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# TWO LEVELS FOR DEFINITENESS\*

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## 1 Introduction

Recent research on definiteness has shown that languages can distinguish between an *anaphoric* and a *uniqueness-based* notion of definiteness. This distinction may be marked by using different forms of the article, as in Fering, or no determiner in one of the two cases (Hausa, Mandarin): see Schwarz (2009, 2013). Anaphoric (aka “strong”) definites, illustrated in (1a), refer to objects that have been introduced in the (discourse) context, possibly via various types of bridging relation (see again Schwarz 2009, Jenks 2016, Simpson and Biswas 2016 for discussion on the nature of these relations, an issue which we will not address in this contribution). Unique (“weak”) definites, as in (1b), on the other hand, pick up a referent which is the single or maximal element in the property denoted by their restrictor.

- (1) a. I bought a book and some candies. When **the author** wrote **the book** ...  
b. **the president** of this country / **the closest star** / **the moon** ...

In this paper we will map the anaphoric/unique distinction to another well-known semantic distinction, that between denoting *individuals* or *singleton/maximal* properties. This choice will in turn be mapped onto two distinct syntactic levels, a s(trong)DP and a w(eak)DP projection, whose heads may be filled or empty. If the head is empty, we propose that the projection can still be semantically active if material of the appropriate type moves to its Head or Specifier, licensing the layer and making it visible for interpretation.

In many languages, strong definiteness is expressed by means of a (bleached) *demonstrative*. This is sometimes an option also in Romance and Germanic languages such as Italian and English, as illustrated in (2), but these languages normally use *definite articles*, as in (1), for both types of definites.

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- (2) John bought a dog and a cat. The/*this* dog was very shy.

At first glance, languages that do not have definite articles, like Mandarin or Cantonese, present a very different picture. In Mandarin, demonstratives are normally used for anaphoric definites, much as in Jenks (2016), but a simple bare nominal is used for all other cases—see (3a). In Cantonese, definiteness is normally expressed with bare Cl[assifier] phrases (nominals consisting of a classifier plus a noun: Cl-N henceforth) as in (3b): see Cheng and Sybesma (1999).<sup>1</sup>

- (3) a. {Nà-zhī gǒu / Gǒu} hěn pàxiū. *Mandarin*  
       {that-CL dog / dog} very shy  
       ‘the dog<sub>strong</sub> / the dog<sub>weak</sub> is very shy’  
   b. Zek<sup>3</sup> gau<sup>2</sup> hou<sup>2</sup> paa<sup>3</sup>cau<sup>2</sup>. *Cantonese*  
       Cl dog very shy

However, even in languages that have a definite article, like English and Italian, there are other ways in which a definite interpretation can arise. English noun phrases with pre-N genitives (so-called “Saxon genitives”) in argument position—(4a)—are known to get a definite interpretation, and hence are impossible when the context provides more than one possible antecedent, as in (4b).

- (4) a. John bought a dog and Marc did, too. ... **John’s dog** was very shy.  
       b. John bought two dogs. ... \***John’s dog** was very shy.

Less well-known is that the coordination of bare (determinerless) NPs in a number of languages, including English and Italian, can—and in the count singular cases, must—trigger definiteness, as discussed in Heycock and Zamparelli (2003) and Roodenberg (2004).

- (5) a. John bought a dog and a cat on Monday.  
       Later that week, he took **cat and dog** to the vet. *= the cat and dog*  
   b. John bought two cats and two dogs on Monday.  
       #Later that week he took **cat and dog** to the vet.  
 (6) Un gatto ed un cane si azzuffavano. **Cane e gatto** erano ugualmente luridi. *Italian*  
       a cat and a dog were fighting dog and cat were equally filthy  
       ‘A cat and a dog were fighting. **Cat and dog** were equally filthy.’

When the strategies used by English and Italian to encode definiteness without an article are taken into account, some interesting similarities between Germanic, Romance and Chinese begin to emerge. The remaining non-lexical differences—we hope to show—are confined to a domain which has been neglected in the research on noun phrase structure, namely the domain of predicative cases, and point to a deeper regularity in the way functional projections are licensed.

<sup>1</sup>We set aside cases where Cantonese uses bare nouns to refer to broad-context unique objects, like the moon. Our hunch is that these cases, like the Italian nouns discussed in connection with (25b) might be assimilated to proper names.

## 2 Definiteness and its positions

### 2.1 Subject/Object Asymmetries

In English or Italian (and in Mandarin, when demonstratives are used), definites do not give rise to subject/object asymmetries. The definiteness of subject or object *the*-nominals, as in (7), or Saxon genitive nominals, as in (8), is the same.

(7) [Il cane] inseguì [il gatto]. *Italian*  
the dog chased the cat

(8) [John's cat] chased [Mary's dog]

Cantonese Cl-N and Mandarin NP, on the other hand, have different interpretive possibilities depending on their position. In Cantonese, for instance, a bare Cl-N in object position can be interpreted either as a definite or an indefinite—(9a). In subject position, however, a Cantonese Cl-N is always interpreted as a definite, as in (9b) (see Cheng and Sybesma 1999 and Cheng et al. 2013).<sup>2</sup>

(9) a. ngo<sup>5</sup> gam<sup>1</sup>jat<sup>6</sup> maai<sup>5</sup>-zo<sup>2</sup> **bun<sup>2</sup> syu<sup>1</sup>** *Cantonese*  
I today bought-PERF CL book  
'I bought **a/the book** today.'

b. **zek<sup>3</sup> gau<sup>2</sup>** gam<sup>1</sup>jat<sup>6</sup> seng<sup>4</sup>jat<sup>6</sup> hai<sup>2</sup> oi<sup>6</sup>min<sup>6</sup> *Cantonese*  
CL dog today whole.day at outside  
'**The dog** was outside the whole day today.'

