

## Lecture 1 Introduction

### 1. The Top-Down Computational Approach (the XS-Model):

1. a. There is a layer of the English vocabulary, call it the Conceptual Array, which consists of grammatically unmarked items (at times called roots, see Marantz, 1997, and referred to below as listemes), which are, in essence, concepts with (partial) phonological labels. Listemes are not associated with grammatical information: no categorially-polarized morphology (derivational or inflectional), no subcategorization, no argument structure information.
- b. There is another layer of the English vocabulary, call it the Functional Lexicon, which consists of grammatical formatives. Grammatical formatives come in at least the following shapes:
  - i. Free morphemes (F-morphs) such as *the*, *three* and including clitics (e.g. weak pronouns)
  - ii. Abstract head features (<*pst*>)
  - iii. So-called derivational morphemes, including categorizing morphology (-*ation*).Grammatical formatives have a category and project structure, and are specified to occur in specific architectural configurations.
- c. Grammatical formatives merge with listemes, effectively making them categorially polarized.
2. "'Tw<sub>as</sub> [<sub>A</sub>brillig], and the [<sub>NP</sub> [<sub>A</sub>slithy] toves]  
Did [<sub>V</sub>gyre] and [<sub>V</sub>gimble] in the [<sub>N</sub>wabe]:  
All [<sub>A</sub>mimsy] were the [<sub>N</sub>borogoves],  
And the [<sub>NP</sub> [<sub>A</sub>mome] raths] [<sub>V</sub>outgrabe]"  
(also possible, but less plausible: [<sub>N</sub>mome] [<sub>V</sub>raths] [<sub>N</sub>outgrabe])  
*Jabberwocky*, Lewis Carol, *Through the Looking Glass*
3. a. This is too little carpet for the money  
b. There are three wines in the cellar  
c. Cat came (proper name interpretation)  
d. The three Kims I met yesterday were all tall (common name interpretation)

4. a. \*a lot of wine is/are many  
b. \*there are too much carpet in this room  
c. \*too much carpets
5. a. The factory horns sired throughout the raid  
b. The factory horns sired midday and everyone broke for lunch  
c. The police car sired the Porsche to a stop  
d. The police car sired up to the accident site  
e. The police car sired the daylight out of me
6. Formal properties of '*words*' are weak (and can be coerced, type-shifted)  
Formal properties of '*structures*' are strong (and cannot be coerced, type-shifted)
7. A Preview of Coming Attractions:
  - a. Some general syntactic considerations
  - b. What are the functional nodes within the DP and how do their different modes of licensing give rise to different interpretations?
  - c. Proper Names, Common Names
  - d. The Mass-Count Distinction
  - e. Weak and Strong quantifiers
  - f. The definite article.
  - g. Pseudo Partitives
2. What is (Functional) Structure - a Brief Overview
8. A. Functional structures are headed by a categorially-labeled *open value* which must be *assigned range* by the appropriate operator  
B. The functional lexicon of each language makes available an array of (direct) range assigners for specified open values. Such range assigners come primarily in two varieties; f-morphs and abstract head features. The latter require the support of some head (L, possibly F) to be pronounced, a fact that typically translates to the obligatory nature of head movement in such contexts.  
C. The derivation converges just in case the phonology dispenses a representation for the combination of head+*head feature*.  
D. Two modes of indirect range assignment are possible (i.e., range by elements which are not specified, in the functional lexicon, as range assigners for a particular open value). One involves range assignment by an adverb of quantification or a discourse operator. The second involves specifier – head agreement.  
E. A *portmanteau* item is a single functional item which can assign range to more

than one open value. A *portmanteau* item merges with the lowest target open value, and moves up the tree to assign range to higher values. *Every* is a portmanteau item which assigns range to  $\langle e \rangle_{DIV}$  (distributive); to  $\langle e \rangle_{\#}$  (universal), and to  $\langle e \rangle_D$  (strong)

F. All phrasal projections have an  $X^{max}$  and an  $X^{min}$  (but in line with Chomsky, 1995b, these are derived notions, rather than primitives, and the same node may be both  $X^{max}$  and  $X^{min}$ )

G. Every phrasal projection has at most one specifier and at most one complement, a fact that follows directly from binary branching.

9.  $[_{DP} \text{ every.} \langle e \rangle_d [_{\#P} \text{ every.} \langle e \rangle_{\#} [_{DIVP} \text{ every.} \langle e \rangle_{DIV} [ \text{ dog } ] ] ] ] ]$

10. a. During the summer, water in the pond mostly evaporates

b. Hummingbirds always die young

11. a. Water in the pond is mostly lost through evaporation

b. Hummingbirds always drink from our birdfeeder.

12. a. many hummingbirds always die

b. little water in the pond mostly evaporates

13.  $[_{\#P} \langle e \rangle_{\#} \dots [_{NP} ] ]$

14. Where superscript 3 is a value appropriate for  $\langle e \rangle_{\#}$  - and  $X^3$  an assigner of 3:

A.  $[_{\#P} q^3 - \langle e^3 \rangle_{\#} - N [_{NP} \text{ N } ] ]$

$q$  is head feature, L-head movement obligatory (dual marking in Hebrew, Arabic).

b.  $[_{\#P} f\text{-morph}^3 \langle e^3 \rangle_{\#} [_{NP} \text{ N } ] ]$

(free)  $f\text{-morph}$ ; L-head movement blocked (cardinals, as heads or as specifiers)

c.  $adverb^3 [_{\#P} \langle e^3 \rangle_{\#} [_{NP} \text{ N } ] ]$

adverb of quantification; L-head movement not forced.

15. a. the cat

b.  $[_{DP} \text{ the.} \langle e \rangle_d [(AP) [_{NP} \text{ cat } ] ] ]$

16. a. *ha.xatul*

the.cat

b.  $[_{DP} \langle e \rangle_d (AP) [_{NP} \text{ xatul } ] ] \rightarrow [_{DP} \text{xatul.} \langle def \rangle. \langle e \rangle_d (AP) [_{NP} \text{xatul} ] ]$

17. a. The dog's ear

b. A dog's ear

18. a. \*the dog's the ear

b. \*a dog's the ear

c. \*the dog's an ear

d. \*a dog's an ear

e. \*a dog's two ears (non-generic reading)

19. The dog's two ears

20. a. an ear of the dog

b. the ear of a dog

c. (the) two ears of the/a dog

21.  $[_{DP} [_{DP} \text{ the dog's } ]^3 \langle e^3 \rangle_d \dots [_{NP} \text{ ear } ] ]$

22. the two ears (of the dog)

	$\langle e \rangle_T$	$\langle e \rangle_d$	$\langle e \rangle_{\#}$	'plural'
English	Past: $\langle pst \rangle$	<i>the</i>	<i>three</i>	$\langle pl \rangle$
	Future: <i>will</i>	<i>this</i>	<i>a</i>	
	Present: $\langle pres \rangle$	<i>that</i>	<i>most</i>	
Hebrew	Past: $\langle pst \rangle$	$\langle def \rangle$		$\langle pl \rangle$
	Future: $\langle fut \rangle$			
	Present: empty (or no PF for V. $\langle pres \rangle$ )			
Kraho				<i>me</i>

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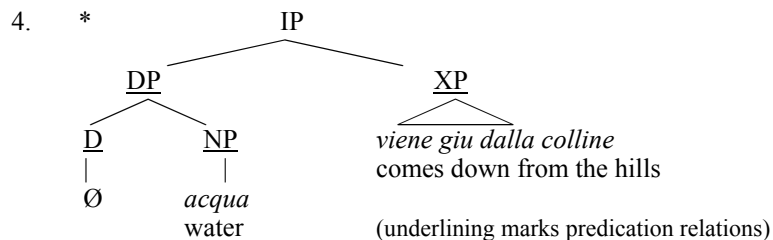
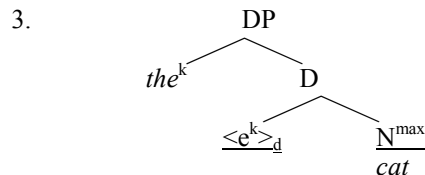
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## Lecture Note 2

### Proper Names

#### 1. Licensing D (Assigning Range to $\langle e \rangle_d$ ) – from Longobardi 1995

1. A "nominal expression" is an argument only when introduced by a lexically filled D
2. Empty determiners in Italian (Spellout):
  - a. Occur with plural or mass head nouns only
  - b. Are subject to lexical government, on a par with null heads.
  - c. Receive only an indefinite interpretation corresponding to that typically associated with existential quantification.



