Malayalam -kaL is Plural, English ‘Plural Marking’ is Not

Formal Approaches to South Asian Linguistics II
Massachusetts Institute of Technology
March 17th-18th 2012

Sarah Ouwayda
Ouwayda@usc.edu
University of Southern California

Mythili Menon
mythilim@usc.edu

0. Background: Plural marking in Malayalam

Two endings: -kaL and -maar
Masculine nouns take -maar, so does feminine nouns ending in -a

(1)  a. adhyapakan ~ adhyapakan-maar ‘Teacher (m)’
b. adhyapika ~ adhyapika-maar ‘Teacher (f)’
c. sahodaran ~ sahodaran-maar ‘Brother’
d. bhaarya ~ bhaarya-maar ‘Wife’

-kaL is the more productive ending.

(2)  a. maram ~ maran-gal ‘Tree’
b. poovu ~ poo-kal ‘Flower’
c. vastram ~ vastran-gal ‘Clothes’
d. sundari ~ sundari-kal ‘Beautiful women’

Aside from phonological distinctions, -kaL and -maar behave syntactically and semantically alike. In this talk, we only use examples using -kaL.

Plural marking optional when a numeral or an indefinite quantifier precedes the noun; Depends on [±HUMAN] (Asher and Kumari 1997)
(3) [+HUMAN] nouns require plural marking in the presence of a quantifier/numeral
   a. pattə aankutti-kaL
      ten boy-kaL
   b. *pattə aankutti
      ten boy
      ‘Ten boys’

(4) [-HUMAN] nouns do not require plural marking in the presence of a quantifier or numeral.
   a. andjə patti
      five dog
      ‘Five dogs’

   b. pattə teenga
      ten coconut
      ‘Ten coconuts’

   c. kuree puuvə
      a lot flower
      ‘A lot of flowers’

   b. nuuRə pakshi
      hundred bird
      ‘Hundred birds’

[+HUMAN] nouns take plural marking with two exceptions: ‘aal’ ‘person’ where it is optional and peer ‘person’ with which it can’t be used.

(5) a. pattə aaNu-kaL
    ten men-PL
    ‘Ten men’

   b. eezhə strii-kaL
    seven women-PL
    ‘Seven women’

   c. nuuRəaAL cooRə uNT-u
    hundred people rice eat-PAST
    ‘A hundred people ate rice’

   d. pattə peer vannu
    ten person come-PAST
    ‘Ten people came’

The optionality for [-HUMAN] does not exist in other Dravidian languages:
(6) a. eratu pustag-aLu Kannada
two book-PL
‘Two books’

b. reNTu pustakam-ulu Telugu
two book-PL
‘Two books’

c. irandu pustakangal Tamil
two book-PL
‘Two books’

1. Observation

(7) a. English singular: b. English plural:

I have a child I have children
True if I have one child True if I have one child
True if I have more than one child True if I have more than one child

(8) a. Malayalam singular: b. Malayalam plural:
enikkə kutti uNTə
I-dat child exist\textsubscript{COP}
‘I have a child’
enikkə kutti-kaL uNTə
I-dat child-kaL exist\textsubscript{COP}
‘I have children’

True if I have one child False if I have one child
True if I have more than one child True if I have more than one child

2. Proposal:

♦ -kaL and -s have different semantics

♦ kal and -s have different syntactic representations
2.1 Syntax: General Idea

Assuming the DP structure (9) (see Ouwayda 2011 for motivations), -kaL, but not -s, is in #

(9)

\[
\begin{array}{cccc}
3 & D & 3 \\
Q & 3 \\
& # & 3 \\
& -kaL & CL & 3 \\
& *-s & N \\
\end{array}
\]

(10) English:

[DP [Q ([# ]) [DIV dog-s [N dog ]]]]]

(11) Malayalam:

[DP [Q [# patti-kaL [DIV patti-ø [N patti ]]]]]

(12) **Plural Individual** or **Plural gen. quantifier**

\[ \lambda P. \lambda x. x \text{ is a plurality of some size,} \]

\[ \text{and every atomic part of it is a unit of apple, and } P(x) \text{ is true} \]

\[ \text{wo} \]

\begin{array}{cccc}
D & wo \\
Q & \\
\end{array}

**Plural (Count) Nominal Predicate**

\[ \lambda x. x \text{ is a plurality of a certain size,} \]

\[ \text{and every atomic part of it is a unit of apple} \]

\[ \text{wo} \]

\begin{array}{cccc}
# \\
\end{array}

**Count Nominal Predicate**

\[ \lambda x. x \text{ is a unit of apple} \]

\[ \text{wo} \]

\begin{array}{cccc}
CL \\
N \\
apple \\
\end{array}

**Nominal predicate**

\[ \lambda x. x \text{ is apple} \]

\[ \text{wo} \]
2.1 Semantics:

Two possible interpretations for plural:

(13) Option 1: Strong theory of plural (cf. e.g. Chierchia 1998)
    \[ [\text{PLURAL}] (x) \text{ defined only if } |\text{Atoms}(x)| \neq 1 \]
    \[ [\text{PLURAL}] (x) = x \]

