

**GENERICITY, QUANTIFICATION, AND MODALITY:
THE MANY FACES OF –UM AND –UNNU IN MALAYALAM***

Hany Babu M.T.

Central Institute of English and Foreign Languages, Hyderabad 500007
hanybabu@ciefl.ac.in

The imperfective aspect marker –unnu licenses a situation argument, which is the characteristic property of an episodic predicate. The generic reading of the –unnu construction is derived when the situation argument is bound by an extensional quantifying operator. The imperfective reading is derived when the situation argument is bound by an existential operator signalled by the existential copula uNTə. The –unnu generic sentences contrast with the generic sentences with the future tense marking modal particle –um. The modal marker –um is argued to signal the presence of a modalized generic operator that quantifies over the set of accessible possible worlds. This gives the sentence an intensional (characterizing) property. The modal –um is thus claimed to be closely related to the universal quantifying particle –um.

1. Introduction

Most Malayalam speakers will agree that the universal truth that sun rises in the east can be expressed in either of the two ways in Malayalam:¹

* A version of this paper was presented at the Platinum Jubilee Conference of the Linguistics Society of India held at the University of Hyderabad, December 2005. I am grateful to Probal Dasgupta, K. Srikumar, P. Madhavan, K.A. Jayaseelan, and R. Amritavalli for valuable comments, patient listening/reading, and encouragement. I would also like to thank Jenny, whom I have pestered many a time with questions about data. No one is to blame but me for the shortcomings of this paper.

¹ The following abbreviations are used in the gloss:

IPL	: First Person Plural	LOC	: Locative
ACC	: Accusative	MOD	: Modal
AUX	: Auxiliary	NEG	: Negative
COND	: Conditional	NEG.EX	: Negative Existential Copula
EX	: Existential Copula	NOM	: Nominative
FUT	: Future Tense	PRES	: Present Tense
INF	: Infinitive	Q	: Question Particle

I have chosen to gloss –um sometimes as the future tense marker, sometimes as the modal, and sometimes as –um itself according to the point that is relevant for discussion. Similarly, –unnu has been glossed sometimes as the present tense marker and sometimes as –unnu itself. This should not cause any confusion to the reader.

- (1) a. suuryan kizhakkə udikk-**um**
 sun *east* *rise-FUT*
 ‘The sun rises in the east.’
- b. suuryan kizhakkə udikk-**unnu**
 sun *east* *rise-PRES*
 ‘The sun rises in the east.’

Most speakers would find not much difference between the two sentences above. In this paper, I will claim that while (1a) makes a prediction about the sun’s behaviour, (1b) is at best a generalization of a series of repeated episodes of sun’s rising. This analysis ties with the difference between essential and accidental generalizations (Dahl 1975) and “inductive” and “rules and regulations” approach to genericity advocated by Carlson (1995).

In this paper I argue that the modal suffix *-um* introduces an intensional operator that quantifies over the set of accessible possible worlds giving the predicate a characterizing property. The generic sentence with *-unnu*, on the other hand, introduces an adverb of quantification that quantifies over a situation variable that ranges over a period of extensional time. Thus I bring about a difference between characterizing sentences and generic sentences that report repeated occurrences of a particular episode. The former class is intensional, while the latter class is extensional. My analysis also captures a hitherto unnoticed parallel between the modal marker *-um* and the *-um* that occurs in universal quantifiers and certain polarity sensitive items.

This paper is structured as follows: § 2 offers a brief introduction to the notion of genericity and characterizing predicates. I draw upon Krifka et al’s (1995) model where they distinguish between the generic reading of the NP and the generic reading of the VP. I make crucial use of the distinction between a generic (characterizing predicate) and an episodic predicate. In § 3, I present my analysis and show that *-um* and *-unnu* make different kinds of generalizations. Lexical stative predicates and sentences that talk about a dispositional property resist the generic *-unnu*. *-um*, on the other hand, occurs in characterizing sentences. In § 4, I put forth the claim that the modal suffix *-um* and the *-um* that occurs in universal quantifiers and polarity sensitive items are closely related. I also offer an analysis that claims that the function

of *-unnu* is to license a situation argument to the predicate. In § 5, I review the claim that there is no tense in Malayalam. I summarize existing literature and add to the discussion. I conclude in § 6 by summarizing the major claims of the paper.

2. Krifka et al 1995 on Genericity

According to Krifka et al (1995), genericity can be taken to be a generalization over particular objects or particular events or facts. Genericity, thus, stands in opposition to particular reference. In the case of a DP, generic reading implies “kind” denoting interpretation (in the sense of Carlson 1980), while the non-generic reading implies “object” denoting interpretation. In the case of the VP, the generic reading contrasts with an episodic reading. The following set of sentences from Krifka et al illustrates these possibilities:

- (2) a. The potato was first cultivated in South America. (*Kind denoting DP; episodic VP*)
- b. John smokes a cigar after dinner. (*Object denoting DP; generic VP*)
- c. The potato is highly digestible. (*Kind denoting DP; generic VP*)

The definite singular *the potato* gets the kind denoting reading in (2)a and c. (2)b is generic by virtue of the DP being a habitual predicate. The VP in (2)c is also taken to be generic because of the lexical stative predicate (which attributes an individual level property). A sentence in which the VP is generic is taken to be a *characterizing* sentence. A characterizing sentence opposes with a particular sentence that has an episodic predicate. An episodic predicate has a situation argument that is bound by the existential operator. The VP in (2)a is an example of this, as it describes an episode – that of the potato being first cultivated. If the situation variable is bound by an operator like *usually*, we have a generalization over situations, giving rise to a characterizing property. Habitual predicates like *smoke a cigar after dinner* can be taken to be examples of such characterizing sentences. The other class of characterizing sentences is the lexical stative like *know French* or *be highly digestible*, which lack a situation argument altogether.² We shall look at characterizing sentences in the next section.