#### 2. Proper or Common Names?

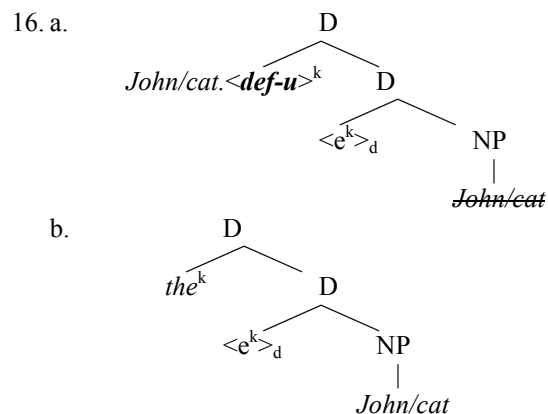
5. a. *Il mio Gianni ha finalmente telefonato*  
the my Gianni has finally telephoned
- b. *\*Mio Gianni ha finalmente telefonato*
- c. *Gianni mio ha finalmente telefonato*
- d. *Il Gianni mio ha finalmente telefonato*
6. a. *E venuto il vecchio Camerese*  
is come the older Camerese
- b. *\*E venuto vecchio Camerese*

- c. *E venuto Camerese vecchio*  
is come the older Camerese
- d. *E venuto il Camerese vecchio*
7. a. *Mio caro Gianni, vieni qui!*  
My dear Gianni, come here
- b. *Gianni mio caro, vieni qui!*
8. a. Old John came in
- b. \*John old came in
9. [DP [F1P (AP) [F1' [F2P (AP)[F2' [NP Gianni ]]]]]
 

a. <i>il<sub>1</sub></i>	mio	Gianni <sub>1</sub>		<del>Gianni<sub>1</sub></del>	Gianni <sub>1</sub>
b. <i>Gianni<sub>1</sub></i>	mio	<del>Gianni<sub>1</sub></del>		<del>Gianni<sub>1</sub></del>	Gianni <sub>1</sub>
c. <i>il<sub>1</sub></i>		Gianni <sub>1</sub>	mio	<del>Gianni<sub>1</sub></del>	Gianni <sub>1</sub>
d. <i>Gianni<sub>1</sub></i>	mio	<del>Gianni<sub>1</sub></del>	caro	<del>Gianni<sub>1</sub></del>	Gianni <sub>1</sub>
e. <i>*Ø</i>	vecchio	Camerese <sub>1</sub>		<del>Camerese<sub>1</sub></del>	Camerese <sub>1</sub>
f. <i>??Ø</i>	mio		caro	Gianni <sub>1</sub>	<del>Gianni<sub>1</sub></del>
10. a. Cat came
- b. I invited Dog/\*dog
11. a. Tall Kim showed up here
- b. The tall Kim showed up here
- c. Good old Kim showed up here
- d. Tall Kims are a rare sight
- e. I saw tall Kims
- f. The tall Kims will handle this problem
12. a. *keleḥ naḥax meuxar* (proper name only, and compare with (12d), (14a))  
dog barked late
- b. *baraxti mi-keleḥ* (ambiguous)<sup>1</sup>  
ran-away.1.sg from-dog
- c. *'etmol naḥax keleḥ meuxar* (ambiguous)  
yesterday barked dog late
- d. *ha.keleḥ naḥax meuxar* (common name only)  
the.dog barked late
13. a. *Rina hopiḥa po meuxar* (proper name only, and compare with (14b))  
Rina appeared here late
- b. *'etmol hopiḥa po rina meuxar* (ambiguous)  
yesterday appeared here rina late
- c. *rinot tamid me'axrot* (generic)  
Rinas always late

<sup>1</sup> Definite direct objects in Hebrew, including proper names, are marked as such by an object marker absent in indefinites. As a result, there is no ambiguity for direct objects.

- d. \*rinot 'exaru ha.boqer (\*existential, (#generic) and compare with (14c)  
 rinas were-late this morning
- e. hizmanti rinot la-mesiba (existential, \*generic)  
 invited.1.sg rinas to the party
- f. la-mesiba ha.zot higu rinot  
 to-this party, arrived rinas (existential, \*generic and compare with (14d)
14. a. eyze keleb nabax meuxar (common name only)  
 some dog barked late
- b. eyze rina hopi xa po meuxar (common name only)  
 some rina appeared here late
- c. kama rinot exaru ha.boqer (common name only)  
 several rinas were-late this morning
- c. la-mesiba ha.zot higu kol ha.rinot  
 to this party arrived all the rinas.
15. a. ze'eb radap axrey ha.yeled  
 Ze'ev chased after the boy  
 'Ze'ev chased the boy' (proper name only)
- b. 'etmol radap ze'eb axrey ha.yeled  
 yesterday chased Ze'ev/a wolf after the boy  
 i. 'Yesterday, Ze'ev chased the boy' (proper name)  
 ii. 'Yesterday, a wolf chased the boy' (common name)
- c. baraxti me-ze'eb  
 ran-away.1.sg. from-Ze'ev/wolf  
 i. 'I ran away from Ze'ev' (proper name)  
 ii. 'I ran away from a wolf' (common name)



### 3. Some More on Proper Names with Determiners

17. a. The Queen Mary sailed for the last time in 1962  
 b. \*Queen Mary sailed for the last time in 1962 (under the intended interpretation)
18. This Kim is really getting on my nerves
19. a. ha.rani ha.ze mamaš xole li xal ha.xacabim  
 the.rani the.this really climbs to-me on-the nerves  
 'This Rani really gets on my nerves'
- b. betax šam xat kbar xal šuho šel ha.bibi  
 probably heard.2.sg.f. already about return.his of the.Bibi  
 'You probably heard already about the return of the Bibi (=Bibi's return)'
20. So I hear we are inviting this Pat person?
21. a. al-hassan (hassan: 'good, good looking')  
 b. al-faaDel (faaDel: 'virtuous')
22. a. (\*I) youssuf  
 b. (\*I) maryam
23. a. He is a Bronx-lover  
 b. This is a Bronx-type environment  
 c. Every city can use a Bronx
24. a. Der Hans ist weggegangen (German)  
 'Hans is gone'  
 b. O Kostis efuge (Greek)  
 'Kostis is gone'
25. The predication problem:  
 Common nouns moved to D are NOT predicated of their original, common name meaning (e.g., Wolfgang is not 'he who walks like a wolf'). This raises the question of whether the XS-model allows such a radical stripping of a concept from its meaning, in some structures, as to leave, of it, only the 'appellation' property.
26. A non-solution – one could suggest, in line with Li (1998), that all common names may merge as determiners. This solves the predication problem, but the correlative cost is assuming that all common names (indeed, all phonological words) are ambiguous between a CONCEPT and a DETERMINER. That assumption, once made, is however applicable to the structure in (16a), as we can now assume that just in case the determiner version is inserted under N, it must move...

