DEM = demonstrative; MOD-m = marker modifier
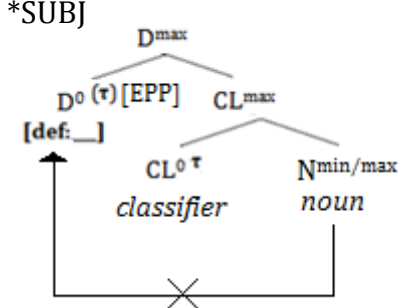
3.2 CL+N vs. one-CL+N

Answer: difference in the position of specificity feature ([spec: __]), as shown in (12).

(12) a. [Cantonese]   b. [Mandarin]

Evidence for N-to-D movement in Mandarin:
- ❖ The presence of a classifier blocks N-to-D movement. Without an overt D^0 and a specificity feature in CL^0, Mandarin bare classifier phrases ([CL+N]) cannot be licensed as subjects, and can only have an indefinite, non-specific interpretation.

Recall the examples in (2), repeated below:

(2) [Mandarin]

d. *CL+N	*zhi mifeng CL bee *'the bee'*	**mai-le** ***buy-PERF*** ***'bought'***	ge dangao CL cake *'the/a cake'*	d'. CL-N
e. *one*+CL+N	yi zhi mifeng one CL bee *'a bee'*		yi ge dangao one CL cake *'a cake'*	e'. *one*-CL-N

The presence of yi 'one' makes a difference in grammaticality and interpretation in Mandarin, because of (i) the [def -] feature inherent to numerals; (ii) the presence of ([spec: __]) in Q^0, as shown in (13). They both fulfil the subjecthood-licensing condition in (8) and give numeral phrases (NUM+CL+N) in Mandarin in general, an indefinite but (non-)specific reading (Cheng and Sybesma 1999).

(13) [Mandarin]
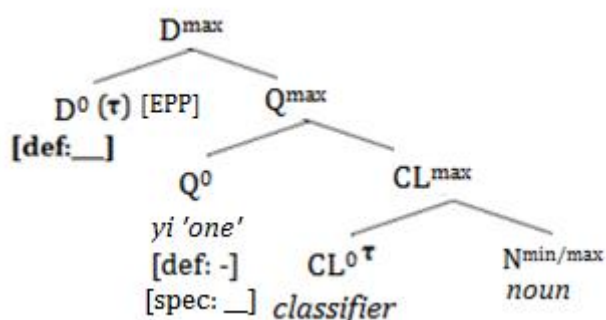
Question: but why should the specificity feature be located in different positions in Mandarin and Cantonese?

Answer: there are two types of classifiers: **CL-UNIT** in Cantonese which are unit-makers; and **CL-NUMERAL** in Mandarin which are only there for counting, i.e. to licence numerals.

Therefore, classifiers in Cantonese introduce atomic-set specificity (i.e. object reference) as opposed to kind specificity (i.e. kind reference); whereas classifiers in Mandarin do not carry any referentiality-related responsibilities. This explains why Mandarin allows Type III bare nouns and Cantonese does not, as well as a slightly wider acceptability of counting without a classifier in Mandarin.

(14) NUM+N

a. [Mandarin] ?yi | yi-bai | yi-qian
   one | one-hundred| one-thousand

   xuesheng canjia-le bisai
   student join-PERF competition
   student joined the competition.'

b. [Cantonese] *yat |*yat-bak | *yat-cin
   one | one-hundred| one-thousand

   hoksang caamgaa-zo beicoi
   student join-PERF competition
   student joined the competition.'

Note, however, that an overt classifier does NOT value the [spec] feature in CL^0. **Classifiers are just facilitators.** They provide a unit of counting so that enumeration is possible and a quantity can be specified, but it awaits an overt Q^0 to give the noun phrase a concrete number value or quantity and by default a classifier phrase is interpreted as singular. The same applies to referentiality; the classifier opens a new layer of referentiality – atomic-set specificity – but it alone does not specify the value of this feature. The specificity feature is valued at LF, same for definiteness feature if there is no demonstrative.

4 Conclusions

I argue, on the basis of the observations made so far, that the Chinese nominal structure abstracted in Cheng and Sybesma (2014: 267 ex. 46) as in (15), should instead be formulated as (16).

(15) $[_{\text{FP3 [+specific]}} \text{F3}^0 \ [_{\text{FP2 [+indef]}} \text{F2}^0 \ [_{\text{FP1 [+definite]}} \text{F1}^0 \ [_{\text{NP}} \text{N}^0 \ ]]]]$

(16) $[_{\text{DP [+definite]}} \textbf{D}^0 \ [_{\text{QP [-definite] ([spec: \_])}} \textbf{Q}^0 \ [_{\text{CLP ([spec: \_])}} \textbf{CL}^0 \ [_{\text{NP}} \textbf{N}^0 \ ]]]]$

The differences between Cantonese and Mandarin nominal behaviours can be captured by two parametric variations:
(i)   presence/absence of the type-shifter in D^0 in Mandarin and Cantonese respectively;
(ii) functional properties of classifiers: unit-making and referentiality expression vs. enumeration-licensing.

With more functions deposited in classifiers, Cantonese nominals have a greater reliance and dependence on the presence of an overt CL^0, both in terms of counting and subjecthood licensing.

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