Both Cantonese and Mandarin display other subject/object asymmetries. Num-Cl-N nominals are nearly always impossible in subject position<sup>3</sup> (without a special verbal licensing element, e.g. *jau<sup>5</sup>* 'have' in Cantonese); they are possible—but always indefinite—in object position (10).

(10) a. \*ng<sup>5</sup> bun<sup>2</sup> syu<sup>1</sup> hai<sup>2</sup> go<sup>2</sup> zoeng<sup>1</sup> toi<sup>2</sup> soeng<sup>5</sup>min<sup>6</sup> *Cantonese*  
five CL book COP that CL table top  
Intended: 'Five books are on the table.'

b. ngo<sup>5</sup> gam<sup>1</sup>jat<sup>6</sup> maai<sup>5</sup>-zo<sup>2</sup> ng<sup>5</sup> bun<sup>2</sup> syu<sup>1</sup> *Cantonese*  
I today bought-PERF five CL book  
'I bought 5 books today' (not '...the 5 books')

These asymmetries are reminiscent of similar cases found with Italian, Catalan and Spanish bare plurals (11), which may only appear in post-V (or post-P) positions.

(11) a. \***Cani** sono onnivori *Italian*  
Dogs are omnivores

<sup>2</sup>The definiteness of subjects is sometimes attributed to the idea that Chinese subject are always topics; but see Tsai (2001). However, in languages like Italian topics may easily be indefinites, so the conclusion does not immediately follow. Moreover, if topicality induced definiteness, it would remain unclear why this does not happen with numerals, as in (10a) below.

<sup>3</sup>For space reasons, we exclude from consideration vague amounts expression like Cantonese *hou<sup>2</sup> do<sup>1</sup>* and certain subject Num-Cl-Ns, which acquire a pure amount reading involving modals, see Tsai (2001).

- b. Io allevo **cani** per lavoro  
I breed dogs as a job

Italian

This distribution has been attributed by Contreras (1986), Longobardi (1994), Chierchia (1998), and others to the idea that such nominals have an empty D ( $D^e$  henceforth), which must be licensed by V or P under c-command (12). The same analysis can be directly extended to both Cantonese and Mandarin, assuming that even in cases in which we see a simple CI-N a more complex structure with a null head is present.

The null head cannot be a missing numeral since, as (10b) shows, even an *overt* numeral does not allow for a definite reading in object position, while this is one of the possible interpretations of CI-N. We propose, instead, that the empty head in need of licensing is D itself, in Cantonese and Mandarin just as in Italian.<sup>4</sup>

- (12) a.  $*[_{DP} D^e \text{ dogs}] V$   $D^e$  unlicensed  
b.  $V [_{DP} D^e \text{ dogs}]$   $D^e$  licensed by V

The subject/object asymmetry in Chinese DPs is however different from that observed for DPs in Italian, since in Italian, like in English, the presence of a numeral (or another amount expression: *molti* ‘many’ *pochi* ‘few’, etc.) is sufficient to license an indefinite reading in any position: the fully acceptable *cinque libri sono sul tavolo* ‘five books are on the table’ contrasts, for example, with Cantonese (10a). Interestingly, both in Italian and English, numerals can follow a determiner (unlike, say *\*the every/most people*), but **must** be in DP-initial position if they occur in the absence of a determiner. Thus (13a) is well-formed because *those* licenses the D position, even though *two* appears below the adjective *wonderful*. (13b) shows that *wonderful* can introduce a bare plural.<sup>5</sup> But if we try to combine a low *two* with the bare plural strategy, as in (13c), the result is sharply ungrammatical. Instead, a lone numeral must be in DP-initial position, as in (13d).

- (13) a. I remember [**those** wonderful **two** weeks spent together]. (Crisma 1991)  
b. I remember [wonderful weeks spent together].  
c. *\*I* remember [wonderful **two** weeks spent together].  
d. I remember [**two** wonderful weeks spent together].

This suggests that a  $D^e$  may be licensed by an overt Num, or by its features, moving onto  $D^e$  from a ‘close enough’ position, with no material interfering. The ungrammaticality of (10a) suggests that this strategy is not available in Chinese, except in the special cases mentioned in footnote 3.

## 2.2 Possessives

As we have seen in (4), argumental possessives are interpreted as definites. Contrary to what is sometimes claimed or assumed, this cannot simply be accounted for in terms of “definiteness spreading” from the possessor to the whole possessive DP, or agreement in definiteness between the possessor in the specifier of the DP and its head.

<sup>4</sup>Note that we will define DP in essentially semantic terms, i.e. as a projection which has or can be converted to have as semantic type  $\langle e \rangle$  (individual) or  $\langle \langle et \rangle t \rangle$  (Generalized Quantifier). In this sense, it is unclear how a language could ‘lack’ a category DP.