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**Lecture Note 3**  
**The Mass-Count Distinction and Plurals as Classifiers**

**1. The Mass-Count Distinction and Classifying Chinese**

1. If listemes do not come with grammatical features of any sort, the mass-count distinction, assuming it to be a valid grammatical distinction, cannot be associated with listemes, but must be the property of syntactic structures. That e.g. **count** is a property of structures, rather than lexical items, has been argued for directly, for Chinese (but not, e.g., for Italian) by Chierchia (1997, 1998).
2. Xuesheng lai le  
 student come par (aspectual)  
 'The students came' (Li 1998).
3. a. yí lì mǐ  
     one CL rice  
     'one grain of rice'  
    b. yì ge rén  
        one CL person  
    c. shenme qián  
        much money (*shenme*: literally *what*)

**1.1. Chierchia's claims:**

4. A. A semantic parameter:
  - i NP is [+pred, -arg]
  - ii NP is [-pred, +arg]
  - iii NP is [+pred, +arg] (in actuality, either [+pred, -arg] or [-pred, +arg])
 B. Mass nouns are lexical plurals

**1.2. What (purports) to follow from 4 A-B for Chinese (with value Aii):**

5. a. The absence of articles  
    b. The absence of plural morphology  
    c. The fact that every noun extension is mass  
    d. A numeral may combine with a noun only through a classifier  
    e. Nouns can occur bare in argument positions

**1.3 The line of reasoning:**

6. a. In Chinese, NPs are arguments. In e.g., Italian, NPs are predicates. In Italian D must project for an argument to emerge (D turns a predicate to an argument). Therefore, in Italian arguments are DPs. In Chinese, on the other hand, NPs are already arguments and there is no need to project D. In the absence of D, we don't expect determiners, and indeed, we get none. Properties (a) and (e) follow.

b. But Chinese, of course, has quantifiers, and quantifiers need restrictions, i.e., predicates. So there must be a way to turn NP arguments in Chinese to predicates, just as there is a way to turn predicates to arguments in Italian. It turns out that the semantic properties of the operator which converts arguments to predicates must operate on kinds (rather than individuals), and thus, by necessity, gives rise to mass predicates. It now follows that no plural marking can exist, as mass nouns are already lexically plural. It further follows that classifiers are needed to license numerals, as numerals cannot otherwise occur with mass predicates. We have now derived properties (b,c,d), as well as the fact that in Chinese, **count** interpretation derives from the existence of some syntactico- semantic structure, and not from the properties of specific lexical items.

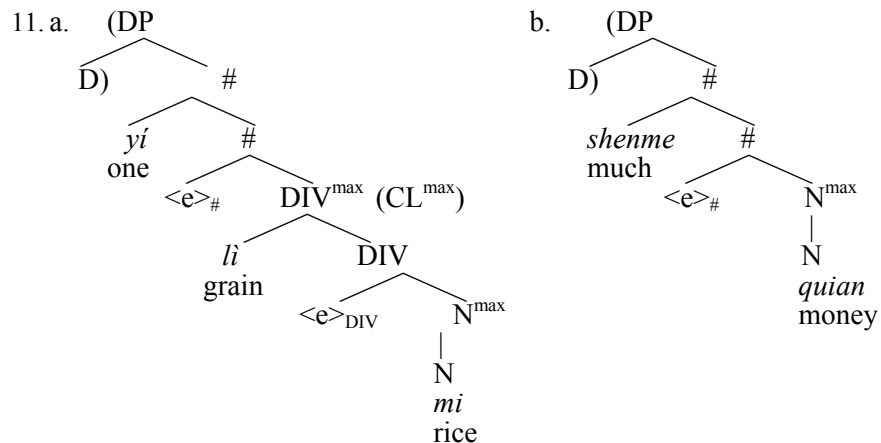
7.  $\cup$ d: a function that turns kinds to (mass) predicates, operates on idealized kinds.  
 $\cap$ P: a function that turns predicates to kinds
8. DET converts predicates to kinds (and projects as D)  
 DET' converts kinds to (mass) predicates:  $\text{DET}'(x)(P) = \text{DET}(\cup x)(P)$   
 Example: EVERY' (dog) (bark) = EVERY ( $\cup$ dog) (bark)

**1.4. Problems for Chierchia:**

9. A. What excludes plural marking on the output of the classifier system (i.e., above it, and attached to it as a bound plural morpheme)? Why is this not attested?  
    B. If in Italian DET is in D, why is DET' not in some D' for Chinese? And if Italian has a null DET which converts predicates to arguments (e.g., for existentially interpreted bare plurals) how do we know that there is no null DET' which converts Chinese arguments to predicates? And why couldn't there be a phonologically realizable DET' article on a par with *the* which converts Chinese arguments to predicates, in D or in some D'? Therefore, properties (a,e) follow from a number of independent stipulation on the difference between DET' and DET (DET' is not in D'; there is no null DET', there is no '*the*' DET').
- C. (c) is probably true, but not clearly unique to Chinese; (d) is clearly true. But can they be derived?
- D. See Li (1997) for the argument that Chinese has a DP projection. See Cheng and Sybesma (1998, 1999) for arguments that the distribution of determinerless NPs in Chinese is not free, and largely follows the same distribution of bare NPs in languages which otherwise have overt determiners, and no Chinese-type classifiers.
- E. Something Chierchia's account is entirely silent on: why don't languages such as English and Italian have a (non-phrasal) classifier morphology?

**2. Things to explain:**

10. A. Why doesn't Chinese have plural morphology?  
    B. Why doesn't e.g. English have classifier morphology?  
    C. Why are classifiers obligatory in Chinese in numeral contexts? And if that indicates that the NP predicates are mass, why are they mass?



### 3. What I will assume:

12. A. NP predicates in Chinese are mass because all N<sup>0</sup>'s, universally, are mass  
 B. All N<sup>0</sup>'s are mass, because nouns, as such, are listemes without any grammatical structure. Unless given structure, they will acquire none. Mass is simply a default interpretation in the absence of 'count' structure.  
 C. English (and Hebrew, and many other languages) do have classifier morphology. It is called 'plural'. The reason plural morphology and classifier morphology do not co-occur is because they range over the same functional value, that of <e>DIV. Contrary to common wisdom, plurality is **not a number specification** or a quantity specification, **nor is it a function from singulars**. Rather, it is a divisional function on mass. The difference between the classifier system of English and that of Chinese is that the latter defines a possible portion, while the former only divides.  
 D. Dominating DivP is a Quantity Phrase (#P). #P quantities either stuff or divisions.

(Notation: subscripts are category labels; superscripts are range assignment configurations)

### 13. Non-Quantity structures:

- a. Determinerless mass: [DP <e><sub>d</sub> [NP salt ]]  
 b. Determinerless Pl. [DP <e><sub>d</sub> [DIV dog<div<sup>7</sup>> <e<sup>7</sup>>DIV [NP ~~dog~~ ]]]

### 14. Quantity structures:

- a. Quantity (indef.) mass  
 [DP <e><sub>d</sub> [NP Q<sup>5</sup> <e<sup>5</sup>># [NP salt ]]]  
 b. Quantity (indef.) Pl.  
 [DP <e><sub>d</sub> [NP Q<sup>5</sup> <e<sup>5</sup>># [DIV dog<div<sup>9</sup>> <e<sup>9</sup>>DIV [NP ~~dog~~ ]]]]  
 c. Quantity (indef.) Sg.  
 [DP <e><sub>d</sub> [NP a<sup>9</sup> <e<sup>9</sup>># [DIV a<sup>9</sup> <e<sup>9</sup>>DIV [NP dog ]]]]  
 d. Definite mass  
 [DP the<sup>3</sup> <e<sup>3</sup>><sub>d</sub> [NP the<sup>3</sup> <e<sup>3</sup>># [NP salt ]]]

- e. Definite pl.  
 [DP the<sup>3</sup> <e<sup>3</sup>><sub>d</sub> [NP the<sup>3</sup> <e<sup>3</sup>># [DIV dog<div<sup>9</sup>> <e<sup>9</sup>>DIV [NP ~~dog~~ ]]]]  
 f. Definite sg.  
 [DP the<sup>3</sup> <e<sup>3</sup>><sub>d</sub> [NP the<sup>3</sup> <e<sup>3</sup>># [DIV the<sup>3</sup> <e<sup>3</sup>>DIV [NP dog ]]]]

### 4. The Mass-Count Distinction. (summary largely based on Chierchia, 1998)

⊗: interpretable but 'odd'.