Option 2: Weak theory of plural (cf. e.g. Sauerland et al. 2005)
    \[ [\text{PLURAL}] (x) \text{ defined everywhere} \]
    \[ [\text{PLURAL}] (x) = x \]

Claim:

English -s:

(14) \[ [[-s]] (x) \text{ defined everywhere} \] (Sauerland et al. 2005)
    \[ [[-s]] (x) = x \]

Malayalam -kaL:

(15) \[ [[-kaL]] (x) \text{ defined only if } |\text{Atoms}(x)| \neq 1 \]
    \[ [[-kaL]] (x) = x \]

3. Evidence:

3.1. Pronouns and agreement

-kaL is optional on [-HUMAN] nouns following cardinals

(16) a. mupattu patti
    thirty dog-Ø

    b. mupattu patti-kaL
    thirty dog-kaL

In the absence of -kaL, pronouns can be either plural or singular

(17) mupattu patti avante/avarute ownerin-e nakki
    Thirty dog-Ø his/their owner -acc licked
    ‘Thirty dogs licked their owner’

In the presence of -kaL, pronouns must be plural
3.2. Collective-Distributive Interpretation

Cardinal containing DPs in Malayalam have two forms:

(19) Form 1: CARDINAL    NOUN

   naalu    patti(-kaL)
   four     dog(-KAL)

(20) Form 2: NOUN    CARDINAL    CLASS-WORD

   patti    naalu    eNNan(-kaL)
   dog      four      number(-KAL)

When the noun is marked with -Kal following a cardinal, only a collective reading is available

(21) naalu patti-kaL oru ellu kzhicc-u
    four dog-KAL a bone eat-PAST
    ‘Four dogs ate a bone’

    Collective:  True in a scenario in which there are four dogs, and the
dogs all shared one big bone

    *Distributive: False in a scenario in which there are four dogs, and each of
them ate a bone, but they did not share a single bone

When the class-word is marked with -Kal following a cardinal, only a collective reading is available

(22) patti naalu eNNan-kaL oru ellu kzhicc-u
    dog four number-KAL a bone eat-PAST
    ‘Dogs of four types ate a bone’

    Collective:  True in a scenario in which there are dogs of four types, and the
dogs all shared one big bone
*Distributive: False in a scenario in which there are dogs of four types, and each of the dogs ate a bone, but they did not share a single bone

When the noun is not marked with -\textit{k}al following a cardinal, both a collective reading and a distributive reading are available

(23) patti-\textit{k}aL naalu e\textit{NN}am oru ellu k\textit{a}zhi\textit{c}c-u
dog-\textit{K}al four number a bone eat-\textit{PAST}

‘Four dogs ate a bone’

Collective: True in a scenario in which there are dogs of four types, and the dogs all shared one big bone

Distributive: True in a scenario in which there are dogs of four types, and each of the dogs ate a bone, but they did not share a single bone

English DPs with -s-marked nouns allow both collective and distributive reading

(24) Three boys ate a pizza

Collective: True in a scenario in which three boys shared a pizza and none ate his own

Distributive: True in a scenario in which three boys each ate a pizza and no three boys shared a pizza

4. Notes on Malayalam DPs:

4.1. ‘\textit{CLASS-WORDS}’ like \textit{e\textit{NN}am ‘number’} in Form-2 DPs are in N

- They co-occur with plural marking (which is an indication they are not classifiers)

(25) patti naalu e\textit{NN}an-\textit{k}aL
dog four number-\textit{K}AL

‘four types of dogs’

They can be modified by an adjective independently from the apparent head

(26) k\textit{a}zhinju roti andju valiya ka\textit{SN}am

burnt bread five big number

‘five big pieces of burnt bread’

Case marking for the DP is marked on the \textit{CLASS-WORD}:
(27) a. andju patti-kaL-kkə bharam uNTə
    Five dog(-kal)-DAT heavy cop
    ‘Five dogs are heavy’

    b. patti-kaL andju eNNattinə bharam uNTə
    dog(-kal) five number-DAT heavy cop
    ‘Dogs of five types are heavy’

4.2. The lexical nouns (patti ‘dog’) in Form-2 DPs are full DPs

An article other than the cardinal can be present before the noun:

(28) oru rotii naalu eNNam
    a bread four number
    ‘Four bread’

5. Structures

(29) ...

    wo...

    5...

    oru rotii(-kal)

    3(#

    Q 3

    naalu #)

    3

    CL 3

    N 3

    eNNam

    → Ambiguous
    → Both plural and singular pronouns OK

(30) ...

    wo...

    5...

    oru rotii

    3

    Q 3

    naalu #

    3

    -kaL CL 3

    N 3

    eNNam

    → Collective
    → Only plural pronouns OK
(31) ...

3
Q  3
naalu  #  3
-kaL  cl  3
N
rotii

⇒ Collective
⇒ Only plural pronouns OK