Reevaluating Standard Analyses of Comparison: The View from Malayalam

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ABSTRACT

In this paper, I will argue for an alternative analysis where both the standard marker than and the comparative marker more encode comparative semantics. The evidence for this comes from Malayalam comparatives. Malayalam lacks an adjectival category and uses complex property concept expressions to encode adjectival meaning (Menon 2013, Menon and Pancheva forthcoming). In the absence of adjectives, nominal and verbal comparatives are formed using two different kinds of comparatives. The comparative marker is an adnomial degree modifier along the lines of ‘in addition to’, ‘in excess of’. The comparative semantics is encoded in the semantically non-vacuous than which functions as a quantifier domain adverbial (similar in spirit to Schwarzschild 2014) whereby it restricts the domain of the degree quantifier more.

1. Introduction

Under the standard analysis, gradable adjectives denote relations between individuals and degrees (Seuren 1973, Cresswell 1979 a.o). A gradable predicate, such as tall, incorporates the measure function height, which when applied to an individual, yields the degree d of height of that individual.

\[ \text{⟦tall⟧} = \lambda d \lambda x. \text{height}(x) \geq d \]

In the degree analysis of adjectives, functional morphology such as, measure phrases (‘two feet’), positive morphemes (POS), or the comparative morpheme more saturate the degree argument. In comparatives, such as (2) the semantics of comparison is encoded in the comparative morpheme (3) and the standard marker than is taken to be semantically vacuous. The degree morpheme is a quantifier that undergoes quantifier raising along with the standard phrase.

\[ \text{⟦-er/more⟧} = \lambda D. \lambda D'. \max D' > \max D \quad \text{(Heim 2000)} \]

In the absence of lexical adjectives, Malayalam uses property concept expressions (often lexicalized as adjectives in languages that have them). The semantics of these expressions differ considerably from the standard semantics. This paper extends the semantics to understand how comparison works in languages without lexical adjectives.

2. Malayalam comparatives: The basic data

There are two types of comparatives in Malayalam, depending on the standard marker: kaal-um and il-um (4). They both show clausal comparison and phrasal comparison (see Menon 2012 for some diagnostics). The kaal-um is similar to a particle comparative and is unique to Malayalam among other Dravidian languages. kaal is a dedicated than morpheme found only in comparatives. The comparative marker kuuttal is optional with kaal-um comparatives.

(4) a. the kaal-um comparative: phrasal

Anil-inə Komalan-e kaal-um kuuttal pokkam unə
Anil-DAT Komalan-ACC than-UM more tallness POSS V
‘Anil is taller than Komalan.’ (Lit. ‘To Anil there is (more) tallness than Komalan.’)

b. the kaal-um comparative: clausal
Anil-inə [Komalanə pokkam u/[a-t-ine] kaa]-um (kuuṭuttal)
Anil-DAT Komalan-DAT tallness EX.COP\textsubscript{nonfinite}-REL-NOML-ACC than-UM more
pokkam unə
tallness POSS V
‘Anil is taller than Komalan.’ (Lit. ‘To Anil there is (more) tallness than Komalan has tallness.’)

The second type of comparison, called the \textit{il-}um comparative is the common strategy employed by all other Dravidian languages. It uses a locative postposition \textit{il}, which is attached directly to the standard. Thus, there is a case marking difference between the two comparatives. The standard in the \textit{kaa}-um comparative is accusative case marked while the standard in the \textit{il-}um comparative is locative case marked.

(5) a. the \textit{il-}um comparative: phrasal
Anil-inə [Komalan-il-um] *(kuuṭuttal) pokkamunə
Anil-DAT Komalan-LOC-UM more tallness POSS V
‘Anil is taller than Komalan.’ (Lit. ‘To Anil from Komalan there is tallness.’)
b. the \textit{il-}um comparative: clausal
Anil-inə [Komalan Pokkam u/[a-t-il-um] *(kuuṭuttal)
Anil-DAT Komalan-DAT tallness EX.COP\textsubscript{nonfinite}-REL-NOML-LOC-UM more
pokkam unə
tallness POSS V
‘Anil is taller than Komalan.’ (Lit. ‘To Anil from Komalan there is tallness.’)