### 15. Availability of plural morphology:

- a. There are (three) shoes in this store  
 a'. ⊗ There are (three) footwears in this store  
 b. There are (three) drops of blood on the wall  
 b'. ⊗ There are (three) bloods on the wall

### 16. Availability of numerals:

- a. There are three shoes under this bed  
 a'. ⊗ There are three footwears under this bed  
 b. There is one pebble on the floor  
 b'. ⊗ There is one sand on the floor

### 17. Obligatoriness of classifier or measure phrase when combining with numerals:

- a. three ⊗ (grains of) rice(s)  
 b. one ⊗ (pound of) cheese(s)

### 18. Choice of determiners:

- a. Mass determiners: *little, much*,  
 b. Count determiners  
 i. Singular: *every, a, each*  
 ii. Plural: *several, many, few, a few, both*  
 c. Mass and plural determiners: *all, a lot of, plenty, more, most*  
 d. Unrestricted determiners: *the, some, any, no*

### 19. Independence of distinction from structure of matter:

- a. shoes vs. footwear  
 b. cloths vs. clothing  
 c. coins vs. change

### 20. (Predominantly), mass nouns can be made count:

- a. a wine, a love, a thread, a salt, a stone  
 b. wines, loves, threads, salts, stones  
 c. all the wines, all the loves, all the threads, all the salts, all the stones  
 d. every wine, every love, every thread, every salt, every stone  
 e. We store three bloods in this lab

### 21. (Predominantly), count nouns can be made mass (cf. Lewis's fabled universal grinder):

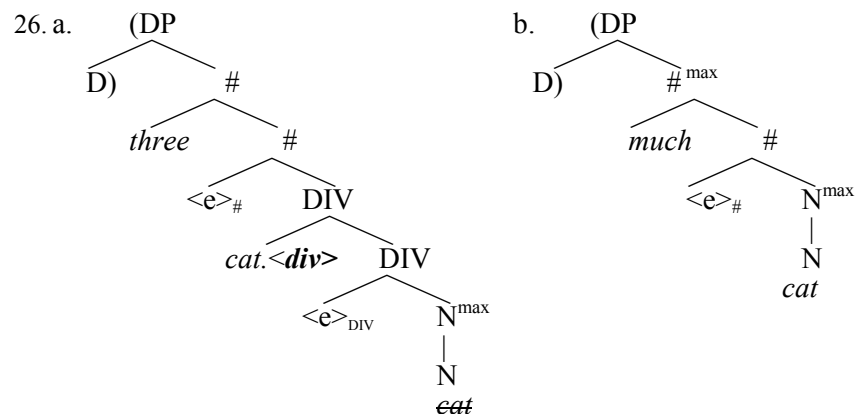
- a. there is dog/stone/chicken on this floor  
 b. that's quite a bit of table/carpet for the money  
 c. (too) much dog/chicken, (too) much stone, (too) much table, too much carpet  
 d. a lot of dog/chicken, a lot of stone, a lot of table, a lot of carpet

e. all dog/chicken, all stone, all table, all carpet

## 5. Some (repeated) observations on what can or cannot be coerced:

22. a. \*there is rabbits in my stew  
b. \*there is a portion of rabbits in my stew  
c. \*a rabbits was singled out  
d. \*The rabbit/meat are numerous  
e. \*Much rabbits was consumed
23. Conclusion: 'true' grammatical marking, such as singular-plural agreement, -s, and determiners, cannot be coerced. It therefore follows that if, e.g., *meat* were to be marked as **mass**, the status of that marking would need to remain quite different from the status of the expression *much meat*, the latter being absolutely incoercible, as opposed to the former.
24. The observations in (20)-(21) are the key to the mass-count distinction, suggesting that it is not lexically encoded on heads, but dependent on the structure in which stems are embedded. "Mass" structure leads to mass interpretation and allows mass determiners. "Count" structure leads to count interpretation and allow "count" determiners. The "massiness" or the "countiness" of isolated *listemes* can be over-ridden by the grammar because it is not grammatical. The "massiness" or the "countiness" of mass/count structures is grammatical, and hence must be respected by the grammar.
25. Chinese has 'countifying' morphemes; it does not have 'massifying' morphemes (although it does, of course, have mass modifiers, by assumption in #P). Prima facie, this supports the claim that mass interpretation involves less structure.

## 6. A DivP (Classifier Phrase) for English



### 6.1. The Typology of English determiners:

27. a. A singular by definition is both a quantity and a division; thereby, its dividing function and its counter function cannot be separated. Thereby, either *a* must be assumed to assign range to both <e># and to <e>DIV, or the nodes are fused,

for singulars (I will not attempt to motivate a choice between these execution modes here)

- b. Both divided mass and undivided mass can be quantified. However, only divided mass can be counted.
- c. Counting imposes uniformity of division (by some conceptually coherent criteria):  
incoherent: *there are 435 tables, chairs, computers, and erasers in this room*  
coherent: *there are 435 man-made objects in this room*  
i. there are three cats in the room  
ii. I bought three apples  
iii. I ate three apples  
iv. I threw away three apples
- A specific execution (with thanks to B. Schein, p.c.): a divisional function involves the superimposition, on a mass denotation, of an infinite set of webs, or reticules (including potentially without any divisions at all). The # function involves the selection, among these reticules, of one which matches the properties of the specific #-determiner. For e.g., a cardinal, it will involve the selection of reticule with (uniform) individuals.
- d. How come there are no determiners in English (or in other languages which I know of) which pick up plural and singular (so-called count nouns) but exclude mass? If plurals, like classifiers, are dividers but singulars are quantities, this follows.

## 28. Numerals in English are not dividers:

- a. \*two meat/boy
- b. \*several meat/boy
- c. \*many meat/boy
- d. \*a few meat/boy
- e. \*both meat/boy
29. **Every** and **each** are dividers and counters (and also <d>), hence portmanteau items (cf. Gil, 1995) (potentially, fused).
30. Hungarian quantifiers are both dividers and counters (portmanteau, possible fusion structures; similar facts reported in Turkish):  
a. a kalap(-ot)  
the hat (-acc)  
b. egy kalap(-ot)  
a hat (-acc)  
c. kalap-**ok**(-at)  
hat pl(-acc)  
d. a kalap-**ok**(-at)  
the hat pl(-acc)
31. a. a két fekete kalap(-ot)  
the two black hat(-acc)  
b. minden kalap(-ot)  
every hat(-acc)

- c. az összes kalap(-ot)  
the all hat(-acc)
- d. (a) néhány kalap(-ot)  
(the) some hat(-acc)
- e. (a) keves kalap(-ot)  
(the) few hat(-acc)
- f. (a) sok kalap(-ot)  
many hat(-acc) (Kriszta Szendroi, p.c.; see also Szabolcsi, 1994)