<sup>5</sup>As will be discussed later, we assume that the bare NP in (13b), adjective included, is raised to  $[Spec, D^e]$ : see (29a) below.

First, note that the internal nominal inside a partitive in sentences such as (14) is restricted to definites (Jackendoff, 1977).

- (14) A few of {the books/those books/\*books/\*some books} were sold.

Now observe that a possessive DP placed in this position, as in (15), is perfectly acceptable, both when the possessor is definite, as in (15a), and—crucially—when it is indefinite, as in (15b,c):

- (15) a. Only [a few of {**my books/Maria's books/that woman's books**}] were damaged.  
 b. Only [a few of **a partner's friends**] really become your friends.  
 c. I was watching [a few of **some guy's videos**] a couple of months ago.

Second, as noted in McNally (1998), Dobrovie-Sorin (2000), Alexiadou (2005), among others, while an English possessive with an indefinite possessor does not identify a unique individual with respect to the context, it still encodes uniqueness/maximality with respect to a choice of value for the indefinite possessor. For instance, Dobrovie-Sorin points out that *a king's four sons* has the same meaning as *the four sons of a king*.<sup>6</sup> She points out that, in this respect, the English “Saxon genitive” contrasts with the Hebrew construct state, where maximality is not part of the interpretation when the possessor is not definite.

- (16) arba'a bney meleχ *Hebrew (Dobrovie-Sorin, 2000)*  
 four sons king  
 ‘four sons of a king’

These facts suggest that it is the structure of the nominal—here, we will argue, the position of the possessor—that generates the definite meaning, rather than some kind of definiteness feature inheritance/agreement, though as we will see later the full picture is actually more complex.

Cantonese possessives make the same point in a different way. In this language possessors may be placed between the classifier and the noun, as in (17a), or before the classifier, as in (17b). In the latter case, they always trigger a *definite* reading, even in object position.

- (17) a. ngo<sup>5</sup> maai<sup>5</sup>-zo<sup>2</sup> bun<sup>2</sup> [Chomsky ge<sup>3</sup>] syu<sup>1</sup> *(possessor between Cl and N)*  
 I buy-PERF CL [Chomsky GE] book  
 ‘I bought one book of Chomsky’s.’  
 b. ngo<sup>5</sup> maai<sup>5</sup>-zo<sup>2</sup> Chomsky bun<sup>2</sup> syu<sup>1</sup> *(possessor above Cl-N)*  
 I buy-PERF Chomsky CL book  
 I bought Chomsky’s book. (the one salient in the conversation)  
 Not: ‘I bought one book of Chomsky’s.’

Note that there is an important difference between the effect of possessives like *John's* in *John's book* or *Chomsky* in (17b), and the effect of the numeral in (13d): the former trigger definiteness,

<sup>6</sup>It should be observed that this uniqueness/maximality interpretation can co-exist with the appearance of the whole possessive nominal in an existential construction, often taken to be a diagnostic for indefiniteness (see McNally 1998 for discussion of possessives in existentials).

- (i) a. There were someone's three-lettered initials on the license plate.  
 b. Suddenly there were someone's hands on my neck.

the latter does not. Even in Romance and Germanic languages where bare numeral phrases are acceptable anywhere, *two weeks* cannot mean *the two weeks*.

### 2.3 Bare Nominal Conjunction

Heycock and Zamparelli (2003) (HZ03) observe that in Germanic and Romance, conjunctions of bare (determinerless) nominals (**B**[are]**N**[ominal]**C**[onjunction]s) give rise to an unexpected definite reading, whether in the singular (18a) or in the plural (18b) (see also Roodenburg 2004). This contrasts strongly both with non-conjoined bare plurals, which are notoriously unable to connect to previous antecedents even in their existential reading (Carlson, 1977), and with bare singular count nouns, which are simply ungrammatical in Germanic and Romance languages (18c). The examples in (18) are in subject position, but the situation is identical in object position, as shown in (19).

- (18) A refugees' ship just arrived in Puglia. (cf. HZ03, ex. (29))
- a. Captain and bosun are Serbian, the sailors are Albanian.  
*Only: 'the captain and the bosun...'*
  - b. Sailors and passengers are Albanian; the captain is Serbian.  
*OK: 'the sailors and the passengers...'*
  - c. Sailors are Albanian; \*(the) captain is Italian.  
*Only: 'sailors in general...'*
- (19)
- a. I spoke with captain and bosun. *Only '... the captain and the bosun'*
  - b. I spoke with sailors and passengers. *OK: '... the sailors and the passengers'*
  - c. I spoke with sailors. *Only 'some sailors or other'*

Just as we saw for Chinese nominals including numerals in (10b), here too nominals headed by numerals do not trigger definiteness, even when conjoined:

- (20) The pair of forks<sub>i</sub> goes on the right and the pair of spoons<sub>j</sub>, on the left. [(Two) forks and (\*two) spoons]<sub>i+j</sub> must match.

The same construction is present in Cantonese ((21)—note the absence of the Cl), and in Mandarin ((22)—note that this is an anaphoric case, in which a demonstrative would normally be used).