There are two generalizations from the above data. The comparative marker behaves differently in \textit{kaa}-um and \textit{il-}um comparatives. In the case of \textit{il-}um comparatives, the comparative marker \textit{kuuṭuttal} is obligatory.

3. Distribution of the comparative marker \textit{more}

The comparative marker in Malayalam \textit{kuuṭuttal} has a peculiar distribution. Depending on different expressions it can combine with, there is an asymmetry in the distribution.

3.1. NP comparatives are conditioned by possession

The comparative marker is obligatory when the NP is encoded in a non-possessive construction. When the NP is encoded in a possessive construction (the existential copula), the comparative marker is optional.

(6) NP comparative: obligatory \textit{more} outside of possession
a. Anil [Komalan-e kaa]-um *(kuuṭuttal) pazham kazhicc-u
Anil Komalan-ACC than-UM more bananaseat-PAST
‘Anil ate more bananas than Komalan.’
b. *(kuuṭuttal) ve[l]am kuṭiccu ‘drank more water’
c. *(kuuṭuttal) kaatu vizhingi ‘ate more air’

(7) NP comparative: optional \textit{more} with possession
a. Anil-inə [Komalan-e kaa]-um (kuuṭuttal) ve[l]am unə
Anil-DAT Komalan-ACC than-UM more water POSS V
‘Anil has more water than Komalan.’
b. (kuuṭuttal) paṇam unə ‘has more money’

Crucially, possession plays a role in determining the presence of the comparative marker. In the case of \textit{il-}um comparative, as I noted in the previous section, the comparative marker is always obligatory.
3.2. **Verbal comparatives: obligatory more**

In the case of verbal comparatives, the comparative marker seems to be obligatorily required.

(8) a. Anil [Komalan-* kaal-um] *(kuuṭṭuttal) ooti
   Anil Komalan-ACC than-UM more ran
   ‘Anil ran more than Komalan.’

b. *(kuuṭṭuttal) nadannu ‘walked more’

c. *(kuuṭṭuttal) mala keɾɾi ‘climbed more hills’

The same obligatory requirement holds of verbal comparatives formed using the *il-um* comparative.

3.3. **Class 1 property concept expressions prohibit the comparative marker**

In previous work, I have analyzed Malayalam has having two classes of property concept (PC) expressions (for more details, see Menon 2013, Menon and Pancheva 2014, Menon and Pancheva forthcoming). There are no semantic differences between the two types of roots. The distinction is morpho-syntactic (based on etymology), and the morpho-syntactic class determines the type of structures the roots can appear in.

(9) a. [[√nall]] = the property of goodness (Class 1)

b. [[√santosh]] = the property of happiness (Class 2)

A covert possessive categorizes Class 1 roots. Class 2 roots are categorized with a non possessive, and they enter further PC predication as complements of possessive predicates. Correspondingly, all PC predication is possession-based.

(10) Class 1 PC root (-a ending, relativized root)

   a. [[[√nall + φ_v,poss], + POS], v -a]rel
      Lit. ‘having an instance of goodness measuring to a degree that exceeds the standard’

   b. [φ_v,poss] = λII λd λx. ∃y [y is an instance of II & x has y & μ(y) ≥ d]

   c. [POS] = λx. ∃d ∃y [y is an instance of goodness & x has y & μ(y) ≥ d & d > d₁]

   d. [nalla] = λx. ∃d ∃y [y is an instance of goodness & x has y & μ(y) ≥ d & d > d₁]
      ≈ λx. ∃d [x’s goodness ≥ d & d > d₁]

Thus, Class 1 PC expressions encode covert possession and they are gradable. These Class 1 PC expressions such as *big, good, new* never appear with the comparative marker.

(11) Class1 PC comparatives: *more* is prohibited

   a. Anil [Komalan-* kaal-um] *(kuuṭṭuttal) nalla-van aanɾo
      Anil Komalan-ACC than-UM more good-M.SG PRED V
      ‘Anil is good than Komalan.’ (Lit. ‘Anil is one having goodness than Komalan’)

   b. *(kuuṭṭuttal) pazhayatɔ ‘more old’

   c. *(kuuṭṭuttal) valippam ‘more big’

Class 1 PC expressions only appear with *kaal-um* comparative due to the prohibition against the comparative marker.

3.4. **Class 2 property concept expressions optionally allow the comparative marker**

Class 2 PC roots are non-gradable and they are categorized using a non possessive verbal head.