### 32. Dividing numerals:

[DP [<sub>#P</sub> két<sup>7</sup> <e<sup>7</sup>><sub>#</sub> [DIV<sup>max</sup> két<sup>7</sup> <e<sup>7</sup>><sub>DIV</sub> [NP kalap]]]]

33. a. \*zero boy  
b. zero boys  
c. zero meat
34. a. no boy  
b. no boys  
c. no meat
35. \*zero a cat
36. a. all meat  
b. all boys  
c. \*all boy (but available with mass interpretation)
37. a. 0.5 apples  
b. \*0.5 apple (with relevant interpretation)  
c. half \*(an) apple
38. **Classifiers or Plural:** Armenian (Michelle Siegler, p.c.); see also Chinese (Li, 1998)
- a. yergu hovanoc uni-m  
two umbrella have-1s  
'I have two umbrellas'
- b. yergu **had** hovanoc uni-m  
two Cl umbrella have-1s  
'I have two umbrellas'
- c. yergu hovanoc-**ner** unim  
two umbrella-pl have-1s  
'I have two umbrellas'
- d. \*yergu **had** hovanoc-**ner** unim  
two ClI umbrella-pl have-1s
39. a. The indefinite article, numeral *one*:  
[DP [<sub>#P</sub><sup>max</sup> one/a<sup>4</sup> <e<sup>4</sup>><sub>#</sub> [DIV<sup>max</sup> ~~one/a~~<sup>4</sup> <e<sup>4</sup>><sub>DIV</sub> [NP meat/boy ]]]]
- b. Plural-taking quantifiers, numerals other than *one* (including *zero*):  
[DP [<sub>#P</sub> three/several<sup>3</sup> <e<sup>3</sup>><sub>#</sub> [DIV<sup>max</sup> meat-/boy-<div<sup>5</sup>> <e<sup>5</sup>><sub>DIV</sub> [NP ~~meat/boy~~ ]]]]
- c. Singular-taking quantifiers:  
[DP [<sub>#P</sub> every/each<sup>3</sup> <e<sup>3</sup>><sub>#</sub> [DIV<sup>max</sup> ~~every/each~~<sup>8</sup> <e<sup>8</sup>><sub>DIV</sub> [NP meat/boy- ]]]]

### 40. A typology of determiners and the mass/count distinction:

	±counters	± dividers	Syntactic Realization
<i>little, much</i>	-	N/A	no DIV <sup>max</sup> projected
<i>every, each,</i>	+	+	DIV <sup>max</sup> projected, <e> <sub>DIV</sub> licensed by <i>each, every,</i>
<i>a</i>	+	+	No DIV <sup>max</sup> projected
<i>a.several, many, few, a few, both</i> <i>b.numerals</i>	+	-	DIV <sup>max</sup> projected, <e> <sub>DIV</sub> licensed by plural marking
<i>all, a lot of, plenty, more, most</i>	unspecified	-	i. DIV <sup>max</sup> projected, <e> <sub>DIV</sub> licensed by plural marking ii. DIV <sup>max</sup> not projected
Hungarian numerals	+	+	DIV <sup>max</sup> projected, <e> <sub>DIV</sub> licensed by numerals
<i>some-1, any-1, no-1</i> (same as <i>all, more, etc.</i> )	unspecified	-	i. DIV <sup>max</sup> projected, <e> <sub>DIV</sub> licensed by plural marking ii. DIV <sup>max</sup> not projected
<i>some-2, any-2, no-2</i> (same as <i>every, each, a</i> )	+	+	DIV <sup>max</sup> projected, <e> <sub>DIV</sub> licensed by <i>any, some, no</i>
<i>the (a discourse anaphor)</i>	(as per antecedent)	(as per antecedent)	(as per antecedent)

### 7. Some evidence from telicity

#### 7.1. Verkuyl's generalization

#### 41. Verkuyl's Generalization (Verkuyl 1972, 1989):

Telic interpretation can only emerge in the context of an argument with property α (where the nature of property α is generally sought within the domain of quantification of some sort, so that it distinguishes between mass nouns and bare plurals, on the one hand, and singulars and quantified expressions, on the other hand, but its precise characteristics are not agreed upon.)

42. a. Kim ate apples this afternoon (\*in an hour)  
b. Pat built houses (\*in two months)  
c. Robin drew circles (\*in half an hour)
43. a. Kim ate three apples (in an hour)  
b. Pat built more than three houses (in two months)  
c. Robin drew some circles (in half an hour)
44. a. Kim ate meat (\*in an hour)  
b. Pat built furniture (\*in two months)  
c. Robin sifted sand (\*in half an hour)
45. a. Kim ate too much meat (in an hour)  
b. Pat built most furniture (in two months)  
c. Robin sifted (too) much sand (in half an hour)





70. Interpretation	cardinals-CL-NP (including 'one')	bare CL-N (always singular)	bare NP
weak indefinite	√Mandarin	√Mandarin	√Mandarin
	√Wu	√Wu(Wenzhou)	√Wu
	√Min	*Min	√Min
	√Cantonese	√Cantonese	√Cantonese
strong indefinite	√Mandarin	*Mandarin	√Mandarin
	√Wu	√Wu(Wenzhou)	√Wu
	√Min	*Min	√Min
	√Cantonese	√Cantonese	√Cantonese
generic	*Mandarin	*Mandarin	√Mandarin
	*Wu	*Wu	√Wu
	*Min	*Min	√Min
	*Cantonese	*Cantonese	√Cantonese

(See Simpson (to appear) for bare Classifier-N combinations with a singular interpretation in Vietnamese, Hmong and Nung).

71. a. *bun syu* Cantonese  
 Cl<sup>volume</sup> book 'the book(\*s)
- b. *di syu*  
 Cl<sup>pl</sup> book 'the book\*(s)
72. a. *paŋ si* Wu  
 Cl<sup>volume</sup> book 'the book'
- b. *liè si*  
 Cl<sup>pl</sup> book 'the book\*(s)
73. a. *wo xiang mai ben shu* Mandarin  
 I want buy Cl<sup>volume</sup> book  
 'I would like to buy a book'
- b. *wo xiang mai xie shu*  
 I want buy Cl<sup>pl</sup> book  
 'I would like to buy some books'
74. *ni zhe xin dei cheng yi-xia*  
 your this/these letter/s must weigh a-bit  
 'this/these letter/letters of yours must be weighed'
75. a. *ge-ge xuesheng* Mandarin  
 Cl-Clstudent 'every student'
- b. *zek-zekgau* Cantonese  
 Cl-Cl dog 'every dog'

76. One or two projections?
- a. *yi xiao ben shu*  
 one small Cl book  
 'one small book'
- b. *liu da jian xingli*  
 six big Cl luggage  
 'six big pieces of luggage' (T'ung and Pollard, 1982, cited in Simpson, to appear)

77. GEN<sup>k</sup> [DP <e<sup>k</sup>><sub>d</sub> [#P <e<sup>k</sup>><sub>#</sub> [DIV<sup>max</sup> <e<sup>k</sup>><sub>DIV</sub> [NP *shu* ]]]]  
 'books (generic)'

78. a. [DP .... [#P *ben* <e><sub>#</sub> [DIV<sup>max</sup> ~~*ben*~~ <e><sub>DIV</sub> [NP *shu* ]]]]  
 classifier book ('a book')
- b. [DP *ge-ge* <e><sub>d</sub> [#P ~~*ge-ge*~~ <e><sub>#</sub> [DIV<sup>max</sup> ~~*ge-ge*~~ <e><sub>DIV</sub> [NP *xuesheng* ]]]]  
 every student
- c. [DP .... [#P *xie* <e><sub>#</sub> [DIV<sup>max</sup> ~~*xie*~~ <e><sub>DIV</sub> [NP *shu* ]]]]  
 some book
- d. [DP *zhe* <e><sub>d</sub> [#P ~~*zhe*~~ <e><sub>#</sub> [DIV<sup>max</sup> ~~*zhe*~~ <e><sub>DIV</sub> [NP *xin* ]]]]  
 DEM±SG letter