² Krifka et al call for a reformulation of the notion of stativity in the case of predicates like *be available*, which can have a situation argument.

2.1 Characterizing sentences and accidental generalizations

Characterizing sentences are said to have the following properties:

1. In characterizing sentences the property described by the verbal predicate is an “essential” property of some entity mentioned in the sentence.
2. The subject or other NP of a characterizing sentence may be any type of NP.
3. Characterizing predicates may be *habitual* (i.e., derived from an episodic predicate) as in (2)b above, or *lexical* (i.e. a stative predicate) as in (2)c above.

It is the first point that is of essential importance to us. An essential property has “law-like” (normative or nomic) quality. An essential property contrasts with an accidental generalization, which holds true because of a “quirk of fate.”

Greenberg (2003) offers the following scenario to explain this difference. Imagine that there are only eight lions left in the world and seven of them lost a leg due to some reason. (3)a will be true as an accidental property of lions. However, (3)b and (3)c will still not be true as they talk about characteristic properties of lions.

- (3) a. Most lions have three legs.
- b. A lion has three legs.
- c. Lions have three legs.

Another property of characterizing sentences is that they support counterfactual statements. Dahl (1975) says that the following argument will be valid only if the first sentence is understood as a characterizing (nomic) property:

- (4) My friends vote for the Socialists. Hence, if you had been my friend, you would have voted for the Socialists.

If the property of voting for Socialists were an accidental property, the argument would not hold.

Both these properties of characterizing sentences can be explained if they are viewed as “intensional” in that they make a generalization of the state of affairs in all the accessible possible worlds. So a situation contrary to the one described by a characterizing sentence is not plausible at all. However, the usual problem in the semantics of the generic operator *Gen* holds true in the characterizing sentences as well. That is to say, it has been noted that generic sentences allow for exceptions,

unlike sentences quantified by universal operators. And to state precisely how many examples validate a generic claim or how many counterexamples invalidate it has been always problematic.³

An accidental generalization, on the other hand, is extensional in that it describes a state of affairs in the “real” world. It just describes what holds true in the actual world without making any claim as to how things are in the intensional contexts.

Greenberg argues that both kinds of genericity are encoded syntactically in natural languages. She reports on the use of the indefinite determiner *des* and the definite determiner *les* in French (attributed to Carlier 1989):

- (5) a. Des agents de police ne se comportent pas ainsi dans une situation d’alarme
 “INDEF-PL police officers do not behave like that in an emergency situation”
 b. Les agents de police ne se comportent pas ainsi dans une situation d’alarme
 “DEF-PL police officers do not behave like that in an emergency situation”

The former has a normative value, while the latter has only the force of a descriptive generalization. Greenberg also cites instances of certain African languages making such distinctions. Swahili, for instance, has a generic marker *hu*.

- (6) ng’ombe hu-la nyasi
 “Cows eat grass”

If the marking is absent, the generalization is seen to be descriptive, while the presence of the marker makes it “a generalization about the nature of the entity denoted by the subject.” Greenberg argues that English makes this distinction in terms of the indefinite singular and the bare plural subject in generic sentences.⁴ Thus, (7)a will talk about a specific property of boys because of which, “every member of the set of boys will not cry (in all contextually relevant situations).” (7)b, on the other hand, can also express a descriptive generalization that is arrived at on the basis of several instances of boys not crying in “tear-inducing situations.” However, the bare plural

³ The interested reader is referred to Krifka et al 1995 for an extensive discussion.

⁴ Greenberg, however, refines the concept of nonaccidental generalizations further into what she calls “in virtue of” and “descriptive” generalizations, which is closely parallel the distinction made by Carlson. I do not intend to go into a discussion of this aspect in this paper.

subject also lends itself to the reading under which the property of not crying can be taken to be “essential” to boys.

- (7) a. A boy doesn't cry.
b. Boys don't cry.

I will claim that these two types of generalizations are encoded in Malayalam with the help of *-unnu* and *-um*. The former captures something similar to an inductive generalization, while the latter a characterizing (nomic) property. I will argue that this difference is brought about by two types of quantificational operators. The accidental generalization is associated with an extensional operator that binds the situation variable introduced by the episodic predicate. The characterizing generalization is associated with the modal operator that quantifies over the set of accessible possible worlds. In the next section we shall look at the use of *-um* and *-unnu* in generic contexts.