- (21) keoi<sup>5</sup> bei<sup>2</sup>-zo<sup>2</sup> jat<sup>1</sup>-tiu<sup>4</sup> so<sup>2</sup>si<sup>4</sup> tung<sup>4</sup>mai<sup>4</sup> jat<sup>1</sup>-fong<sup>1</sup> seon<sup>3</sup> ngo<sup>5</sup>. **So<sup>2</sup>si<sup>4</sup> tung<sup>4</sup> seon<sup>3</sup>**  
 he give-PERF one-CL key CONJ one-CL letter I key CONJ letter  
 ngo<sup>5</sup> dou<sup>1</sup> bei<sup>2</sup>-zo<sup>2</sup> uk<sup>1</sup>zyu<sup>2</sup> laa<sup>3</sup>. *Cantonese*  
 I DOU give-PERF landlord SFP  
 'He gave a key and a letter to me. Key and letter, I have given both to the landlord.'
- (22) tā gěi-le yī-tiáo yàoshí gēn yī-fēn xìn gěi wǒ. wǒ bǎ **xìn gēn yàoshí** dōu  
 he give-PERF one-CL key CONJ one-CL letter give I I BA letter CONJ key DOU  
 gěi-le wūzhǔ le. *Mandarin*  
 give-PERF landlord SFP  
 'He gave a key and a letter to me. I have given both key and letter to the landlord.'

As observed in HZ03, naturally occurring cases are nearly all anaphoric, possibly across some bridging relation. New-mention definites whose uniqueness is guaranteed by a restriction—whether shared (23a) or distributed (23b)—are clearly degraded.

- (23) a. I didn't enjoy the film: \*(the) man and woman in front of me were very tall.  
b. To even out the couples, \*(the) shortest man and tallest woman should not partner.

This profile is of course the hallmark of strong/anaphoric definiteness.

To explain this set of facts we take the lead from the situation in Bangla, an Indo-Aryan classifier language. In Bangla, when a numeral is present the normal order is Num-Cl-N. When it is missing, the only grammatical order is N-Cl (see (24), from Simpson and Biswas 2016), and the nominal obligatorily gets a definite (according to Dayal 2012; specific, in Bhattacharya 1999) reading.

- (24) a. Ek Ta chabi  
1 Cl key  
a key  
b. chabi Ta  
key Cl  
the key

Following Dayal (2012) and Chacòn (2011), whose accounts are in turn based on Bhattacharya (1999), we will assume that the definiteness is triggered by NP raising to some higher DP layer.<sup>7</sup>

Similar facts have been reported in Longobardi (1994) for certain Italian nouns (*casa* 'house/home', *camera* 'room', names of days of the week): overt N raising above the possessive adjective yields a 'rigid designator' meaning, as in (25b). In the context of strong/weak definiteness distinction, the latter meaning could be seen as having a speaker-oriented deictic component—hence, a strong definite.

- (25) a. Carlo voleva la sua casa  
Carlo wanted the his house  
Possible reading: 'He wanted a private house.'  
b. Carlo voleva casa sua  
Carlo wanted house his  
Only reading: 'Carlo wanted his own house (the one he had before).'

This suggests that in the absence of a determiner-like element, definiteness can be obtained by having a nominal category of the appropriate type merged or re-merged at the top of the DP. This movement may be visible, as in the Bangla or Italian cases shown above, or—we propose—string vacuous, in Cantonese and Mandarin.

To spell out this idea, let us start with a base structure as in (26) for all the languages under consideration (this structure will be slightly revised later). CIP is a Classifier Phrase, probably equivalent to Pl(urality)P in Heycock and Zamparelli (2005) (HZ05); PredP/NumP is equivalent to Zamparelli's (1996/2000) PDP). We assume that when a projection has no overt realization and no semantic effect it may be omitted, so it does not need to be licensed.

<sup>7</sup>Simpson and Biswas (2016) show that this move gives anaphoric definiteness, while for uniqueness definiteness a nominal without Cl is used, much as in Mandarin. For reasons of space we will not discuss this aspect here.

- (26) [DP D [PredP/NumP Numeral [CIP/PIP (Classifier) [NP (Adjectives) N ]]]]

D, however, is semantically active (see footnote 4), and when it is not occupied by a demonstrative or a definite article it must be licensed by some other means. One is the presence of a ‘high’ possessor:

- (27) [DP [DP Possessor] (’s) [NumP/PredP Numeral [CIP/PIP (Classifier) [NP N ]]]] *English/Chinese*

In non-possessive DPs, licensing strategies take two different courses: head-movement of a functional element to D<sup>e</sup> (blocked by an intervening head), or phrasal movement of a CIP/PIP or NP to [Spec,D<sup>e</sup>] (creating a situation similar to (27)). The first route would be realized by (a) Cl moving to D in Cantonese as in (28a) (see also Simpson 2005); (b) the BNC coordination head moving covertly to D<sup>e</sup>, and taking scope there, as in (28b); or finally (c), Num’s  $\phi$ -features moving to D<sup>e</sup>, as in (28c), to generate the kind of structure exemplified earlier in (13d) in English or Italian (but not Chinese, possibly for lack of  $\phi$ -features on Num).<sup>8</sup>