79. [DP .... [#P Q<sup>8</sup> <e<sup>8</sup>><sub>#</sub> [DIV<sup>max</sup> Y<sup>9</sup>/Ø <e<sup>9</sup>><sub>DIV</sub> [NP *shu* ]]]]

80. a. *san ben/\*xie shu* (Mandarin)  
 b. *saN bun/\*se zhu* (Southern Min)  
 c. *Saam bun/\*di syu* (Cantonese)  
 three Cl./\*Cl<sup>pl</sup> book

81. a. [DP .... [#P *san* [ *ge* <e><sub>#</sub> [CL<sup>max</sup> ~~*ge*~~ <e><sub>DIV</sub> [NP *xuesheng* ]]]]]]  
 three Cl. student
- b. [DP *san* <e><sub>d</sub> [#P ~~*san*~~ [ *ge* <e><sub>#</sub> [CL<sup>max</sup> ~~*ge*~~ <e><sub>DIV</sub> [NP *xuesheng* ]]]]]]  
 three Cl. student

'three students' (strong)

82. a. *hoong<sub>2</sub> saam* [CL *hoong* [NP ~~*hoong<sub>2</sub>*~~ ] (Thai)  
 room three room/CL  
 'three rooms'
- b. *cun<sub>2</sub> ta* [CL *cun* [NP ~~*cun<sub>2</sub>*~~ ] (Burmese)  
 island one island/CL  
 'one island'

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## Lecture Note 4 Things that Count

### 0.0. Duals

#### 1. Duals are Dividing Counters:

- a. \*šney/štey yom.ayim (yam.im 'days')  
 two(m)/two(f) day.dual
- b. \*kama xodš.ayim (xodaš.im 'months')  
 several month.dual
- c. \*harbe šbu.ayim (šabu.ot 'weeks')  
 many week.dual

#### 2. 'Dual' morphology in plural contexts:

- a. štey 'ozn.ayim (\*oznim)  
 two ear.pl
- b. kama ragl.ayim (\*raglim)  
 several foot.pl
- c. harbe yad.ayim (\*yadim)  
 many hand.pl

### 1. The Paradigm: Grocerese Numerals (GNs) ('Restuarantese', Cook-book Registers).

- 3. a. šney/'eser lexem  
 two.m/ten.f bread.m
- b. šney/'eser gbina  
 two.m/ten.f cheese.f
- c. šnayim lexem  
 two.m bread.m
- d. šnayim gbina  
 two.m cheese.f
- 4. a. 'exad xalab  
 one.m milk.m
- b. 'exad gbina  
 one.m cheese.f
- 5. a. šney lexam.im  
 two.m bread.m.pl
- b. štey gbin.ot  
 two.f cheese.f.pl
- c. ?štey lexam.im (colloquial only)  
 two.f bread.m.pl
- d. ?šney gbin.ot (colloquial only)  
 two.m cheese.f.pl
- 6. a. xalab 'exad  
 milk.m one.m
- b. gbina 'axát  
 cheese.f one.f
- c. \*xalab 'axát  
 milk.m one.f
- b. \*gbina 'exád  
 cheese.f one.m
- 7. Some differences between GNs and other quantity expressions:
  - a. 'exád occurs pre-nominally ((4) vs. (6)).
  - b. In the presence of cardinals distinct from 'exád the restriction (may be) a bare stem, not plural.
  - c. With the exception of 2, pre-nominal GNs have a fixed form, regardless of the gender of the restriction (at times masculine - 1-'exád(m); at other times feminine - 10-šeser).
  - d. The phonologically-unbound form of the cardinal 'two', šnayim occurs with a restriction, not possible outside of Grocerese.
- 8. a. \*asara gbina (compare with (3a))  
 ten cheese
- b. \*'axát gbina (compare with (4b))  
 one.m cheese.f
- 9. #šnayim gbin.ot/lexam.im  
 two cheese.pl.f/bread.pl.m (but see 12))
- 10.a. šney xagbaniya  
 two tomato  
 '\*two tomatoes'  
 'two portions of tomato stuff (e.g., spread)'
- b. šeser melapepon  
 ten cucumber  
 '\*ten cucumbers'  
 'ten portions of cucumber stuff (e.g., spread)'
- c. 'exád melapepon  
 one cucumber  
 '\*one cucumber'  
 'one portion of cucumber stuff (e.g., spread)'
- d. 'exád xagbaniya  
 one tomato  
 '\*one tomato'  
 'one portion of tomato stuff (e.g., spread)'

11. Bare stem complements of GNs must be interpreted as mass

12. a. *šnayim zeyt.im*  
two olives  
'\*two olives'

'two fixed portions of olives' (e.g., cans, jars, etc.)

b. *'exád garšin.im*  
one sunflower-seeds

'\*one sunflower seeds'

'one fixed portion of sunflower seeds'

c. *šnayim tapux.im*  
two apples

'\*two apples'

'two fixed portions of apples'

13. Plural complements of GNs must be interpreted as fixed portions of pluralities

## 2. Different from Partitive *'exád*.

### 2.1 Gender Agreement in Partitives but not in Grocerese.

14. a. *'exád ha.dub.im*  
one.m the.bears.m.pl

b. *'axát ha.xatul.ot*  
one.f the.cats.f

15. a. *\*'exád ha.dub.ot*  
one.m the.bear.f.pl  
(one of the female bears)

b. *'axát ha.dub.ot*  
one.f the.bear.f.pl  
(one of the female bears)

### 2.2. Plural as Portion, not as Reference Group.

16. a. *'exád zeyt.im*  
one olives  
'one portion of olives'  
'\*one of the olives'

b. *'exád ha.zeyt.im*  
one the.olives  
'\*one portion of olives'  
'one of the olives'

### 2.3. Definite Marking in Partitives, not in Grocerese.

17. a. *\*'exád dub.im*  
one.m bear.m.pl

b. *\*'axát xatul.ot*  
one.f cat.f.pl

### 2.4. Bare Stem Complement in Grocerese, not in Partitives.

18. a. *\*'exád ha.dob*  
one.m the.bear.m

b. *\*'axát ha.xatula*  
one.f the.cat.f

## 3. Different from Dividing Numerals.

19. *ḥasara 'iš xamišim nepeš šloš-meot xayal*  
ten man fifty soul three-hundred soldier  
*alpayim roš* *ḥasara šeqel*  
two-thousand head (cattle, sheep) ten shekel.m (currency unit)

20. *\*ḥeser 'iša* *\*xamišim kacín* *\*šloš-meot matbe'a*  
ten woman fifty officer three-hundred coin  
*\*'arbaḥim ben* *\*'arbaḥim bat* *\*ḥesrim 'agora/lira*  
forty son forty daughter twenty cent.f/pound.f.