3. Generic tense in Malayalam: Future and the present

In this section we shall look at the use of the present and the future tenses in Malayalam. I will bring out the differences in the meanings of these two forms.

3.1 The present tense in generic contexts

The typical tense for generic sentences in Dravidian is the future. The use of present tense for universal time reference seems to have a curious history in Malayalam. The following two quotes – one from the beginning of the last century and the other almost from the end of the century – is revealing:

In addition to Past, Future and Present, matters pertaining to all times also will have to be stated. For such statements Aryan languages use Present Tense. Dravidian language use Future Tense on such occasions. Future will be used in meanings like habit also. . . . As in Aryan languages present tense is *now* also used to denote all times. (Rajarajavarma 1917:176, emphasis added)

For universal time reference both future tense and present tense forms occur, though for some speakers only the future is possible. The influence of English is sometimes cited for the use of the present tense. (Asher and Kumari 1997:286)

What both the above quotes indicate is that the use of present tense for universal time reference is somehow seen as a new or a restricted phenomenon. While it is true that the use of present tense for universal time reference smacks of literariness, in this venture, I will show that it does not have the same meaning as the use of the putative future tense. In the following subsections I will discuss certain contexts where the two generic forms are not interchangeable.

3.2 Lexical statives

Hany Babu and Madhavan (2002) (henceforth HM) note that *-unnu* construction cannot be used in all the contexts where there is a universal time reference. They present the following contrast (b is attributed to Rajasekharan Nair 2002), but offer no explanation.

- (8) a.. *ii paatratt-il naalu littar veLLam koLL-unnu
 this vessel-loc four liter water hold-UNNU
- b. ii paatratt-il naalu littar veLLam koLL-um
 this vessel-loc four liter water hold-UM
 ‘This vessel holds four liters of water.’

If we analyse *-unnu* generic sentences as involving a generalization over episodes, we have an explanation for the non-occurrence of *-unnu* in (8)a. *koLLuka* ‘to hold’ is a lexical stative predicate, and it does not have a situation argument. There is no variable to be bound by the extensional operator, and the sentence cannot be interpreted with a generic meaning. However, the modal context introduces the set of accessible possible worlds, which gets bound by the intensional operator. The modal *-um*, thus, can give generic meaning.

3.3 Dispositional property

Sentences describing dispositional properties are cited as typical examples of characterizing sentences. This is because a dispositional property does not necessarily talk about an extensional property, but it talks about an intensional property. (9) below shows that we cannot use *-unnu* to talk about dispositional properties, while *-um* can occur in such constructions.

- (9) a. *pancasaara weLLatt-il aliy-**unnu**
sugar water-LOC dissolve-UNNU
- b. pancasaara weLLatt-il aliy-**um**
sugar water-LOC dissolve-UM
 ‘Sugar dissolves in water.’

The property of being soluble in water is an essential property of sugar. This generalization is not dependent on any particular episode of sugar having been dissolved in water.

3.4 Supporting counterfactuals

In § 2.1 above, we said that only characterizing predicates support counterfactuals. I show that only generalizations made by *-um* support counterfactuals. A generalization of the same fact made by *-unnu* does not support the counterfactual. (10)a where we have *-um* can be felicitously followed by the counterfactual statement, but not (10)b in which we have *-unnu*.

- (10) a. dakSina indiikkaar dhaaraaLam ari-bhakSaNam kazhikk-**um**.
south Indians plenty rice-food eat-UM
- awan dakSina indiikkaaranaayirunn-enkil, awan
he south Indian was-if he
- ari-bhakSaNam kazhikk-um-aayirunnu
rice-food eat-UM-AUXILIARY
- ‘South Indians eat plenty of rice. If he were a South Indian, then he would have eaten rice.’
- b. dakSina indiikkaar dhaaraaLam ari-bhakSaNam kazhikk-**unnu**.
south Indians plenty rice-food eat-UNNU
- #awan dakSSina indiikkaaranaayirunn-enkil, awan
he south Indian was-if he
- ari-bhakSaNam kazhikk-um-aayirunnu
rice-food eat-UM-AUXILIARY
- ‘South Indians eat plenty of rice. #If he were a South Indian, then he would have eaten rice’

Thus, if the counterfactual test can be taken as an illustration of characterizing property, then we can say that a generalization made by *-unnu* is not a characterizing property, while the same generalization becomes a characterizing property when made by *-um*.

3.5 The differences between *-um* and *-unnu* in generalizations

In the preceding subsections, I have shown that the generalizations made with the help of *-um* and *-unnu* differ in many ways. We shall summarize them as follows:

- A generalization made with *-um* has the force of a characterizing sentence, because it is associated with the generic operator, which, according to Greenberg (2003) is a “modalized universal operator, quantifying over all accessible possible worlds, as well as individuals and situations.”
 - *-um* can be used for generic reference in the case of lexical statives and dispositional properties.
 - Generalizations made with *-um* support counterfactuals.
- Generalizations made with *-unnu* have the flavour of an accidental generalization.
 - *-unnu* can only be used to make extensional generalizations over episodic predicates.
 - It cannot be used to make generalizations in the case of lexical statives and dispositional properties.
 - Generalizations made with *-unnu* do not support counterfactuals.