(12) **Class 2 property concept root (-am ending, nominalized root)**
a. \[\text{Pokk} + \emptyset \text{v} + \text{-am}\]
   Lit. ‘being an instance of height’

b. \[\emptyset \text{v} \text{v}^+\text{-am}\]

c. \[\text{Pokkam} \text{v} \text{v}^+\text{-am}\]

The possessive relation is expressed at the level of the word, through a covert possessive verbal morpheme, with Class 1 roots, and at the phrasal level, through an overt possessive verb, with Class 2 roots. Gradability is directly related to property possession. Only Class 1 roots are gradable.

Class 2 PC expressions such as happiness, tallness, smartness optionally appears with the comparative marker.

(13) Class 2 PC comparatives: more is optional

a. Anil-inə [Komalan-e kaa[-um]] (kuuṭṭtal) pokkam unṭə
   Anil-DAT Komalan-ACC than-UM more tallness POSS V
   ‘Anil is taller than Komalan.’ (Lit. ‘Anil has more tallness than Komalan.’)

b. (kuuṭṭtal) santosham ‘more happiness’

c. (kuuṭṭtal) dukkam ‘more sadness’

A question regarding the comparative marker emerges at this point. Why is more obligatory with NP comparatives outside of possession, optional with possessive predicates including those appearing with Class 2 expressions, and disallowed with Class 1 expressions? The answer lies rooted in the semantics of the standard marker, often assumed semantically vacuous in standard analyses as we will see in Section 5.

In this section, we have seen that the behavior of more is quite distinct from the English –er/more. It has a varied distribution depending on the standard marker and the kind of expression it combines with. The next section examines the distribution of the standard marker than.

4. Distribution of than

It is well known that in English, the standard phrase in a comparative construction can be optionally omitted. These type of constructions are called as implicit comparatives.

(14) ‘Come out onto the porch.’ It’s cooler here. (Sheldon 1945)

(15) a. John has 3 pens. I have more.
   b. John is 6 ft tall. I am taller.

4.1. Than is always obligatory in Malayalam

Unlike English comparatives, the standard marker in Malayalam comparatives can never be omitted and these comparatives are disallowed.

(16) a. Anil-inə muunə pena unṭə. enikkə [atin-e kaa[um]] kuuṭṭtal unṭə.
   Anil-DAT three pens EX COP I-DAT that-ACC than more POSS V
   ‘Anil has three pens. I have more than that.

b. Anil-inə aarə aṭi pokkamunṭə. enikkə [atin-e kaa[um]] kuuṭṭtal unṭə
   Anil-DAT three feet tallness EX COP I-DAT that-ACC than more POSSV
   ‘Anil is 6 feet tall. I have more than that.

Thus, another generalization that comes forth from this data is regarding the nature of the comparative marker more in Malayalam, it behaves differently from English more. Schwarzschild 2014, analyses Hebrew as having a semantically meaningful than, based on the way the language forms differentials.
Malayalam differs from English and Hebrew in forming comparatives from property concept expressions. Hebrew and Malayalam allow bare comparatives, formed only using the standard phrase headed by than. English and Hebrew, to the exclusion of Malayalam, allow an incomplete comparative where the standard phrase is omitted. Thus, the Malayalam than is special and the behavior of than and more in Malayalam is different from that of English or Hebrew.

5. Toward an analysis

There are three viable options for accounting for the variable behavior of the comparative marker. I will show that only one of these options if tenable for the data presented from the Malayalam comparatives. The first option is to assume the standard semantics for the comparative marker as in the standard literature. In this case, the comparative marker more encodes the comparative semantics. However, this analysis will provide no explanation for the varied distribution of the comparative marker. Why is it that the more is disallowed with Class 1 property concept expressions, optional with Class 2 property concept expressions, and obligatory with NP and VP comparatives, if indeed the comparative marker encodes comparative semantics uniformly?

The second option is to assume a silent degree head as is seen postulated for Hindi (Bhatt and Takahashi 2011). However, if indeed there was a silent head mediating the semantics, we expect to see systematic distinctions between the degree head –er and the comparative marker, yet we don’t.

The final option is to assume that the standard phrase is not semantically vacuous and in addition to the comparative marker encodes the comparative marker. This is the analysis I will be pursuing in the following sections.

