A GENERATIVE TYPOLOGY OF DRAVIDIAN ADJECTIVES

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CERTIFICATE

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DECLARATION

This thesis titled "A Generative Typology of Dravidian Adjectives" submitted by me for the award of the degree of Doctor of Philosophy, is an original work and has not been submitted so far in part or in full for any other degree or diploma of any University or Institution.

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Abbreviations

PRES	present tense
PST	past tense
HAB	habitual aspect
PROG	progressive aspect
PRF	perfective aspect
DAT	dative case
ACC	accusative case
GEN	genitive case
LOC	locative case
REL	relativiser
MASC/ M	masculine
FEM / F	feminine
NEUT / N	neuter
NM	non masculine (In the Gondi examples)
S	singular
P	plural
ADV	adverb
CONJ	conjunction
AGR / agr	agreement
MNR	manner
COP	copula

NEG	negation
ConjPrtpl	conjunctive participle
N	noun
V	verb

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I

INTRODUCTION

Generative grammar has as its aims, the task of observing the vast variety found in natural language (*observational adequacy*), describing that data adequately and as completely as possible (*descriptive adequacy*), and explaining the occurence and non-occurence of such data in its environment (*explanatory adequacy*). Whereas observational and descriptive adequacy require any theory of language to have enough resources to capture the diversity attested in all human languages, explanatory adequacy requires such a theory to restrict the mechanisms available to generate this diversity.

This has been the focus of generative grammar from its inception. However, now with so much of work having been done, so many languages described and their syntax explained, generative grammar has grown (to simply borrow a phrase of Chomsky's, but without any of its theoretical implications) "beyond explanatory adequacy." By this, what we would like to refer to is the recent shift of attention from 'explaining away' variation to 'explaining' variation.

Much work has recently been done trying to address linguistic variation. In fact, Variation studies has become sort of a separate module or branch of theoretical linguistics. Variation studies expand the primary questions that we seek to answer to the following:

(1) What are the universal properties of natural human languages i.e., properties that are "inherent to the human species"?

(2) What are the properties that vary between languages?

(3) Which aspects of this variation are systematic and which are idiosyncratic?

(4) What do the answers to the above tell us about the nature of the human mind?

- adapted from Baker (2010)

There have been quite a few different approaches towards this end. In general, variation studies have come to be comprised of Macrovariation, Microvariation and Diachronic variation studies:

> Linguistic variation has been investigated at different levels. One can look at samples of unrelated languages (macro variation/typology) and try to find differences and commonalities. Another option is to look at languages that are very closely related, like dialects or languages within one language family (micro variation/dialectology), or languages that are related to each other through time (i.e. different stages of one language/diachronic research). Obviously, for a complete understanding of the design of linguistic diversity in human language, comparative research is needed on all three levels.
>
> - Barbiers (2013) Concept note for Workshop on The Universality of Linguistic Micro and Macro Variation, Lipsius 148.

1.1 The Parametric Approaches to the Study of Variation

Most of the work done under the parametric approach to variation come under microvariation studies. This approach, popularly known as the Comparative Syntax enterprise, typically looks at a bunch of closely related languages, and tries to pin the locus of variation down to micro parameters.

According to this approach (pioneered by Richard Kayne), the apparently large variation found among languages can actually be traced as the result of the interaction between many micro level parameters. These microparameters can be isolated by studying very closely related (therefore minimally varying) languages and the minor differences between them. Once they are identified, any bigger differences between languages can be explained in terms of the complex interactions between the settings of these microparameters.

On the other hand, the macroparametric approach looks at variation in a top-down fashion. According to the proponents of this approach (Mark Baker being prominent among them), UG itself allows a heirarchy of parameter settings (cf. Baker 2008), which divides languages into predictable groups of probable languages (in the sense of Newmeyer 2005). The interaction of the 'higher order' parameters show up in the form of quantitatively and qualitatively predictable linguistic phenomena in languages regardless of their geographical or historical proximity/relatedness. These parameters can thus be discovered by large typological studies comparing historically and geographically unrelated languages.

1.2 From Variation to the Phylogenetics of Languages

Longobardi (2006) describes how grammatical variation is "exhaustively given" by the parameters in UG: thus the possibilities for such variation are actually finite. This view of parameters also leads to a conflict like the one associated with the objectives of generative grammatical theorization that was mentioned at the beginning: the more the number of parameters, the more the number of languages prohibited. However, decreasing the number of parameters is also incapable of explaining variation

insomuch as (in Longobardi's own words) it increases rather than decreases invariance in the options allowed by UG.

Longobardi and Guardiano (2009) propose that the parametric study of languages are more reliable in calculating genealogical distances between languages than the classical historical linguistics' methodology of comparing cognates by looking at sound change etc, or the more recent lexical comparative methods.

Thus comparable to the shift in Biology of reliance on theoretical predictions from empirical observations in order to deduce the genealogical connections between species, theoretical syntactic investigation is the more reliable tool for such insights in the quest for genealogical connections in linguistics too.