3.6 Interchangeability of *-um* and *-unnu*

A question might be raised about the interchangeability of *-um* and *-unnu* in examples like (1) above repeated below:

- (1) a. suuryan kizhakkə udikk-**um**
 sun *east* *rise-FUT*
 ‘The sun rises in the east.’
- b. suuryan kizhakkə udikk-**unnu**
 sun *east* *rise-PRES*
 ‘The sun rises in the east.’

Both the constructions can occur in the above scenario because the sun's rising lends itself to being described either as a generalization over a series of episodes of individual rising or as an essential (characterizing) property. Thus we claim that both these constructions are not in mutual variation, but that they differ in meaning.

In § 3.2 and § 3.3, we found two contexts in which *-unnu* was ruled out from generic constructions, namely in the case of lexical statives and dispositional properties. Our explanation was that *-unnu* makes a generalization over an episodic predicate, and since there is no situation argument in lexical statives and dispositional predicates, we cannot use *-unnu* to make a generalization in both these cases. Our analysis can be strengthened by pointing out the existence of contexts in which only *-unnu* can be used to make a generalization. If our analysis is correct, this should be a context which resists a characterizing interpretation. In the next subsection I show that such contexts do indeed exist.

3.7 Only accidental property

HM report an interesting instance where a generalization can only be made by *-unnu* and not by *-um*. (Again, no explanation is offered by HM.)

- (11) a. chennai-yil daivaṅṅal tiṅṅi-ppaarkk-**unnu**⁵
Chennai-LOC *gods* *dense-dwell-UNNU*
 'Gods dwell densely in Chennai.'
- b. ?chennai-yil daivaṅṅal tiṅṅi-ppaarkk-**um**
Chennai-LOC *gods* *dense-dwell-UM*
 (Okay as a prediction: 'Gods will start living in large numbers in Chennai.')

The above sentence, in its most salient reading, describes an accidental property of Chennai that it abounds in temples. And due to this reason, we cannot make this generalization with *-um*, which would have resulted in the funny situation where it becomes the essential property of Chennai that it is infested with gods.

Thus we have shown that there are indeed two types of generalizations possible in Malayalam: one that is a generalization over an episodic predicate, and the other that is a characterizing predicate. And both these seem to be grammatically

⁵ This sentence is taken from Jayamohan 2001.

distinguished in Malayalam in that the former is made by the imperfective morpheme *-unnu* and the latter by the modal *-um*. I have argued for the existence of two different types of operators corresponding to the difference in the verbal morphology. *-unnu* is associated with an extensional quantifying operator that binds the situation argument, while the modal *-um* is associated with an intensional operator that binds a variable that ranges over the set of accessible possible worlds.

3.8 An unbounded reading for *-unnu*

Asher and Kumari (1997) note that the future tense is preferred to the present tense in order to talk about the habitual actions of an individual.

- (12) a. ?usha ennum aarə-maNikkə ezhuneelkk-**unnu**
 Usha daily *six-o'clock* *get.up-PRES*
- b. usha ennum aarə-maNikkə ezhuneelkk-**um**
 Usha daily *six-o'clock* *get.up-FUT*
 ‘Usha gets up daily at six o’clock.’

(12) is odd because it gets the implausible interpretation that Usha has been getting up at six o’clock from time immemorial. The oddity can be explained as follows: *aarə-maNikkə ezhuneelkkunnu* ‘get up at six-o’clock’ is an episodic predicate and it has a situation argument, which gets an unbounded reading when quantified by the extensional operator. This is proven from the fact that the sentence becomes quite acceptable when the time span is delimited as in:

- (13) orə aazhccay-aayi usha ennum aarə-maNikkə
 one week-become *Usha daily* *six-o'clock*
 ezhuneelkk-**unnu**
 get.up-PRES
 ‘For the last one week, Usha has been getting up at six o’clock.’

Here the variable ranges over only relevant situations in the last one week, and the sentence is acceptable. Thus the intuition that *-unnu* is not normally used to talk about habitual actions of an individual can also be explained if we assume the quantificational approach to genericity in the case of *-unnu*. In the next section, we shall turn our attention to the semantics of *-um* and *-unnu* in generic constructions.

All the polarity sensitive items and the universal quantifier are related in fairly obvious ways. This is evident from the vast amount of literature on it and from the fact that many languages including English use the same morpheme to encode many of these meanings, as the English *any* for instance.⁶

In the last section, I argued that generic sentences with *-um* have a modalized universal operator as they give rise to characterizing property. The parallel is now too obvious to miss. When attached to an NP, *-um* gives the NP a quantificational reading; when attached to a verb, *-um* gives it a quantificational reading which is also intensional. Modality is best understood in terms of possible worlds. Intensionality has also been characterized in terms of possible worlds. My claim, then, is that *-um* licenses a quantificational operator. When it occurs in the modal domain, it quantifies over the set of accessible possible worlds. When it occurs in the NP domain, it quantifies over individuals.

