Doublets and gaps as probes into nominal architecture: the case of object mass nouns

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1 INTRODUCTION. Object mass nouns like *jewelry, kitchenware* or *furniture* are challenging for any theory of the count-mass distinction because while they are syntactically mass (1), they pattern with (plural) count nouns in two respects: size adjective modification (2) (Schwarzschild 2011), and countability, i.e. measurement along a cardinality scale, (3) (Bale and Barner 2009).

(1) a. one jewel, two jewels   b. *one {blood/jewelry} c. *two {bloods/ jewelries}

(2) a. large {jewel(s)/ jewelry}   b. *large blood.

(3) a. more {jewels/ jewelry} = #volume, cardinality.   b. more blood = volume, #cardinality

The traditional view (Chierchia 1998, 2010; Bale and Barner 2009; Cowper and Hall 2009; Smith 2021) assumes that these nouns are lexically marked plural but enter the syntax into a mass frame thus preventing the subsequent count properties in (1). My goal is to show that this view misses important generalizations regarding the classes of roots found in both object mass and count nouns as well as cross-linguistic variation. **I motivate the novel generalization in (4), and argue that Ⓐ the additional piece is not [PL], Ⓑ the properties of object mass nouns follow from their structural complexity, and Ⓒ the location of the relevant feature may be subject to variation.**

(4) The Count-Object-Mass Containment Generalization: Object mass nouns structurally contain (i.e. are formed on top of) count noun bases.

$$[[\sqrt{\text{ROOT}}\ n_{\text{CT}}]\ n_{\text{OBJECT MASS}}] \rightsquigarrow \text{'collection of jewel-related things'}$$

       jewel   *-ery*

2 MOTIVATING (4) & GAPS. The root morphemes that participate in the class of object mass nouns also participate in the class of count nouns giving rise to doublets in Table 1. See De Belder (2011) and Cohen (2020) for Dutch and Hebrew data respectively. Besides, the count noun stem serves as the base for the object mass noun, but not the opposite. While not every object mass noun has a count noun counterpart, that does not mean that these object mass nouns are morphologically simplex: (5). These gaps are language-specific: English (5a) vs. Spanish *mueble* 'furniture.CT'.

Table 1: count and object mass doublets in English & Spanish

English		Spanish			
CT	**obj. mass**	**CT**	**obj. mass**	**CT**	**obj. mass**
jewel	jewel-ry	joya	joy-ería	piel	pelet-ería
weapon	weapon-ry	'jewel'	'jewelry'	'fur'	'furriery'
word	word-age	hoja	foll-aje	profesor	profesor-ado
sign	sing-age	'leaf'	'foliage'	'teacher'	'collection of teachers'
carpet	carpet-ing	arma	arma-mento	equipo	equipa-miento
light	light-ing	'weapon'	'weaponry'	'utensil'	'collection of utensils'
foot	foot-wear	mueble	mobil-iario	peón	peon-aje
neck	neck-wear	'furniture.CT'	'furniture'	'laborer'	'collection of laborers'

(5) a. CT **obj. mass** **root**   b. CT **obj. mass** **root**   c. CT **obj. mass** **root**
     –   furniture $\sqrt{\text{FURN}}$ –   equipment $\sqrt{\text{EQUIP}}$ –   cutlery $\sqrt{\text{CUT}}$

3 NOT [PL]. The object mass morpheme added to the count base is never exponed as plural or triggers plural agreement, but it acts as a nominalizer (i.e. creates a new noun from another) and triggers different suppletion on root (6)-(7). And yet, both morphemes seem to occupy the same position with respect to the root: (8). **In fact, I propose that these two morphemes are in overlapping distribution: they both require complementation by n_{CT}.**

(6) a. $\sqrt{\text{FOOT}} \Leftrightarrow feet/$ __PL 'feet' b. $\sqrt{\text{FOOT}} \Leftrightarrow foot$-/ __$n_{\text{OBJECT MASS}}$ '*feetware', 'footware'