1.3 Capturing the diversity in the domain of adjectives

It is in this context that we look at the domain of adjectives (but restricting ourselves to Dravidian). The domain of adjectives has been controversial in linguistics both in functional as well as formal grammar. Starting from the question of it being a separate (primitive) lexical category, there have been conflicting claims about Adjectives and continues to the present day. It has been a domain that Generative grammarians have also conferred quite a lot of attention on over the past years.

The category adjective was initially considered to be one of the primitive lexical categories, expected to be universally available in all languages. For instance, within functional typology, Dixon and Aikhenvald (2004) concludes that adjectives are a crosslinguistically universal category. Similarly within

the formal Generative grammar, Baker (2003) gave compelling arguments for considering the adjective as a primitive lexical category.

However, there has not been a consensus on the question and the enquiry continues. Therefore the next set of questions about adjectives that linguistic theory has concerned itself with is regarding its distribution: including where they merge, how they merge, whether they project, why and how they stack etc. This has also had ramifications for the major frameworks used for theoretical explanation and description, like Antisymmetry, Minimalism, Distributive Morphology, etc.

Some of these questions are what will inform and frame our inquiry into the domain of adjectives in the Dravidian family of languages.

1.4 The Cartographic Approach to the Syntax of Adjectives

We will start by looking in detail at the Cartographic approach to the syntax of adjectives.

The cartographic approach rose to prominence after Kayne's (1994) formulation of the theory of Antisymmetry of Syntax. The main thesis of this was that linear order of terminals in language was not determined by an external (ie language particular) "rule" or parameter, but built into the system and falls out from the relation between the heirarchy of non-terminals and the terminals (which are necessarily linearly ordered). As a consequence of c-command being asymmetric, phrase structure is totally linearly ordered and therefore the linear ordering of the terminals is no more a fact that needs to be fit into the theory.

This also has the consequence of the syntax generating a single ordering of specifiers preceding heads preceding complements. Another fallout of the

theory is that adjuncts get analyzed as specifiers in this theory. Languages with other word orders than SVO use Specifier positions of functional heads to move up and derive the surface word order.

This theory became the basis for the rise of a whole new enterprise of crosslinguistic comparative work. Among others, Cinque (1996) showed that it can best explain one of the typological universals on word order in the domain of adjectives, first mentioned by Greenberg (1963) and which came to be known as the U20.

1.5 Cinque and the U20

Greenberg (1963) compared thirty languages[1] and came up with what are called typological universals: properties cross-linguistically common to all languages. He formulated absolute as well as implicational (conditional) universals, among which the U(niversal) 20, on the order of Demonstratives, Numerals, Adjectives and Nouns in the NP/DP, is arguably the most discussed one. The U20 in Greenberg's original formulation reads as follows:

> When any or all of the items (demonstrative, numeral and descriptive adjective) precede the noun, they are always found in that order. If they follow, the order is either the same or its exact opposite (Greenberg 1963: 87)

This was later revised by others, important among them being Hawkins (1983). This study was based on data from 150 languages, a much larger sample than Greenberg's (1963). Cinque (2005) quotes Hawkins' (1983) revised formulation of U20 as concluding that only the first part of the original U20 actually holds true. The second part is to be abandoned, because "for the postnominal order of demonstrative, numeral, and adjective essentially every combination is possible." (cf. Cinque 2005: 316)

1 Selected according to accessibility but with "as wide a genetic and areal coverage as possible" (Greenberg 1963) at that time

Cinque (1996, 2000, 2005) tries to explain the U20 in terms of the cartographic approach of comparative syntax, based on the Antisymmetric system first introduced by (Kayne 1994). Cinque's main thesis is that there is a fixed universal merge order for the elements in the DP, viz., Dem> Num> Adj> N. As the derivation progresses, the N(P) moves around each modifier in a simple or roll-up fashion, with or without pied-piping. Thus the theory claims to be able to derive all the permissible orders found in the world's languages from this fixed initial order, and to rule out the unattested orders as being impossible to be derived from this fixed initial order.

1.5.1 Cinque (1996)

In his 1996 review of Kayne's (1994) *Antisymmetry of Syntax* (henceforth AS), Cinque points out some areas of syntax where the AS system can throw more light: one of which is the right-left asymmetry in the domain of nominal modification, formulated in the form of Greenberg's U20 mentioned above. He goes on to show how this asymmetry can be captured by an antisymmetry-based Comparative syntax account: the base generated order of the modifiers in the NP is as shown in (1), and the other orders attested crosslinguistically can be generated if either:

(i) N raises to each of the functional heads X, Y, W or Z as shown in (1) (for prepositional languages), or

(ii) by roll-up movement of NP to each of the intermediate spec positions in functional (possibly Agreement) projections (here JP, GP and HP) that are complements to the functional heads X, Y, W or Z, as shown in (2) (for postpositional languages):