- (28) a. [DP Cl<sub>i</sub>+D<sup>e</sup> ... [CIP t<sub>i</sub> [NP N ]]] *Cantonese definites (Object-level)*  
 b. [DP and<sub>i</sub>+D<sup>e</sup> ... [NP N] t<sub>i</sub> [NP N]] *LF scope in all BNC languages*  
 c. [DP D<sup>e</sup> +  $\phi$  [NumP Num $\phi$  ... [NP N ]]] *English/Italian numerals, see (13d)*

Turning to phrasal movement, we propose that kind-denoting bare NPs are raised to [Spec,D<sup>e</sup>] for interpretation, as in Borer (2004), and license D<sup>e</sup> as a side effect: see (29a). This strategy seems to be common to Mandarin, Cantonese and English (though restricted to plural or mass Ns in the latter), but we do not discuss it any further here. To derive Mandarin object-level definites, Zamparelli (2013) proposes that CIP/PIP raises to [Spec,D<sup>e</sup>], after N has raised to license an empty Cl head, as shown in (29b) (see the similar approach to Bangla in Chacòn 2011).

- (29) a. [DP [NP N ]<sub>i</sub> D<sup>e</sup> ... t<sub>i</sub> ] *Cantonese/Mandarin/English (Kind-level) e.g. (13b)*  
 b. [DP [CIP N<sub>i</sub> [NP t<sub>i</sub> ]]<sub>j</sub> D<sup>e</sup> ... t<sub>j</sub> ] *Mandarin, Object-level definites*

Alternative derivations are possible: Cantonese bare Cl-N definites might be derived not by head movement, as depicted in (28a) above, but rather by phrasal movement, as in (30a) (cf. Dayal’s 2012 NP-raising approach for Bangla). Conversely, Mandarin definite bare nouns might be derived not by phrasal movement as in (29b), but rather by head-movement of N to D via an empty (but semantically active) Cl<sup>e</sup>, as in (30b) (note, however, that N is not functional). We leave these possibilities open for now.

- (30) a. [DP [CIP Cl N]<sub>i</sub> D<sup>e</sup> ... t<sub>i</sub> ] *Cantonese (alternative to (28a))*  
 b. [DP N+Cl<sup>e</sup><sub>i</sub>+D<sup>e</sup> ... [CIP t<sub>i</sub> [NP t ]]] *Mandarin (alternative to (29b))*

Note that in Mandarin an overt classifier is nearly always preceded by a numeral (see Cheng and Sybesma 1999), while this isn’t the case in Cantonese. If, as it seems, numerals block raising, a derivation like (28a) or (30a) is excluded for Mandarin. As for Cantonese, we can hypothesize that

<sup>8</sup>While the first two instances of movement to D trigger definiteness, this last type does not, suggesting that the relevant  $\phi$ -features (probably those for semantic plurality, i.e. +LATT in the system of Heycock and Zamparelli 2005) are not sufficient to trigger an anaphoric reading of sD<sup>e</sup>.

this language does not have the null active  $CI^e$  needed to obtain object readings with the structure in (29b)—ruling out this possible derivation.

Finally, Italian bare plurals and Chinese numeral indefinites are cases where nothing can be raised, and  $D^e$  must be licensed by a verb under sisterhood. Note that our current proposal for BNC is different from the one in HZ03 (XP-movement of the whole NP conjunction to  $[Spec, D^e]$ ). We discuss the rationale for this new analysis at the end of the paper.

### 3 Definiteness and predicativity

While the proposal above gives us the distribution of definiteness, it still does not give us a distinction between ‘strong’ and ‘weak’ definiteness. In order to investigate this, we need to consider what happens when various types of definite phrases are used as *predicates*. Our diagnostic for predicative status is the possibility of occurring in small clauses, e.g. the complements of *consider* (31) or absolutive *with* (32). The predicates in such small clauses may be introduced by various determiners, including *the*, and possessives:

- (31) a. I consider John {a / the / Mary’s} real problem.  
       b. I consider these {two / the / Mary’s} real problems.
- (32) a. With Mary {a / the / the teams’s} midfielder, we are bound to score.  
       b. With those women { $\emptyset$  / two / the / the team’s / the team’s two} substitutes ...

Some other determiners, on the other hand, cannot appear in these configurations:<sup>9</sup>

- (33) a. \*I consider John {that / this / every} real problem.  
       b. \*I consider these {most / many / few} real problems.
- (34) a. \*With Mary {that / this / every} midfielder we are bound to score.  
       b. \*With those women {most / many / few / those / these} substitutes ...

The outcome is clear: demonstratives, the prototypical case of strong definiteness, do not make good predicates, while at least some *the*-nominals do.

Turning to possessives, Zamparelli (1996/2000) observes that the maximality presupposition active in argumental possessives—(35a)—is lost in predicative position. Thus (35b) may be uttered in a context in which there are various tools belonging to John scattered around. But, as (35c) shows, maximality reappears when a numeral is present.

- (35) a. ??John’s tools are here and John’s tools are also there. *maximal*  
       b. These are John’s tools, and those are also John’s tools. *no maximality*  
       c. ??These are John’s four tools, and those are also John’s four tools. *maximal*

His interpretation is that in (35b) the possessor is realized at the level normally reserved for numerals, which does not trigger definiteness. The presence of a numeral (which presumably competes for position with ‘s or, on an alternative analysis, the head assigning Genitive) forces the possessor into a higher position at the DP level.

