**Malayalam -kaL is Plural, English 'Plural Marking' is Not**

Based on novel facts from Malayalam (Mal), we argue for the claim that KAL in Malayalam forms a predicate of pluralities out of a predicate of count individuals, and that this interpretation is semantic rather than pragmatic. By 'predicate of pluralities' we specifically mean a plurality that cannot be distributed over. We further argue that the plural interpretation of a DP is associated with a node that is distinct from the one that carries so-called 'plural marking' in English (cf. Ouwayda 2011): Assuming a close mapping between the syntactic structure and the semantics in the DP, we suggest that the situation as it emerges in Arabic and in Malayalam suggests that English so-called 'plural marking' does not in actuality mark the formation of a predicate of pluralities. Rather that the formation of a predicate of pluralities, in English, is in and of itself potentially not marked directly, and 'plural marking' in English is a case of div (see Borer, 2005; Ouwayda, 2011).

***Theoretical Assumptions*:** Taking as a starting point Borer's (2005) DP structure in (1), Borer & Ouwayda (2010) and Ouwayda (2011) argue for a functional projection # that hosts cardinals, is associated with semantic plurality, and is distinct from Borer's count (DIV) projection. Bale and Khanjian (2008) based on Western Armenian, and Ouwayda (2011) based on Lebanese Arabic argue that plurality can be semantic. Ouwayda further argues that plurality is formed in the DP, and proposes that a syntactic structure, # (distinct from Q), contains a pluralizing function which takes a predicate of countable singularities, and returns a predicate of pluralities. The syntax-semantics mapping is in (2).

1. Synt.: [$_{D}$ [$_{Q}$ [$_{DIV}$ [$_{N}$ ___ ]]]]] (Borer, 2005)
   Sem.: [DP [COUNT NOUN [NOUN [ROOT

2. Synt.: [$_{D}$ [$_{Q}$ **[**$_{\#}$ [$_{DIV}$ [$_{N}$ ___ ]]]]] (Borer & Ouwayda, 2010)
   Sem.: [PLURAL DP **[PLURAL NOUN** [COUNT NOUN [NOUN [ROOT (Ouwayda, 2011)

The evidence for # in both Borer and Ouwayda (2010) and Ouwayda (2011) is based on manifestations of # that are external to # itself: Agreement, distribution, and interpretation differences between DPs with and without #. This paper presents novel data from Malayalam illustrating, we argue, a local and <u>overt</u> manifestation of #: *-kaL.*

***Facts*:** *-kaL* (glossed '-KAL') is an optional marking that occurs on non-human plural Malayalam nouns (3b). *-kaL* is traditionally described as a plural marker, but its behavior contrasts with that of -PL-marking in English-type languages in many ways (i)-(iii).

i. English -PL-marking is required after cardinals (3a); Malayalam *-kaL* is optional (3b).

3. 'Four dogs': a. four dogs (Engl.)
   four dog-PL
   b. naalu patti/patti-kaL (Mal.)
   four dog/dog-KAL

ii. DPs containing English -PL-marking are ambiguous between collective and distributive (5a). In contrast, DPs containing *-kaL* allow only a collective reading: compare (5c) and (5b).

4. Collective scenario: 4 dogs shared a bone and no 4 dogs each ate a bone (a, b, c)
   Distributive scenario: 4 dogs each ate a bone and no 4 dogs shared a bone (a, b, *c)

   a. Four dogs ate a bone (Engl.)
   → TRUECollective; TRUEDistributive

   b. naalu patti (oru) ellu kazhicc-u (Mal)
   four dog a bone eat-PST
   → TRUECollective; TRUEDistributive

   c. naalu patti-kaL (oru) ellu kazhicc-u (Mal.)
   four dog-KAL a bone eat-PST
   → TRUECollective; <u>FALSE</u>Distributive

iii. DPs containing English -PL-marking need not be semantically plural (6a) DPs containing *-kaL* in Malayalam <u>must</u> be semantically plural (6b)

5. a. English: I have children
   → True if I have 1 kid, True if I have more.

   b. Malayalam: enikku kutti-kaL uNTu
   I-dat child-KAL exist$_{COP}$
   'I have children'
   → <u>False if I have 1 kid</u>, True if I have more

   c. Malayalam: enikku kutti uNTu
   I-dat child exist$_{COP}$
   'I have children'
   → True if I have 1 kid, True if I have more

Contrasts (i)-(iii) show that *-kaL*, but not English-type -PL-marking, is a semantic pluralizer.

<u>*Syntactic proposal*</u>: We propose a syntactic distinction paralleling the semantic differences between English -PL-marking and *–kaL*: Assuming, following Borer (2005) that English -PL- spells out the count projection DIV, as in (6), we propose the structure (7) for *-kaL*, where # is a functional projection dedicated to the formation of plural predicates.

6. English: [$_{DP}$ [$_{Q}$ ([$_{\#}$ ) [$_{DIV}$ dog-s [$_{N}$ dog ]]]]]

7. Malayalam: [$_{DP}$ [$_{Q}$ [$_{\#}$ patti-kaL [$_{DIV}$ patti-ø [$_{N}$ patti ]]]]]
   dog-KAL dog dog

Evidence for (7) from pronouns: Pronouns can be plural or singular when there is no *-kaL*, they must be plural when there is *-kaL*.

8. a. mupattu pati avante/avarute ownerine nakki
   30 dog-ø his/their owner licked
   b. mupattu patti-kal avarute/*avante ownerine nakki
   30 dog-P their/*his owner licked

<u>*Semantic puzzle and proposal:*</u> The behavior of *-kaL* suggests that it is a function that forms a predicate of pluralities from predicates of singularities. Ouwayda (2011) argues for (2) based on Lebanese Arabic, where number marking on the verb marks of the presence of #: When # is missing, the verb is not number marked, only a distributive reading is available (9a) and ; when # is present, the verb is number marked, and both distributive and collective reading are available (9b):

9. *Collective scenario*: 30 kids shared a cake and no 30 kids each ate a cake
   *Distributive scenario*: 30 kids each ate a cake and no 30 kids shared a cake

   a. tleetiin walad akal gateau keemel
   thirty child-ø ate-ø cake whole
   → FALSE Collective, TRUE Distributive

   b. tleetiin walad akal-u gateau keemel (LA)
   thirty child-ø ate-<u>PL</u> cake whole
   → TRUE Collective, TRUE Distributive

The presence # in Lebanese Arabic, then results in ambiguity, and in Malayalam it results in a strictly plural interpretation. Ouwayda (2011) derives the ambiguity in LA from properties of the DP. The facts in Malayalam, and the absence of a distributive reading suggests that things may not be this straightforward. We suggest that the distributivity in LA may in actuality be due to the availability of a distributor in LA but not in Malayalam.

*Formal denotation proposal*:

10. $[\![KAL]\!]=[\![\Gamma]\!]=\lambda n_n.\lambda P_{et}.\lambda x_e.|Atm(x)|\neq 1,|Atm(x)|=n,\&\forall y\in Atm(x),P(y)=1$
    Paraphrase: Given a cardinal n and a predicate P, return a predicate true of all individuals of size n that P is true of every atomic part of. (Ouwayda 2011; Hackl 2000)

***References***: Bale & Khanjian 2008, *Classifiers and Number Marking*. SALT 18 ♦ Borer 2005, *Structuring Sense: In Name Only*. OUP ♦ Borer & Ouwayda 2010, *Dividing and Agreement plural*, Ms. USC ♦ Hackl 2000, *Comparative Quantifiers*, MIT dis. ♦ Ouwayda 2011, *Cardinals, agreement, and plurality*. SuB 16.