What about the meaning of *-um* as a future marker? I will argue that *-um* has the intensional quantification force even when it is used to convey simple futurity. Consider a sentence like:

- (17) *naaLe* *mazha* *peyy-um*
 tomorrow *rain* *pour-UM*
 ‘It will rain tomorrow.’

The meaning conveyed by (17) above is something like: “All accessible possible worlds that are located in tomorrow are worlds in which there is rain.” That is to say, there seems to be a hidden universal quantificational force in sentences conveying simple future meaning with *-um*. In fact, this quantificational force should be responsible for the certainty that is associated with the modal suffix *-um* as opposed to other modal suffixes like *-aam*.

- (18) *naaLe* *mazha* *peyy-aam*
 tomorrow *rain* *pour-MOD*
 ‘It may rain tomorrow.’

⁶ It is not possible to survey the extensive literature on these topics. For a discussion of the semantics of universal quantifiers and polarity sensitive and free choice items see Dayal 2005, Giannakidou 1998, and Giannakidou and Cheng 2005, among others.

The quantification, again, seems to be quantification over possible worlds. The difference between simple future and the characterizing predicate, then, will be in terms of restricting the time span. If the time span is restricted to a particular time, we get simple futurity. Unbounded time span gives you a characterizing predicate. Recall that it is the unbounded time span which gives rise to genericity in the case of *-unnu* sentences as well as discussed in § 3.8 above.⁷

4.2 A unifying approach to the imperfective and the generic *-unnu*

HM have argued that there are two *-unnu*s in Malayalam: an *-unnu* that is the imperfective aspect morpheme, and an *-unnu* that occurs in generic constructions. The argument that is put forth is that the *-unnu* that is marked for the imperfective aspect can be followed by *uNTə* (the existential copula) and negated by *illa* (the negative existential copula), while the *-unnu* in generic construction can do neither.⁸

- (19) a. *bassə var-unnu*
 bus come-UNNU
 ‘The bus is coming.’
- b. *bassə var-unn uNTə*
 bus come-UNNU EX
 ‘The bus is coming.’
- c. *bassə var-unn illa*
 bus come-UNNU NEG.EX
 ‘The bus is not coming.’

⁷ Probal Dasgupta (pc) raises an interesting question: why does a language like Malayalam choose the same form as a quantificational element and a modal, as opposed to a language like English which does not use *all* as a modal or *will* as a quantifier. At this point, I have no answer to offer to this question, other than note that languages, as the famous saying goes, seem to differ in terms of how much semantics they were on their sleeves. The fact that universal quantification, which is logically considered to be infinite conjunction, is expressed by the conjunctive particle in Malayalam is already an indication of the transparency of semantics in Malayalam morphology. To complete the story, it may be interesting to note that existential quantification, which is logically considered to be infinite disjunction, is expressed by the disjunctive particle *-oo* in Malayalam as in *aar-oo* ‘someone.’ See Madhavan 1997 for a discussion.

⁸ The inability to negate using *illa* seems to be more a property of contemporary Malayalam. Older Malayalam seems to have allowed this as seen in the biblical sentence:

kaakkakaL-e nookkuvin awa witaykk-**unn**-illa koyy-**unn**-illa
ravens-ACC look they sow-UNNU-not reap-UNNU-not
 ‘Consider the ravens: they don’t sow, they don’t reap.’ (Luke 12:24)

Note that the generalization made here is purely descriptive as we predict, and not nomic.

- (20) a. suuryan kizhakkə udikk-unnu
sun east rise-UNNU
 ‘The sun rises in the east.’
- b. *suuryan kizhakkə udikk-unn uNTə
sun east rise-UNNU EX
Intended reading: ‘The sun rises in the east.’ (*Ok as:* ‘The sun is rising in the east.’)
- c. *suuryan paTiññaarə udikk-unn illa
sun west rise-UNNU NEG.EX
Intended reading: ‘The sun does not rise in the west.’

The interpretation of the (19) and (20) clearly shows the contrast between the progressive and the simple present tense reading. When the *-unnu* that can be followed by *-uNTə* gets the progressive interpretation, while the other one gets the simple present reading. (Note that this reading is obtained even when the auxiliary *uNTə* is not overt as in (19)a.) Our current task is to account for these two readings of *-unnu*. Are they two different uses of *-unnu*, or can we think of a common analysis for these two meanings? In fact, Amritavalli and Jayaseelan (2002) (henceforth AJ) have argued that *-unnu* is the imperfective morpheme. According to their analysis, there is no tense (either as a morphological or as a syntactic category) in Malayalam and Kannada. I shall turn to the question of tense in Malayalam in § 5 below. In the next section I shall offer an analysis that unifies the semantics of *-unnu* in the imperfective and the generic construction.