<sup>9</sup>A possible objection is that some of these cases may occur in copular sentences: e.g. *John is that person*. Due to the possibility of equative or specificational readings in cases like *the problem is that person* (Moro, 1997), we find this construction to be less reliable than small-clauses as a real test for predicativity.

While definiteness—in the sense of a maximality presupposition—returns with the numeral in examples like (35c), the predicative status is preserved, as shown by examples such as (36) (see also the discussion in Julien 2005, 2006).

- (36) a. Narcissism and sensitivity to criticism: I consider these John's two main weaknesses.  
b. With bankruptcy or flight their two remaining options, they were near despair.

Again, the situation is replayed in Cantonese (37) and Mandarin (38).

- (37) li<sup>1</sup>-di<sup>1</sup> hai<sup>6</sup> aCan<sup>2</sup> ge<sup>3</sup> (??loeng<sup>5</sup> zung<sup>2</sup>) gong<sup>1</sup>geoi<sup>6</sup>; go<sup>2</sup>di<sup>1</sup> dou<sup>1</sup> hai<sup>6</sup> aCan<sup>2</sup> ge<sup>3</sup>  
this-CL COP Can GE two type tool; that-CL DOU COP Can GE  
(??loeng<sup>5</sup> zung<sup>2</sup>) gong<sup>1</sup>geoi<sup>6</sup> Cantonese  
two type tool  
'These are Mr. Can's (??two types of) tools; those are also Mr. Can's (??two types of) tools.'
- (38) zhè-xiē zhì Zhāngsān de (??liǎng zhǒng) gōngjù; nà-xiē yě shì Zhāngsān de  
this-CL COP Zhangsan DE two type tool; that-CL YE COP Zhangsan DE  
(??liǎng zhǒng) gōngjù Mandarin  
two types tool  
'These are Zhangsan's (??two types of) tools; those are also Zhangsan's (??two types of) tools.'

As well as demonstrating that possessives (like *the*-nominals) can retain a maximality interpretation even while functioning as predicates rather than arguments, these data also confirm that there is nothing intrinsically “definite” about possessors, since even the maximality interpretation is absent when the possessor can appear in a low position. This latter point is reminiscent of the situation in Cantonese that we observed in (17), where a lower (post-CL) possessor again did not yield maximality.

Importantly, however, in Chinese the loss of maximality in predicates extends to all cases of bare CL-N (Cantonese) and bare NP (Mandarin). (39) exemplifies for Cantonese: in Context A, CL-N may be used as an indefinite predicate, but in Context B, where the context requires that the predicate be unique, CL-N does not have the desired meaning.

- (39) **Context A:** I am telling a friend about my colleague's children:  
a. Kim hai<sup>6</sup> go<sup>3</sup> nam<sup>4</sup>zai<sup>2</sup>; Jan hai<sup>6</sup> go<sup>3</sup> nei<sup>5</sup>zai<sup>2</sup>  
Kim COP CL boy Jan COP CL girl  
'Kim is a boy and Jan is a girl.'
- Context B:** We have been talking about pupils who will be chosen to meet the prime minister. There will be exactly two pupils chosen: one boy and one girl  
b. #Kim hai<sup>6</sup> go<sup>3</sup> nam<sup>4</sup>zai<sup>2</sup>; Jan hai<sup>6</sup> go<sup>3</sup> nei<sup>5</sup>zai<sup>2</sup>  
Kim COP CL boy Jan COP CL girl  
'Kim is a boy and Jan is a girl.' (not the felicitous: 'Kim is the boy, Jan is the girl.')

The closest equivalents of '*Kim is the boy and Jan is the girl*' involve either making the CL-N the subject, or adding a demonstrative before each CL-N (and possibly turning the predication into some kind of identity statement). The absence of a “definite” (maximality) interpretation for the

CI-N sequence here is striking given that in other contexts such an interpretation is either possible (in object position) or obligatory (in subject position)—see (9a) and (9b) above.

The following table sums up the meaning distribution so far (blank cells not tested here).

|                                  | Subject    | Object                | Pred                 |
|----------------------------------|------------|-----------------------|----------------------|
| Demonstratives                   | <i>def</i> | <i>def</i>            | * (in Small Clauses) |
| Mandarin NP / Cantonese CI-N     | <i>def</i> | <i>def/indef</i>      | <i>indef</i>         |
| NP&NP ( <i>singular</i> )        | <i>def</i> | <i>def</i>            |                      |
| English / Chinese Poss (no Num)  |            | <i>def</i> (above CI) | <i>indef</i>         |
| English/Chinese Poss (above Num) |            |                       | <i>def</i>           |