21. *ḥesrim 'iš ve-'iša* *'arbaḥim ben u-bat*  
twenty man.sg and woman.sg forty son and daughter

22. a. *\*'exád 'iš/šeqel*  
one man/shekel

b. *\*štey/šaloš/ḥeser 'iš* but *ḥeser/'asara šeqel*  
two.f/three.f/ten.f man.m ten.f/ten.m shekel

c. *\*šnayim 'iš/šeqel*  
two man/shekel

#### 4. But like English Pseudopartitives (and Chinese Massifiers).

- 23.a. two pounds of meat  
 b. two pounds of fish/dog (mass reading only)  
 c. #two pounds of book (Selkirk, 1977 and much subsequent literature)
- 24.a. two pounds of olives  
 b. one kilogram of sunflower seeds
- 25.a. \*every ton of gold  
 b. \*most pounds of meat  
 (Klooster 1972, Higginbotham, 1994, Chierchia, 1998b, de Swart, 1998, Schwarzschild and Wilkinson, to appear)
- 26.a. \*the ton of gold  
 b. \*those three pounds of fish
- 27.a. \*šnayim ha.ghina  
 two the.cheese  
 b. \*kol zahaḡ  
 every gold (with the intended, measuring reading)

#### 5. Structure for Grocerese Nominals.

##### 5.1. Multi-headed Structure, Measure Phrase.

28. [#P ... [NP-1 šnayim .... [NP-2 ghina ]]]  
 two cheese  
 two pounds cheese (English)

two is a (quasi-functional) N-head.

two and cheese project two distinct functional complexes.

The expression as a whole is not a DP but a #P (measure phrase).

(Ritter, 1991; Li, 1998; for similar claim see Schwarzschild, 2001).

- 29.a. [#P-1 šnayim [DIV-1<sup>max</sup> šnayim [NP-1 šnayim<sub>i</sub> [NP-2 ghina ]]]]  
 two cheese  
 b. [#P-1 šnayim [DIV-1<sup>max</sup> šnayim [NP-1 šnayim<sub>i</sub> [DIV-2 zayit.div [NP-2 zayit ]]]]  
 two olive.pl

##### 5.1. GN May not Take a #P (or DegP) Complement.

- 30.a. šnayim (\*harbe/\*maspiq/\*yoter) ghina  
 two much/enough/more cheese  
 (two portions of much/enough cheese)  
 b. šnayim (\*harbe/\*maspiq/\*kama/\*xamišim) zeyt.im  
 two many/enough/several/50 olives  
 (two portions of many/enough/several/50 olives)
- 31.a. two pounds of (\*much/\*little/\*some) cheese  
 b. three kilograms (\*many/\*fifty/\*some) olives
- 32.a. šnayim ghina šveycarit  
 two cheese Swiss  
 'two portions of Swiss cheese'exad  
 b. zeyt.im yeruq.im  
 one olives green  
 'one portion of green olives'
- 33.a. two pounds of Swiss cheese  
 b. seven kilograms of green olives
34. šnayim ghina 'axát  
 two cheese one  
 'two portion/containers of one cheese' (as opposed to multi-cheese containers)

##### 5.2. Conclusions and Structures.

- 35.a. 'exád, when occurring post-nominally, is not a #-expression.  
 b. Plural inflection is not a #-expression.

- 36.a. [... [<sub>#P</sub> *one/a* [<sub>DIV</sub><sup>max</sup> ~~*one/a*~~ [<sub>NP</sub> *meat/boy* ]]]]  
 b. [... [<sub>#P</sub> *ten/few* [<sub>DIV</sub><sup>max</sup> *meat.s/boy.s* [<sub>NP</sub> ~~*meat/boy*~~ ]]]]  
 c. [... [<sub>#P</sub> *every* [<sub>DIV</sub><sup>max</sup> ~~*every*~~ [<sub>NP</sub> *meat/boy* ]]]]  
 d. [... [<sub>#P</sub> *much* [<sub>NP</sub> *salt* ]]]]  
 e. [... [<sub>DIV</sub><sup>max</sup> *cats* [<sub>NP</sub> ~~*eat*~~ ]]]]  
 f. [... [<sub>NP</sub> *salt* ]]]]  
 37.a. [... [<sub>#P</sub> *xatul* [<sub>DIV</sub><sup>max</sup> ~~*xatul*~~ [<sub>NP</sub> ~~*xatul*~~ ]]]] sg reading  
       cat  
 b. [... [<sub>#P</sub> *'eser/me'at* [<sub>DIV</sub><sup>max</sup> *xatul.ot* [<sub>NP</sub> *xatula* ]]]]  
       ten/few cat.f.pl  
 c. [... [<sub>#P</sub> *kol* [<sub>DIV</sub><sup>max</sup> ~~*kol*~~ [<sub>NP</sub> *xatula* ]]]]  
       every cat.f  
 d. [... [<sub>#P</sub> *harbe* [<sub>NP</sub> *melax* ]]]]  
       much(many) salt  
 e. [... [<sub>DIV</sub><sup>max</sup> *xatul.ot* [<sub>NP</sub> *xatula* ]]]] 'bare plural' reading  
       cat.f.pl cat.f  
 f. [... [<sub>NP</sub> *melax* ]]]] 'bare mass' reading  
       salt  
 38. [<sub>DP</sub> [<sub>#P</sub> [<sub>DIV</sub><sup>max</sup> ~~*xatul*~~ [<sub>spec</sub> *'exád*] ... [<sub>NP</sub> ~~*xatul*~~ ]]]] cat.m one  
 39. Why not:  
       [<sub>#P</sub> *šnayim* <e># [<sub>DIV</sub><sup>max</sup> ~~*šnayim*~~ <e> <sub>DIV</sub> [<sub>NP</sub> N ]]]  
       two two

## 6. Container Phrases

- 40.a. *šloša baqbuq.im xalab*  
       three bottles milk  
 b. *šney spal.im sukar*  
       two cups sugar (Doron 1992)  
 42.a. *'exád baqbuq xalab*  
       one bottle milk  
 b. *'exád sepel zeyt.im*  
       one cup olives  
 c. *\*'axát qupsa sukar*  
       one.f box.f sugar  
 d. *'exád qupsa sukar*  
       one.m box.f sugar  
 e. *qupsa 'axát sukar*  
       box.f one.f sugar  
 41.a. *šloša baqbuq.im zeyt.im*  
       three bottles olives  
 b. *šibxa mexal.im garxin.im*  
       seven containers sunflower-seeds  
 43.a. *šloša baqbuqey xalab*  
       three bottles milk  
       'three milk bottles'  
 b. *šney sipley sukar*  
       two cups sugar  
       'two sugar cups'  
 c. *šloša baqbuqey zeyt.im*  
       three bottles olives  
       'three olive bottles'  
 d. *šibxa mekaley garxin.im*  
       seven containers sunflower-seeds  
       'seven flower-seed containers'  
 e. *qupsat sukar 'axát*  
       box.f sugar one.f  
       'one sugar box'  
 44.a. *šloša spal.im gdol.im sukar xum*  
       three cup.pl big.pl sugar.sg brown.sg  
       'three big cups of brown sugar'  
 b. *exad zeyt.im yeruq.im*  
       one olives green  
       'one portion of green olives'  
 b. *šloša baqbuq.im gdol.im zeyt.im qtan.im*  
       three bottle.pl big.pl olive.pl small.pl  
       'three big bottles of small olives'

- 45.a. \*šloša spal.im leban.im sukar  
 three cup white sugar  
 (\*three white cups of sugar, unless 'white cup' is a specific measuring unit)
- b. \*šloša baqbuq.im mizkukit zeyt.im  
 three bottles from-glass olives  
 'three glass bottles of olives'

- 46.a. šloša sipley sukar leban.im  
 three cup sugar white  
 'three white sugar cups'
- b. šloša baqbuqey zeyt.im mi-zkukit  
 three bottles olives from-glass  
 'three olive bottles of glass'

- 47.a. Plural container head, mass complement:

[#P-1 šney [DIV<sup>max</sup>-1 baqbuq.pl [NP-1 ~~baqbuq~~ ... [NP-2 xalab ]]]]  
 two bottle.pl milk

- b. Bare singular measure head, mass complement:

[#P-1 baqbuq [DIV<sup>max</sup>-1 ~~baqbuq~~ [NP-1 ~~baqbuq~~ [NP-2 xalab ]]]]  
 bottle milk

- c. Plural container head, plural embedded nominal:

[#P-1 šney [DIV<sup>max</sup>-1 baqbuq.pl [NP-1 ~~baqbuq~~ [DIV<sup>max</sup>-2 zayit.pl [NP-2 ~~zayit~~ ]]]]  
 two bottle.pl olive.pl

- d. Singular measure head, plural embedded nominal

[#P-1 baqbuq [DIV<sup>max</sup>-1 ~~baqbuq~~.pl [NP-1 ~~baqbuq~~ [DIV<sup>max</sup>-2 zayit.pl [NP-2 zayit ]]]]  
 bottle olive.pl

- 48.a. \*baqbuk.im zeyt.im  
 bottle.pl olive.pl

- b. \*mexalim melax  
 container.pl salt

- 49.a. [... [DIV<sup>max</sup> baqbuq.im [NP baqbuq [DIV<sup>max</sup>-2 [NP-2 zayit.pl ]]]]  
 bottle.pl olive.pl

- b. [... [DIV<sup>max</sup> baqbuq.im [NP baqbuq [NP-2 melax ]]]]  
 bottle.pl salt

- 50.a. \*štey qupsa'.ot harbe/maspiq/yoter ghina  
 two boxes much/enough/more cheese  
 (two boxes of much/enough cheese)

- b. \*šloša baqbuq.im harbe/maspiq/kama/xamišim zeyt.im  
 three bottles many/enough/several/50 olives  
 (three bottles of many/enough/several/50 olives)

- 51.a. \*štey qupsa'.ot ghina raba/meḡata  
 two boxes cheese much/little  
 (two boxes of much/little cheese)

- b. \*šloša baqbuq.im zeyt.im rab.im/meḡat.im  
 three bottles olives many/few  
 (two bottles of many/few olives)

- 52.a. štey qupsa'.ot ḡagḡaniya

two boxes tomato  
 '\*two boxes of tomatoes'  
 'two boxes of tomato stuff (e.g., paste)'

- b. ḡasara mekal.im melapepon  
 ten containers cucumber  
 '\*ten cucumbers'

'ten containers of cucumber stuff'

- c. 'exád qupsa melapepon  
 one box cucumber

- 'one box with one cucumber'  
 'one box of cucumber stuff'  
 d. *qupsa 'axát xaghaniya*  
 box one tomato  
 'one box with onetomato'  
 'one box of tomato stuff'
53. a. two (big) boxes of (\*much/enough/more) Swiss cheese  
 b. two (hefty) bottles of (\*many/enough/50) green olives  
 c. one box of (\*an) apple

## 7. Excluding Some Alternative Structures.

### 7.1. Grocerese as Container Phrases with Null Container Heads?

54. [<sub>#P</sub>šney<sub>i</sub> [DIV<sup>max</sup>Ø<sub>N</sub> [NP Ø<sub>N</sub> [NP.xalab]]]]
55. a. *šloša lexem*  
 three bread  
 b. *šloša ~~kikar.ot~~ lexem*  
 three ~~loaves~~ bread
56. a. *\*šnayim kikar.ot lexem*  
 two loaves bread  
 b. *šnayim lexem*  
 two bread
57. a. *šney xatik.ot għina*  
 two.m. pieces.f.pl cheese  
 b. *štey xatik.ot għina*  
 two.f. pieces.f.pl cheese
58. a. *\*štey għina*  
 'two.f. cheese.sg.f  
 b. *\*štayim għina*  
 two.f. cheese.sg.f.  
 c. *šney għina*  
 two.m. cheese.sg.f  
 d. *šnayim għina*  
 two.m. cheese.sg.f.  
 e. *'eser għina*  
 ten.f. cheese.sg.f  
 f. *\*'asara għina*  
 ten.m. cheese.sg.f.
59. a. *\*šnayim baqbuq.im xalav* vs. *šney baqbuq.im xalav*  
 two bottle.pl milk two bottle.pl milk  
 b. *\*'exád baqbuq gadol xalav tari* vs. *'exád baqbuq xalav tari gadol*  
 one bottle big milk fresh one bottle milk fresh big  
 c. *\*'exád šnayim għina*  
 one two cheese (e.g., one portion of two cheeses)  
 d. *\*šnayim 'exád għina* vs. *šnayim għina 'axat*  
 two one cheese two cheese single  
 (two portions of one cheese)
60. Cause for ungrammaticality: measure expressions, including GNs, cannot take a #P complement.  
 Conclusion: GNs and container phrases have the *same* structural status: both head a measure expression.
61. a. *\*[<sub>#P-1</sub>šnayim[DIV<sup>max</sup>-1 šnayim [<sub>NP-1</sub>šnayim [<sub>#P-2</sub>baqbuq.im[DIV<sup>max</sup>-2 ~~baqbuq.im~~ [<sub>NP-1</sub>~~baqbuq~~ [<sub>NP-3</sub>xalav ]]]]]]]*  
 two-GN bottle.pl milk  
 b. [<sub>#P-1</sub>šney [DIV<sup>max</sup>-1 ~~baqbuq.im~~ [<sub>NP-1</sub>~~baqbuq.pl~~ [<sub>NP-2</sub>xalab ]]]]]  
 two bottle.pl milk



c. [#P-1 'exád [DIV<sup>max</sup> -1 'exád [NP-1 'exád

[DIV <sup>max</sup> -2 baqbuq bottle	[NP-2 baqbuq [NP-3 xalav]]]]]]
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construct

## 7.2. Grocerese Numerals and Container Phrases as Specifiers of #P?

(e.g., Schwarzschild, 2001)

62. a. [#P-1 [spec-#P-1 [#P-2 šney [DIV<sup>max</sup> -2 baqbuq.pl [NP-2 baqbuq ]]]] [NP-1 tmisa ]]]  
two bottle.pl solution.f  
b. [#P-1 [spec-#P-1 [#P-2 šnayim [DIV<sup>max</sup> -2 šnayim [NP-2 šnayim ]]]] [NP-1 tmisa ]]]  
two solution

63. a. nexuca tmisa bišvil ha.miršam ha.ze  
needed.f.sg solution.f for the.recipe the.this  
'a solution is necessary for this recipe'  
b. nexuc.im šney baqbuq.im tmisa bišvil ha.miršam ha.ze  
needed.m.pl two bottles solution for the.recipe the.this  
'two bottles of solution are necessary for this recipe'  
c. \*nexuca šney baqbuq.im tmisa bešvil ha.miršam ha.ze  
needed.f.sg two bottles solution for the.recipe the.this
64. a. šnayim għina yexolim le.haspik  
two cheese.f.sg may.m.pl to.suffice  
'two portions of cheese may be enough' šnayim għina yexolim le.haspik  
b. \*šnayim għina yexola le.haspik  
two cheese.f.sg may.f.sg to.suffice  
'two portions of cheese may be enough' šnayim għina yexolim le.haspik  
c. \*šnayim għina yexol.ot le.haspik  
two cheese.f.sg. may.f.pl to.suffice  
'two portions of cheese may be enough'

## 8. Classifiers and Restaurantese.

65. a. hai ga, ba bo  
two chicken, three beef  
b. hai ch-phe den, mot nuoc cam  
two coffee black, one water orange (Vietnamese)  
c. bia iik soong  
beer more two (Thai) (Linguist List posting, reported by D. Gil, 1994)
66. a. hai dia ga, ba dia bo  
two Cl chicken, three Cl beef  
'two platefuls of chicken', 'two platefuls of beef'  
b. hai tach ch-phe den, mot coc nuoc cam  
two Cl coffee black, one Cl water orange (Vietnamese)  
c. bia iik soong khuat  
beermore two bottle/Cl (Thai)
67. "bare" classifier+N combinations are always both # and Cl

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