5.1. Is the more actually more?

Before laying out the analysis, looking at the nature of the comparative marker, one could ask whether it is indeed a comparative marker. I will offer a morphological decomposition account suggesting that the comparative marker is a dedicated morpheme seen only in comparative uses.

√kur is the root for quantity predicates. The same root can be seen in comparatives of superiority (more) as well as comparatives of inferiority (less). Moreover, kuuṭuttal ‘more’ is only used in comparatives.

(17)

a. √kur + -ee = kuree ‘a lot, many, much’
b. √kur + -avə = kuravə ‘less’
c. √kur + -uka = kuuṭuka ‘to increase’
d. √kur + ut + -al = kuuṭuttal ‘many/much + er’ ~ ‘more’

5.2. A semantics for than

It is not altogether implausible to assume a semantics for the standard marker. Cross-linguistically, it has been shown that the standard marker determines the semantics of comparison by selecting for a phrasal vs. clausal standard of comparison (Kennedy 2009). As seen in Schwarszschild 2014 for Hebrew and earlier in this paper in Section 3, comparative marker is not always necessary in comparative constructions. Comparative markers are also cross-linguistically rarer than standard markers (Stassen 1985).

5.3. Than is not semantically vacuous and encodes comparison

My main proposal is regarding the semantic content of the standard marker than. The semantics for the standard marker is given in (18). It takes two individuals and gives an ordering between the property possessed by the individual x and the property possessed by the individual y. Thus, the standard marker establishes an ordering relation and also compares the property possession. However, there needs to be a notion of maximality, which is given by the characteristic function supremum sup. This function gives the

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1 This analysis supersedes the analysis in Menon (forthcoming).
least upper bound reading. The sup function is adapted from Alrenga et al (2013). \( \Pi \) is a meta variable on property concept expressions.

\[
(18) \quad \text{than: } \quad \left[ \text{kaa}-\text{um} \right] = \lambda P_{<e} \cdot \lambda y. \exists \Pi \left[ \text{sup} \Pi (y) > \text{sup} \Pi (P) \right]
\]

Than first takes the standard clause as its argument and relates the target of comparison with the standard of comparison. One evidence pertaining to the claim that the standard marker is not a degree quantifier comes from the inability of the than phrase to host a degree denoting expression such as a measure phrase or degree descriptions such as ‘more than three’.

\[
(19) \quad \text{a. } \text{Anil}-\text{dat six feet-ACC than tallness EX COP}
\]

‘Anil is more than 6 feet tall.’

\[
(19) \quad \text{b. } \text{Anil}-\text{dat six feet-LOC-UM tallness EX COP}
\]

‘Anil is more than 6 feet tall.’

\[
(20) \quad \text{a. } \text{Anil-\text{dat six-DAT than more books EX COP}
\]

‘Anil has more than three books.’

Given this semantics, in the next sections I develop how comparatives are formed in the different classes of property concept expressions in Malayalam.

5.4. Than alone encodes comparison- Class 1

Class 1 property concept expressions are –a ending relativized property concept expressions and they never allow an overt comparative marker more. The internal composition of these Class 1 expressions encode covert possession, through merge in the Spec of a functional head \( \varphi_{v_{\text{poss}}} \). The positive morpheme (POS) can saturate the degree argument and the –a, which is the relative clause marker in Proto-Dravidian attaches next. The role of this marker is only syntactic and it does not change the semantic type of the property concept expression.

\[
(21) \quad \left[ \left[ \emptyset + \varphi_{v_{\text{poss}}} \right] + \text{POS} \right] -a \quad \text{rel}
\]

Lit. ‘having an instance of goodness measuring to a degree that exceeds the standard’

\[
(22) \quad \text{a.}
\]

The role of the standard marker, than, which is a PP adjunct that can adjoin to the vP, is to combine with a Class 1 expression and restrict the POS, essentially set the context. It also introduces an ordering relation
between the property possessions. This structure is then turned into a resumptive one by the addition of resumptive pronouns that turn the relative clause into a free relative.