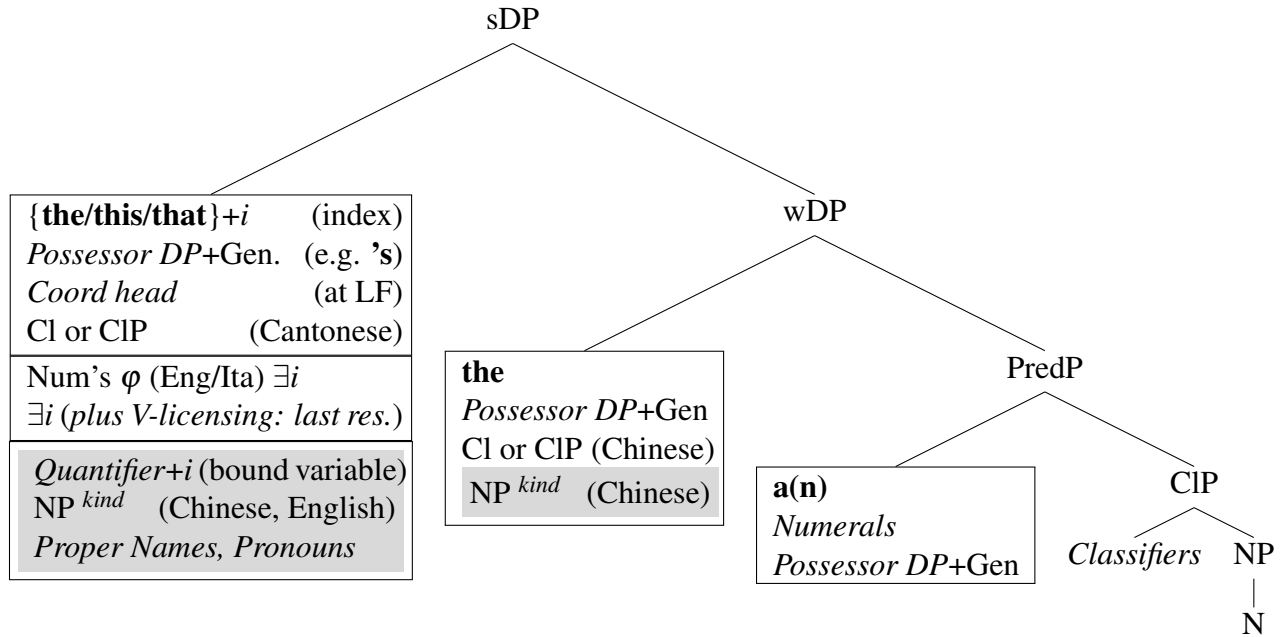
## 4 Analysis

### 4.1 Nominal structure

We propose that this distribution follows from three main assumptions:

- The two types of definiteness correspond to different projections: a high s(trong)DP, with a pronominal index *i* (argumental), and a lower w(eak)DP (predicative/argumental). Syntactically, both D heads, when null, can be licensed by receiving an operator or a fully-licensed nominal XP. Semantically, sDP will be of type  $\langle e \rangle$ , or  $\langle \langle et \rangle t \rangle$  if it contains a quantifier; wD will be of type  $\langle et \rangle$ , denoting the identity function  $\lambda P.P$ , but with the presupposition that *P* is unique or maximal (i.e.  $\exists x[\text{Max}(P)=x]$ ).
- Language uses the smallest category which (i) can accommodate all the material in the numeration; (ii) has or can be converted to the appropriate semantic type ( $\langle e \rangle$  or  $\langle \langle et \rangle t \rangle$  for arguments,  $\langle et \rangle$  for properties) (the MINIMIZE STRUCTURE principle).
- A free type-shifting operator, MAX, is available to take singleton/maximal properties and return their unique/maximal element. Thus, MAX will be able to apply to the output of wDP, given its presuppositions, but not to NumP. So, sDPs are born arguments, wDPs can become arguments via MAX, but NumP or lower projections cannot acquire an argument interpretation in this way.

Glossing over the head/specifier distinction, we obtain the following structure along with its possible occupants at each level.  $\exists i$  stands for the existential closure of index *i* (a last resort). Quantifiers such as *every*, *some*, *a* bind the index at sD—cf. Heim's 1982 Q-construal—but for reasons of space we do not discuss these and other cases here (greyed out boxes).



In the simplest case, DP layers are projected by lexical items, some of which may however be compatible with multiple layers: definite articles may appear at sDP and wDP, possessors at sDP, wDP and PredP. When there is no lexical head, the projection can still be licensed when certain items are inserted in the specifier, or moved to it, or from the verb as a last resort. Note that one of sDP or wDP (the latter converted by MAX) must always be present to create an argument. To make a predicate, one of wDP, PredP, CIP, and perhaps NP will do, but language will always pick the smallest level compatible with the lexical items it needs to insert (MINIMIZE STRUCTURE): wDP if *the* is present, PredP if there is a possessor—but wDP if there is both a possessor and a Numeral. Let's now see how the data presented so far follow from this structure.

## 4.2 Arguments: strong and weak definites

Definites can appear anywhere as arguments, provided they are licensed by one of the means above. MINIMIZE STRUCTURE dictates that they should be wDPs if possible, sDPs if maximality cannot be presupposed or an antecedent is found in discourse, possibly via bridging.

The perfect candidate for wDP definites are of course *superlatives*, since their ordering guarantees maximality. Interestingly, they resist having an antecedent:

- (40) Marc<sub>i</sub>, from Serbia, was taller than any other living person. Unsurprisingly, [the tall(?est) Serbian]<sub>i</sub> was a basketball player.