4.3 A uniform semantics for constructions involving *-unnu*

In our analysis in § 3 above, we said that *-unnu* derives its generic reading by the collusion of two factors: (i) the presence of a situation argument (ii) by the presence of a quantificational operator (which is extensional). In fact, predicates which have a situation argument are prototypically episodic in nature.⁹ As argued by Krifka et al (1995), the predicate gets an episodic interpretation when the situation argument is bound by existential closure. In (19)b above, we found that a sentence like *bassə varunn-uNTə* ‘the bus is coming’ can only get an episodic reading. This should mean

⁹ See the discussion in § 2 above and references therein.

that the situation argument is getting bound an existential operator in this case. If we consider the fact that *uNTə* is the existential copula in Malayalam, we have an explanation for the episodic reading of (19)b. In Hany Babu 2006, I have argued that the existential copula is associated with an existential operator. So what we can say is that in the imperfective construction, the existential operator binds the situation argument and gives rise to episodic reading. Thus we have a common analysis for constructions involving *-unnu*. Morphologically *-unnu* might be an imperfective morpheme. But its semantics in contemporary Malayalam is that it gives rise to an episodic predicate with a situation argument. If it is bound by a generic operator, it gives rise to a generic sentence. If it is bound by the existential operator, it gives rise to an episodic sentence. However, we should bear in mind that the generic operator that occurs with *-unnu* is purely extensional in nature and is different from the intensional operator GEN.¹⁰

Since we get the imperfective interpretation even when *uNTə* is not overt (as in (19)a *bassə varunnu* ‘the bus is coming’), we can posit a null morpheme corresponding to *uNTə* in the imperfective constructions.

Thus, we see that our analysis is able to reduce the two different uses of *-unnu* to the difference in the operator. We have a unified analysis of *-unnu* in the sense that it licences a situation argument for the predicate. We have also been able to provide a unified semantic analysis for the occurrence of *-um* in future tense and in generic sentences. However, I do not refute the existence of tense as a grammatical category in Malayalam. I turn to this in the next section.

5. Tense in Malayalam

AJ claim that there is no Tense (or TP) in Malayalam and Kannada. They argue that all the putative tense markers are aspect markers. It is indeed true that the borderline between tense and aspect marker is not finely defined in Malayalam, or, for that matter, in most languages. However, as argued by HM, denying the existence of Tense as a syntactic category cannot be settled just by taking into consideration the

¹⁰ In fact, one can go further and say that the difference between the two kinds of genericity lies not in the operator, but in the kind of variable that the operator binds. In the modal context, the operator binds a variable that ranges over the set of accessible possible worlds, and in the nonmodal context, it binds a variable that ranges over episodes that are extensionally located. This possibility can only be explored if we go into a formal analysis. I leave this aside for future work.

morphological manifestation of tense and aspect. In this paper, I will reiterate the view of HM by summarizing and adding to their arguments.

If we take the view that aspect concerns with the internal temporal constituency of the event, while tense concerns with external factors like event time and speech time as argued by Comrie 1976 and 1985 and a host of other authors, it would not make any sense to argue that there is no tense in a sentence like (21) below, since there is after all a deictic time reference, which is taken to be the hallmark property of tense.

- (21) awan wannu
 he came
 ‘He came.’

Another point that I would like to make is based on the history of grammaticalization processes in languages. It is well attested that tense markers have evolved from aspect markers. Dahl 1995, quoting work by Bybee and Dahl (1989), states that the most frequent paths of grammaticalization as:

- a. Perfects develop into pasts or perfectives
- b. Futures develop out of so-called prospective or constructions expressing intention, volition, or obligation
- c. (Present) progressives develop into presents or imperfectives

Malayalam seems to follow this well-beaten track. Modifying the analysis of AJ, we can say that the past tense form has evolved out of the perfective. If the analysis in Hany Babu 1996 is on the correct track, the future has evolved out of a modal marker. The progressive *-unnu*, then, can be claimed to have developed into the present and the imperfective. As we have seen, it is this form that is used in the generic constructions as well.¹¹

¹¹ Dahl (1995) also cites the case of Hindi where *bolta hai* (‘(he) speaks’), which was once used in progressive constructions, has come to be used in present tense. Another form *bol raha hai* is now used in the progressive.

One can also speculate the perfect forms like the one with *iTTuNTə* (as in *vann-iTTuNTə* ‘has come’) may have developed at a later stage in the development of Malayalam.

5.1 Tense without finiteness, finiteness without tense: Two problems for AJ

AJ are troubled by two factors: (i) Certain finite clauses in Kannada (and in Malayalam) have no tense morphology, but show finiteness – that is to say, there are finite clauses that have no tense morphology. (ii) The tensed form of the verb occurs in certain non-finite constructions like the gerund – that is to say, there are non-finite constructions with tense morphology.¹² The following data exemplify these two instances:¹³ (22) is finite, but there is no tense morpheme, while (23), which is non-finite has a tense morpheme.

(22) *avanu bar-al(u) illa*
he come-INF NEG
 ‘He did not come.’

(23) [*avan var-unn-at*]-ine *patti ñaṅṅaL samsaari-ccu*
he come-NONPAST-NOM-ACC about we talked-PAST
 ‘We talked about his coming.’

The best one can say from the facts from Dravidian is that they actually support the widely held notion that tense and finiteness are indeed two different animals. George and Kornfilt (1981) have argued for the existence of tense in Turkish nominal clauses. Thus (24)a has a finite embedded clause and (24)b a non-finite embedded (nominal) clause. But both of them are marked for past tense. In fact, it is the absence of agreement morpheme that will distinguish the non-finite construction from the finite.