(23)  b. A pronoun makes the relative clause in (22a) into a free relative.

\[
\begin{array}{c}
\lambda x. \exists d \{ x's \ goodness \geq d \text{ and } d > d_s \}
\end{array}
\]

The PP adjunct is then right adjoined to the VP. I will assume that comparative clause is unpronounced following VP ellipsis at the PF interface. The reason for assuming a clausal standard and not a phrasal standard is due to the fact that the clause can be pronounced fully, optionally (cf. (4b)).

(24)

\[
\begin{array}{c}
\lambda P_{<e>}, \lambda y. \exists II [sup II (y) > sup II (P)]
\end{array}
\]

The PP adjunct then obligatorily extraposes to the left of the VP to derive the correct word order, as in the classical analysis of comparative syntax (Bresnan 1973). Comparative semantics is entirely encoded in
than. Syntactically as well as semantically the comparative marker has no role. Thus in some sense, this is similar to an implicit comparison (compared to) in English, although the kaaɭum comparative is an explicit comparative.

(25) Compared to John, Bill is tall.

This analysis also accounts for how the distribution of kaaɭum is less restricted than that of than phrases. The comparative marker cannot appear on its own since its role is to introduce a measure function.


   b. Anil-ine kaaɭum enikkə Paris iʃʈam aŋə
      Anil-DAT than I-DAT Paris love PRED V
      'I love Paris than Anil.'

   c. Anil-ine kaaɭum Komalanə pustakam unʃə
      Anil-DAT than Komalan-DAT books EX.COP
      'Komalan has more books than Anil.'

In Class 1 property concept expressions, the comparative semantics is wholly achieved by the semantics of the standard marker.

4.7.3.3. Than alone encodes comparison- Class 2

Class 2 property concept expressions are different from Class 1 property concept expressions in that they are nominalized with the –am marker. They merge in the Spec of a non possessive ∅v. Thus in these cases, the possession is encoded overtly by combining with the possessive verb unʃə. The possessive verb together contributes a degree for comparison. This verb also mandatorily requires dative marking.

(27) [[√pokk+ ∅v ]v + -am]n
    Lit. ‘being an instance of height’

(28)

\[ \text{NP}_{\text{<e,t>}} \]

\[ \text{vP}_{\text{<e,t>}} \]

\[ \lambda II \lambda x [x \text{ is an instance of } II] \]

\[ \sqrt{pokk} \text{ v} \]

The nominal formed in (28) merges with a vP hosting the Poss V. Thus possession makes the predicate gradable. The standard marker than saturates the degree argument of the have predicate + dative construction.

(29) 

\[ \text{VP} \]
Similar to Class 1 property concept expressions, after the PP adjoins to the VP, it extraposes for to a position before the VP to derive the correct word order. The possessive copula introduces a degree variable, which the PP can bind. Thus possession introduces gradability or in other words gradability is only an epiphenomenon.

4.7.3.4. Than encodes comparison with the more- Class 2, NP/VP comparative

The cases in which the standard marker than and the comparative marker more can encode comparison are in Class 2 as well as NP/VP comparatives. This happens optionally with Class 2 property concept expressions and obligatorily with NP/VP comparative. In these cases, the comparative marker is an adnominal modifier, meaning along the lines of “in addition of”, “in excess of”. Thus, the behavior of the Malayalam comparative marker is very different from the English more. Its meaning is similar to that of an intensifier- very, totally, a lot, predicate modifiers of the sort <<e,t>, <e,t>>. The semantics is given below and is similar to the il-um comparative cases.

(31) \[ \text{[k}\text{u}\text{u}}\text{t}\text{u}\text{t}\text{t} \text{a} \text{l} \text{]} \equiv \lambda d \in D_d . \lambda x \in D_e . \mu (x) = d \]

Thus, when more occurs with than in Class 2, it specifies the degree exceeding the specified standard.

(32)
Thus, NP and VP comparatives need to be made gradable overtly by the addition of the degree morphology, the comparative adnominal marker more which introduces the measure function.

6. Conclusion

We have seen there is a maximally transparent mapping from surface syntax to meaning by showing that both the comparative morpheme (more) and the standard morpheme (than) contribute to the semantics of comparison. The than can never be omitted from comparative constructions. The than phrase can bind the degree argument in the matrix clause in bare comparatives or can act as a quantifier domain adverbial in the presence of more. This division of labor can be seen in other instances of grammar, time and tense adverbials, modality and negation, numerals and plurals.

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References


