



## 1. The Puzzle

- **The problem:** Asymmetry in prenominal vs postnominal occurrences of numerals.
- Two ways of expressing amount in count NPs. Number marking can optionally co-occur with a classifier like element.
  - When numeral is prenominal (Num + NP + pl)
 

(1) a. muunə kuṭṭi-kaḷ	b. muunə puuča-kaḷ
three children	three cats
‘three children’	‘three cats’
  - When numeral is postnominal (NP + pl + Num + CL)
 

(2) a. kuṭṭi-kaḷ muunə per	b. puuča-kaḷ muunə eṇṇam
children three CL	cats three CL
‘three children’	‘three cats’
- Presence of number and classifier-like element is problematic since crosslinguistically number marking languages lack classifiers (Borer 2005)
- **Main claims:** 1) Malayalam has a small set of emerging classifiers. 2) They behave like individuating classifiers that require their complements to be a completed semi-lattice. 3) The structure in (2) is derived from (1) through movement.

## 2. Properties of Amount phrases

- Malayalam has a small set of emerging classifiers and massifiers as in (3). These words are nominals that can host plural morphology (*kaḷ*). The nature of these is linked to animacy.

(3) a. <b>Count CL</b>		b. <b>Mass CL</b>	
<i>per</i> - person (+animate)		<i>keṭṭə</i> - bundle	
<i>eṇṇam</i> - number (-animate)		<i>tari</i> - grain	
<i>kafṇam</i> - piece (- animate)		<i>tulli</i> - drop	
		<i>kuppi</i> - bottle	
(4) kaḷṇa-ṇṇaḷ,	tari-kaḷ,	eṇṇa-ṇṇaḷ	<i>plural morphology</i>
piece-PL	pinch-PL	number-PL	

### OBSERVATION: Absence of a measure reading in Malayalam

In English mass nouns, these classifier measure phrases display an ambiguity between an individuating and a measure reading (Doetjes 1997, Chierchia 1998, Landman 2004).

- (5) Two glasses of water
- Reading 1: There are two glasses of water. *Individuated reading*
- Reading 2: The amount of water is equal to two glasses. *Measure reading*

In Malayalam, only the individuated reading is available for the *NP+Num +CL* construction. In the *Num+CL+NP*, both readings are available.

- (6) *Num + CL + NP*
- [raṇṭu kuppi veḷlam] koṇṭu var-uu
- two water bottle bring come-PAST
- ‘Bring two bottles of water.’
- Reading 1:* There are two bottles of water. *Individuated reading*
- Reading 2:* The amount of water is equal to two bottles. *Measure reading*
- (7) *NP + Num + CL*
- a. [veḷlam raṇṭu kuppi] koṇṭu var-uu *Individuated reading*
- water two bottle bring come-PAST
- ‘Bring two bottles of water.’
- b. #[veḷlam raṇṭu kuppi] thayir-il-ekka cherkk-uu *#Measure reading*
- water two kuppi curd-LOC-DIR add-PAST
- ‘Add two bottles of water to the curd.’ (Only reading available is to literally put ‘two bottles’ of water into the curd).

## 3. Classifiers as measure nouns

- The small set of classifiers in (3) behave as individuating classifiers that require their complements to be interpreted as a complete semi-lattice (Link 1983, Gillon 1989).
- In a complete semi-lattice, individuals, groups, or portions are combined using the sum operator (Bale and Khanjian 2010).
- The plural marking fulfills this requirement and thus plural marked nouns form completed semi-lattices.



- **Deriving the *Num + NP + pl* and *NP + pl + Num + CL* structure**
- Both the structures are derived from the same underlying base structure.

(8) [<sub>DP</sub>[#P two [ -kaḷ nP [ book [<sub>NP</sub> [<sub>N</sub> CL]]]]]] ‘Two BOOK(s)’

- The classifier is the head noun of the DP as seen by compounding data, where gemination is taken as evidence for compounding.

(9) a. rotiikkaḷṇam ‘a piece of bread’ b. veḷḷakkuppi ‘a bottle of water’

## 4. Analysis

- The classifier is present in the base structure and rendered lexically silent (similar to Kayne 2006).
- When the noun vacates the nP head and moves to the left periphery, the CL element is rendered overt.
- The semi-lattice requirement of the classifier requires number to co-occur with the classifier.

(10) **NP+PL + NUM+CL order:** [<sub>DP</sub> book-kaḷ<sub>i</sub> [#P two [ t<sub>j</sub> t<sub>i</sub> nP [ t<sub>i</sub> [<sub>NP</sub> [<sub>N</sub> CL]]]]]] ‘BOOKS TWO CL’

- Once movement has taken place, the measure reading is disallowed.
- The classifier is also responsible for bringing about the distributivity reading.

(11) [kuṭṭi-kaḷ mupattu per] cake muzhuvan kazhicc-u

child-PL thirty CL cake whole eat-PL

‘Thirty children ate a whole cake’

- True in a scenario where thirty children shared one and only one cake and it isn’t the case that any thirty children each ate a cake. [VCOLLECTIVE]
- False in a scenario where thirty children each ate a cake and none of them shared a cake. [VDISTRIBUTIVE]
- In the order where the CL is lexically silent, only the collective reading obtains.

## 5. Conclusion

- In Malayalam, classifiers can co-occur with number due to the complete semi-lattice requirement of the classifiers.
- The structures involving classifiers are derived from one another through movement. These classifiers are individuating classifiers disallowing a measure reading of the numeral classifier phrases.
- The classifier is responsible for distributivity.

### Further questions:

- Consequences of number and classifier on the mass/count distinction.

### References

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- Link, G. 1983. The Logical Analysis of Plurals and Mass Terms: A Lattice Theoretical Approach. In, Bauerle Schwarze and von Stechow (eds) *Meaning Use and Interpretation of Language*, de Gruyter: Berlin.
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