(24) a. *Ahmet [biz viski-yi iç-ti-k] san-ıyor*
Ahmet we whiskey-ACC drink-PAST-1PL believe-PRES
 ‘Ahmet believes (that) we drank the whiskey.’

b. *Ahmet [biz-i viski-yi iç-ti] san-ıyor*
Ahmet we-ACC whiskey-ACC drink-PAST believe-PRES
 ‘Ahmet believes us to have drunk the whiskey.’

¹² AJ say that analyzing *-unnu* as tense marker leads to the “embarrassment of tense inside gerunds.” HM counter this by saying that “no tense within non-finite clauses” need not be taken as a “gospel truth.”

¹³ (22) and (23) are adapted from AJ. (22) is Kannada and = AJ’s 3b and (23) is Malayalam and = AJ’s 34a.

In fact, it has been traditionally established that it is agreement that marks finiteness in Dravidian languages like Tamil, Kannada, and Telugu. Thus a finite and non-finite construction contrasts by virtue of the presence or absence of agreement. *band-arū* ‘came’ in (25)a is finite and it has agreement morphology. *band-udu* in (25)b is the nominal form and is non-finite, but is marked for past:¹⁴

- (25) a. *awaru band-arū*
 they came-AGR
 ‘They came.’
- b. [*awaru band-udu*] *namag-ella: santo:Sa*
 they came-NOM we.DAT-ALL happy
 ‘We are all happy that they came.’

Thus we see that it is the presence or absence of agreement morphology and not tense that is crucial for determining finiteness in Dravidian just as in Turkish. However, the question whether Dravidian has a TP needs to be considered more seriously. To the best of my knowledge, there is no empirical argument provided by any author for the existence or non-existence of functional categories like TP in Dravidian. Most authors have just assumed their existence. However, Mathew (2005) argues that there is no evidence for a TP in Malayalam. This might be a plausible analysis of the Dravidian clause structure. However, I leave this aside for further research.

5.2 –*unnu* and deictic time reference

In this section, I will show that the imperfective –*unnu* does indeed have deictic time reference in certain non-finite constructions. Consider the following contrast noted by Madhavan (2001):¹⁵

- (26) a. *jooN ezhut-i-yatə kavita aaNə/aayirunnu*
 John write-PAST-NOM poem be.PRES/PAST
 ‘It is a poem that John wrote.’

¹⁴ (25) is adapted from Tirumalesh 2000 with some modifications. The question whether *band* encodes tense or aspect is not crucial here. The point is that *band* + AGR is finite, without AGR *band* is non-finite.

¹⁵ (26)a and b are adapted from Madhavan 2001. (26)a = Madhavan’s 15 and b = 16. Madhavan provides the same translation for a and b. I, however, feel that there is a slight difference in the meaning.

- b. jooN ezut-unn-atə kavita aaNə / *aayirunnu
 *John write-UNN-NOM poem BE.PRES / *BE.PAST*
 ‘What John is writing is a poem / *was a poem.’

The point Madhavan makes is that while the present tense *aaNə* and the past tense *aayirunnu* are compatible with the past (or perfective) *ezuti* as in (26)a, only the present tense (realized as *aaNə*) can occur with the progressive *ezutunn-* in (26)b. Madhavan attributes this to the incompatibility of past tense with the progressive. The question that is left unaddressed in Madhavan’s analysis is why there should be such a restriction between cooccurrence of the past tense and the progressive aspect.

In fact, it would be strange if there is a restriction on progressive aspect and past tense occurring together in a sentence. It makes more sense to say that the past tense *aayirunnu* cannot occur (26)b because of a clash in tense – the past tense and the present tense. That is to say, *aayirunnu* on the matrix clause situates the time of the event in the past.¹⁶ And the event described by the verb in the cleft clause cannot relate to the present (speech) time. The contrast in pairs like the following bear testimony to this clash of tenses:

- (27) a. It was a poem that John was writing.
 b. *It was a poem that John is writing.

The Malayalam examples in (26) above show nothing other than this kind of contrast. This can be taken to be a clinching piece of evidence to show that the cleft clause is indeed marked for tense and not for aspect. However, I maintain the claim that the cleft clause is non-finite. That is to say, it has tense, but is not finite.

6. Conclusion

In this paper, I have shown that different types of genericity arise in Malayalam due to the collusion between the semantic properties of the generic operators and the variables they bind. A characterizing sentence has a modalized universal operator. The Malayalam modal marker *-um* signals the presence of such an operator. The modal operator binds a variable that ranges over the set of accessible possible worlds. If the time span of the possible world is unbounded, we get a characterizing predicate.

¹⁶ Madhavan (2001) analyzes the cleft sentences as monoclausal (contra Madhavan 1987). If the cleft clause has tense as I claim this analysis becomes circumspect. However, I do not intend to go into those aspects in this paper.

If the time span is restricted to some particular time, we get a sentence with a simple future meaning. I have argued that there is a close link between the *-um* that occurs in the generic sentences and the *-um* that occurs in universal quantifiers and polarity sensitive items.