(7) a. $\sqrt{\text{MUEBL-}} \Leftrightarrow mueble/$ __PL 'muebles' ($furniture_{count.pl}$)

   b. $\sqrt{\text{MUEBL-}} \Leftrightarrow mobil$-/ __$n_{\text{OBJECT MASS}}$ '*muebliario', 'mobiliario' ($furniture_{mass}$)

(8) a. $[[\underbrace{\sqrt{\text{ROOT}}\ n_{\text{CT}}}_{carpet}]\ \underbrace{n_{\text{OBJECT MASS}}}_{\text{-}ing}]$ b. $[[\underbrace{\sqrt{\text{ROOT}}\ n_{\text{CT}}}_{carpet}]\ \underbrace{\text{SG/PL}}_{\emptyset/\text{-}s}]$

4 PROPOSAL. I propose that count NPs are marked for two features: [IND(IVIDUATION)] (i.e. makes discrete individuals available) on *n* and [SG/PL] on Number (9a). Having Number enables size adjective modification as adjuncts of NumP, and the projection of a CARD head, which selects for Number ([●Num●]) and introduces numerals in its specifier. (9a) is also consistent with analyses that have located numerals higher than Number (and size adjectives) but lower than D (Cinque 2010, 2023; Dékány 2021; Toquero-Pérez 2023). All mass NPs lack Number (9b). As such, object mass NPs lack Number; but like count NPs, they are [IND]-marked. As opposed to the latter, they are also marked [COLL(ECTIVE)] on a layered *n*: (9c).

(9) a. $[_{\text{DP}}\ [_{\text{CARDP}}\ 3\ [_{\text{CARD'}}\ \text{CARD}_{[●\text{Num}●]}\ [_{\text{NumP}}\ \text{Num[SG/PL]}_{[●\text{IND}●]}\ [_{n\text{P}}\ n\text{[IND]}\ \sqrt{\text{JEWEL}}\ ]]]]]$

   b. $[_{\text{DP}}\ [_{n\text{P}}\ n\ \sqrt{\text{BLOOD}}\ ]]$ c. $[_{\text{DP}}\ [_{n\text{P}}\ n\text{[COLL]}_{[●\text{IND}●]}\ [_{n\text{P}}\ n\text{[IND]}\ \sqrt{\text{JEWEL}}\ ]]]$

5 ANALYSIS. (A) Locating *n*[COLL] immediately c-commanding *n*[IND] is consistent with (i) the Containment generalization in (4), and (ii) the structural parallel with Number (e.g. locality conditions for allomorphy). (B) Given their layered *n*P and its geometrical similarity with NumP, object mass nouns are not that syntactically impoverished: size adjectives can adjoin to this outer *n*P. (C) Both Number and this *n* compete for merger, i.e. same c-selection feature [●IND●] to be checked-off under sisterhood (Adger 2003): merger of *n*[COLL] will block merger of Number, and viceversa thus accounting for their overlapping distribution. (D) Numeral modification is disallowed because the CARD head that introduces numerals requires complementation by Number, e.g. (9a). (E) Count NPs and object mass NPs are countable because they are [IND]-marked.

6 PARADIGM GAPS. The relevant roots in (5) cannot be mapped to an exponent at the point of VI in a particular context. Those roots can only be licensed in a nominal with *n*[COLL] in English: (10). Failure of licensing a root is consistent with the Subset Principle (Halle and Marantz 1993).

(10) a. $\sqrt{\text{FURN}} \Leftrightarrow furnit$-/__ $n\text{[IND]}]\ n\text{[COLL]}\ ]$ 'furniture'

   b. $\sqrt{\text{FURN}} \Leftrightarrow furnish/$__*v*   'furnish'

7 VARIATION. The same Feature $\mathscr{F}$ may appear distributed in the DP (e.g. [PL], Ghomeshi 2003; Wiltschko 2008; Alexiadou 2011; Kramer 2016. If [COLL] is a feature on Number in Language $\mathscr{L}$, we predict that [COLL]-marked nouns in $\mathscr{L}$ will enable numeral modification. This is borne out in Czech: count bases can be marked *-í* instead of plural, resulting in a collective interpretation (Grimm and Docekal 2021): (11b). These *-í*-marked nouns are compatible with collective cardinal numerals: (11c). The location of [COLL] is thus subject to variation, just like [PL].