The situation with indefinites is more complex. By definition, they cannot be maximal, therefore cannot be wDPs or tolerate an active wDP layer; they must be sDPs. But then, indefinite lexical elements must either be interpreted at the sD head, yielding GQ meanings, or at least (in languages like Italian or English) license an sD<sup>e</sup> via movement of their  $\phi$ -features. In this case, sD<sup>e</sup> must be bound by Existential Closure within VP (à la Diesing) or by an adverb of quantification. The last possibility, and the only one available to all Chinese indefinites and to

Romance bare plurals, is that  $sD^e$  is licensed by a c-commanding verb. This gives rise to the subject/object asymmetries we have seen in Italian (11) and Chinese (9)-(10). English bare NP have been assumed to move to  $[Spec, D^e]$ , so no asymmetry is expected.

### 4.3 Predicative Cases

Things change in predicative cases: here the minimal  $\langle et \rangle$  structure is  $PredP$  (or lower): it can accommodate possessors, but has no maximality.  $wDP$  is projected only if *the* is in the numeration, or if the possessive marker is forced to be high by the presence of a numeral which preempts  $Pred$  (35c).

Crucially, an empty  $wDP$  layer cannot be projected as a predicate if the only possible licenser is movement of  $ClP/NP$ , as happens in Chinese.  $PredP$  is already a correct type, nothing in the numeration forces projecting  $wDP$ , and MINIMIZE STRUCTURE militates against it. So no predicative maximality arises in these languages, as we saw in (39b) above. Note that it would be very difficult to obtain this pattern if Cantonese  $ClPs$  were just optionally marked +DEFINITE.

## 5 A consequence: collapsible individuals

Normally, a conjunction of proper names or definites in argument position cannot ‘collapse’ onto a single individual and trigger singular agreement, even in a favourable pragmatic context and with compatible properties.

- (41) a. Dr. Jekyll and Mr. Hyde are/\*is clearly deeply conflicted.  
 b. [That famous linguist and that political commentator] have/\*has been invited.  
 c. [The well-known linguist and the world-famous left-wing commentator] were/?was here for a talk.

Such ‘joint’ readings (in the terminology of HZ05) are possible with appositions (42a), or DP-internal conjunctions (42b), suggesting that *properties* may be collapsed, but  $\langle e \rangle$ -type individuals may not.

- (42) a. Noam Chomsky, [the well-known linguist and the world-famous left-wing commentator] was here for a talk.  
 b. That famous [linguist and commentator] has been invited.

Now superlatives, prime candidates for a  $wDP$  meaning, are among the best cases of arguments which allow a joint interpretation:

- (43) a. [The best cook in town] and [the nicest person I know] is visiting us tonight.  
 b. [The two best cooks in town] and [the two authors of “New Food Bible”] are noone but my friends John and Jack.

In our framework,  $wDPs$  natively denote properties with a maximal element (singletons, in the singular), so their conjunction can take place before MAX applies. (42a) is interpreted as:

- (44)  $MAX [\&P [wDP \text{ the best cook}] \& [wDP \text{ the nicest person}]] = MAX(\{a\} \cap \{a\}) = a$

Recall now that BNCs behave as anaphoric definites, so sDPs. This correctly predicts the strong contrast between the N&N used as an apposition (45a) (joint possible), and the same N&N used in a BNC (45b) (joint impossible).

- (45) a. Jane Smith<sub>i</sub>, [friend and colleague]<sub>i</sub> of the deceased, gave a speech.  
 b. \*At the end of the function, [friend and colleague]<sub>i</sub> was in tears.

BNCs were analyzed as cases where *and* took scope at DP, licensing sD<sup>e</sup>. This means that (46a) gets interpreted as (46b), i.e. as a non-joinable conjunction of sDs, each anaphoric to a distinct individual (however such ‘non-Boolean’ conjunctions should be obtained).

- (46) a. [<sub>sDP</sub> &<sub>i</sub>+sD<sup>e</sup> ... [&<sub>P</sub> [<sub>NP</sub> friend] *t*<sub>i</sub> [<sub>NP</sub> colleague]]]  
 b. [&<sub>P</sub> [<sub>sDP</sub> sD<sup>e</sup> ... [<sub>NP</sub> friend]] & [<sub>sDP</sub> sD<sup>e</sup> ... [<sub>NP</sub> colleague]]]

This effect was not achieved in HZ03, where coordination remained at the level of properties/NPs, but the NP conjunction raised as a phrase to license D<sup>e</sup>, much as in (29b).

## 6 Conclusions

Our proposal has various novel aspects. First, the semantic distinction between ‘strong’ and ‘weak’ definites is reduced to the well-known distinction between arguments and (maximal) properties, with predictions for their distribution: strong definite must be arguments, weak ones may be arguments or predicates, lower projections must be predicates. We propose that only weak definites or other properties may be conjoined with a joint reading.

Second, we propose a connection between three apparently very distant cases of ‘positional definiteness’: high possessors in English or Chinese, DP-scoped coordinations of bare nominals and CI(P)-raising in Chinese. The latter case, combined with the MINIMIZE STRUCTURE principle allowed us to explain on general grounds the lack of definite bare predicates in Chinese. Note, finally, that these results can be achieved only by allowing some lexical items to appear in multiple positions, with their final semantic effect determined by a combination of lexical and positional factors.

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