The other kind of generic sentence is the one that makes a generalization over a series of episodes. This is made possible when a generic operator binds a situation argument introduced by the imperfective *-unnu*. When the situation argument is bound by an existential operator, we get an episodic (imperfective) reading.

Both types of genericity, thus, involve quantification: in one the operator quantifies over a variable that ranges over a set of accessible possible worlds, in the other, the operator quantifies over situations in time. This paper can only be considered as a preliminary enquiry into the complexities of the semantic and syntactic properties of these constructions. A much thorough and rigorous investigation is needed in order to unravel the deeper properties behind these constructions.

References

- Amritavalli, R. and K.A. Jayaseelan. 2002. Finiteness and negation in Dravidian. *CIEFL Occasional Papers in Linguistics* 10. (Later published in Guglielmo Cinque and Richard Kayne eds. 2005. *The Oxford handbook of comparative syntax*. New York: Oxford University Press.)
- Asher R.E. and T.C. Kumari. 1997. *Malayalam*. London: Routledge.
- Carlier, Anne. 1989. Généricité du syntagme nominal sujet et modalités. *Travaux de Linguistique* 19:33-56.
- Carlson, Gregory N. 1980. *Reference to kinds in English*. New York: Garland.
- Carlson, Gregory N. 1995. Truth conditions of generic sentences: Two contrasting views. In Carlson and Pelletier eds.
- Carlson, Gregory N. and Francis J. Pelletier eds. 1995. *The generic book*. Chicago: Chicago University Press.
- Comrie, Bernard. 1976. *Aspect: An introduction to the study of verbal aspect and related problems*. Cambridge: Cambridge University Press.

- Comrie, Bernard. 1985. *Tense*. Cambridge: Cambridge University Press.
- Dahl, Östen. 1975. On generics. In Ed Keenan ed. *Formal semantics of natural language*. Cambridge: Cambridge University Press.
- Dahl, Östen. 1995. The episodic/generic distinction in tense-aspect systems. In Carlson and Pelletier eds.
- Dayal, Veneeta. 2005. The universal force of free choice *any*. In Pierre Pica ed., *The linguistic variation yearbook 4*. Amsterdam: John Benjamins.
- George, Leland and Jaklin Kornfilt. 1981. Finiteness and boundedness in Turkish. In Frank Heny ed. *Binding and filtering*. London: Croom Helm.
- Giannakidou, Anastasia. 1998. *Polarity sensitivity as (non)veridical dependency*. Amsterdam: John Benjamins.
- Giannakidou, Anastasia and Lisa Cheng. 2005. (In)Definiteness, polarity, and the role of wh-morphology in free choice. To appear in *Journal of Semantics*.
- Greenberg, Yael. 2003. *Manifestations of genericity*. New York: Routledge.
- Hany Babu, M.T. 1996. The binarity of Malayalam tense system: Some preliminary remarks. *PILC Journal of Dravidic Studies*. 6:1-10.
- Hany Babu, M.T. 2006. The two copulas of Malayalam revisited. *Proceedings of the First National Symposium on Modeling and Shallow Parsing of Indian Languages* April 2-4, 2006, Department of Computer Science and Engineering, Indian Institute of Technology, Bombay.
- Hany Babu, M.T. and P. Madhavan 2002. The two lives of –*unnu*: A response to Amritavalli and Jayaseelan. *CIEFL Occasional Papers in Linguistics* 10.
- Jayamohan. 2001. *NeTumpaataayooram*. Thrissur: Current Books.
- Jayaseelan, K.A. 2001. Questions and question-word-incorporating quantifiers in Malayalam. *Syntax* 4:263-293.
- John, Athialy P. 1987. *The semantics of modality: A study based on Malayalam and English*. Thiruvananthapuram: Dravidian Linguistics Association.
- König, Ekkehard. 1991. *The meaning of focus particles: A comparative perspective*. London: Routledge.

Krifka, Manfred, Francis Jeffrey Pelletier, Gregory N. Carlson, Alice ter Meulen, Gennaro Chierchia, and Godehard Link. 1995. Genericity: An introduction. In Gregory N. Carlson and Jeffrey Pelletier eds.

Madhavan, P. 1987. Clefts and pseudoclefts in English and Malayalam. Doctoral dissertation, CIEFL, Hyderabad.

Madhavan, P. 1997. How do languages make up their quantifier phrases: A crosslinguistic investigation. In Hariprasad et al eds. *Phases and interfaces of morphology*, Hyderabad: CIEFL.

Madhavan, P. 2001. The cleft question and the question of clefts. Manuscript, CIEFL, Hyderabad.

Mathew, Rosmin. 2005. SIMPLY Malayalam participials. Paper presented at CONSOLE XIV, December 2005, University of the Basque Country, Spain.

Rajarajavarma, A.R. 1917. *Keralapaniniyam: A treatise on Malayalam grammar*. Translated by C.J. Roy. (1999). Trivandrum: International School of Dravidian Linguistics.

Rajasekharan Nair. 2002. Temporal notions in Malayalam and Tamil. Talk at the *Architecture of Grammar* held at CIEFL, Hyderabad.

Tirumalesh, K.V. 2000. *The landscape of language: issues in Kannada linguistics*. New Delhi: Allied.