(11) a. list-y   b. list-í   c. dv-oje   list-í
          leaf-M.PL   leaf-COLL   two-COLL.CARD leaf-COLL
          'leaves'   'Foliage'   'two sets of foliage'

8 IMPLICATIONS.   There is nothing lexically special about the class of object mass nouns. Their properties are determined by the syntax: they are built on top of an individuated *n*P via a [COLL] feature. This novel analysis accounts for all the properties of this class of nouns (e.g. doublets, no plural-marking, root-allomorphy, and adjectival, but not numeral, modification). Countability is also syntactically determined: markedness for individuation. Cross-linguistic variation results from the way that the syntax puts terminal nodes together in concert with the satisfaction of the different requirements at the interfaces (both PF and LF).

REFERENCES

Adger, D. (2003). *Core Syntax*. Oxford University Press, Oxford.

Alexiadou, A. (2011). Plural mass nouns and the morpho-syntax of number. In Washburn, M. B., McKinney-Bock, K., Varis, E., Sawyer, A., and Tomaszewicz, B., editors, *West Coast Conference in Formal Linguistics (WCCFL) 28*, pages 33–41, Somerville, MA. Cascadilla Proceedings Project.

Bale, A. and Barner, D. (2009). The interpretation of functional heads: Using comparatives to explore the mass/count distinction. *Journal of Semantics*, 26:217–252.

Chierchia, G. (1998). Plurality of Mass Nouns and the Notion of "Semantic Parameter". In Rothstein, S., editor, *Events and Grammar*, pages 53–104. Kluwer Academic Publishers.

Chierchia, G. (2010). Mass nouns, vagueness and semantic variation. *Synthese*, 174:99–149.

Cinque, G. (2010). *The Syntax of Adjectives*. MIT press, Cambridge, MA.

Cinque, G. (2023). *On Linearization*. MIT Press, Cambridge, MA.

Cohen, D. (2020). Activewear and other vaguery: A morphological perspective on aggregate-mass. In Moltmann, F., editor, *Mass and Count in Linguistics, Philosophy and Cognitive Science*, pages 37–60. John Benjamins Publishing Company.

Cowper, E. and Hall, D. C. (2009). Argumenthood, pronouns, and nominal feature geometry. In Ghomeshi, J., Paul, I., and Wiltschko, M., editors, *Determiners: Universals and Variation*, pages 97–120. John Benjamins, Amsterdam.

De Belder, M. (2011). *Roots and Affixes: Eliminating Lexical Categories from the Syntax*. PhD thesis, Universiteit Utrecht.

Dékány, É. (2021). *The Hungarian Nominal Functional Sequence*. Studies in Natural Language and Linguistic Theory. Springer.

Ghomeshi, J. (2003). Plural marking, indefiniteness, and the noun phrase. *Studia Linguistica*, 57:47–74.

Grimm, S. and Docekal, M. (2021). Counting aggregates, groups and kinds: Countability from the perspective of a morphologically complex language. In FIlip, H., editor, *Countability in Natural Language*, pages 85–120. Cambridge University Press, Cambridge.

Halle, M. and Marantz, A. (1993). Distributed Morphology and the pieces of inflection. In Hale, K. and Keyser, S. J., editors, *The View from Building 20*, pages 111–176. MIT Press, Cambridge, MA.

Kramer, R. (2016). A split analysis of plurality: Number in Amharic. *Linguistic Inquiry*, 47:527–599.

Schwarzschild, R. (2011). Stubborn distributivity, multiparticipant nouns and the count/mass distinction. In Lima, S., Mullin, K., and Smith, B., editors, *North East Linguistic Society (NELS) 39*, pages 661–678, Amherst, MA. GSLA.

Smith, P. (2021). *Morphology–Semantics Mismatches and the Nature of Grammatical Features*. John Benjamins.

Toquero-Pérez, L. M. (2023). The syntax of individuating and measuring pseudo-partitives in Alasha Mongolian. *Journal of East Asian Linguistics*, 32:551–593.

Wiltschko, M. (2008). The syntax of non-inflectional plural marking. *Natural Language and Linguistic Theory*, 26:639–694.