(1) $[_{XP}$ ...$[_{XP}$ X $[_{YP}$ Dem $[_{YP}$ Y $[_{WP}$ Num $[_{WP}$ W $[_{ZP}$ Adj $[_{ZP}$ Z $[_{NP}$ N]]]]]]]]]

(2) $[_{XP}$ ...$[_{XP}$ X $[_{JP}$ $[_{GP}$ $[_{HP}$ $[_{NP}$ N] $[_{HP}$ H $[_{ZP}$ Adj $[_{ZP}$ Z t_{NP}]]]]$[_{GP}$ G $[_{WP}$ Num $[_{WP}$ W t_{HP}]]]]]$[_{JP}$ J $[_{YP}$ Dem $[_{YP}$ Y t_{GP}]]]]]]

Evidence for this is attested empirically in the form of languages allowing the orders[2] formed by the intermediate steps of the derivations shown in (1) and (2). The NP raising (as opposed to N raising) account for postpositional languages is also evidenced by the fact that in these languages the Genitive in Spec NP[3] precedes the N[4], unlike in prepositional languages (except in Chinese). Also, no XP complements of the functional heads X, Y, Z or W move leftward: they would generate the impossible structures Dem Adj N Num and Num Adj N Dem (cf. his eg. 17). Thus he shows that the cartographic account based on antisymmetry can explain the existence of the attested orders in the world's languages and also correctly predict the impossibility of the unattested orders.

1.5.2 Cinque (2005)

Cinque (2005) builds on the cartographic account for the order of Demonstratives, Numerals and Adjectives proposed in Cinque (1996) that there is a single universal order of Merge, Dem> Num> Adj> N, from which all the attested orders can be derived by the very limited options of movement allowed by syntax, and none of the unattested orders can be derived. He revises his earlier claim about N vs. NP movement and claims that the two postnominal orders can be derived from the common base order in (3) by two

2 The orders considered are neutral orders, without any informational structure or other phenomena to motivate the movements. Cf. also Greenberg (1963) on dominant order.

3 Current work on the DP shows that the possessor is not in Spec Dp as was earlier thought: it is an independent head with its own PossP projection, dominating the DP.

4 As shown by Hawkins (1983: 66) apud Cinque (1996: 456).

different types of successive cyclic movement of the NP: either Spec to Spec movement of the NP alone (4a) or roll up movement as in (4b):

(3) $[_{AgrwP}\ Agr_W\ [_{WP}\ DemP\ W\ [_{AgrxP}\ Agr_X\ [_{XP}\ NumP\ X\ [_{AgryP}\ Agr_Y\ [_{YP}\ AP\ Y\ NP]]]]]]$

(4a) $[_{AgrwP}\ NP\ Agr_W\ [_{WP}\ DemP\ W\ [_{AgrxP}\ t_{NP}\ Agr_X\ [_{XP}\ NumP\ X\ [_{AgryP}\ t_{NP}\ Agr_Y\ [_{YP}\ AP\ Y\ t_{NP}]]]]]]$

(4b) $[_{AgrwP}\ [_{AgrxP}\ [_{AgryP}\ NP\ Agr_Y\ [_{YP}\ AP\ Y\ t_{NP}]]\ Agr_X\ [_{XP}\ NumP\ X\ t_{AgryP}]]\ Agr_W\ [_{WP}\ DemP\ W\ t_{AgrxP}]]$

That is, in the new version, Dem, Num and Adj are not heads but phrases (a trivial difference according to Cinque), and instead of N raising now we have NP raising.[5] Also the functional projections dominating the DemP, NumP and AdjP are Agr(eement)Ps, supported by evidence from Schlonsky (2004). Through this new formulation he claims to be able to sort of mathematically derive (all) attested and possible orders, and predict the ungrammaticality of the unattested orders. He summarizes the basic assumptions of his proposal as follows (his (7), cf. Cinque 2005: 321):

(5) (a) Universal Merge order: [... [WP Dem... [XP Num... [YP A[NP N]]]]]

(b) Parameters of movement:[6]

5 Cinque (1996: 457) fn 21: "Dem > Num > N > Adj is attested (in Romance), but as a function of the movement of the N alone, not of NP, as shown by the impossibility of Dem > Num > [Gen N] > Adj." On the other hand, in Cinque (2005) he argues it is NP movement and not N movement (p. 317, fn 6): "... In Cinque (1996, 2000), to derive the order N Dem Num A, I actually posited N-movement, though the same order could be derived by moving the NP from spec to spec (without pied piping). Here, because of such redundancy, and, more crucially, because N-movement will prove unable to exclude the unattested orders, only phrasal movement (of NP—or of a larger XP including NP) will be assumed to be available." There is no more mention of the unavailability of [Gen N] raising. Also see note 1 above.

6 Cinque (1996: 457) fn 21: "Dem > Num > N > Adj is attested (in Romance), but as a function of the movement of the N alone, not of NP, as shown by the impossibility of Dem > Num > [Gen N] > Adj." On the other hand, in Cinque (2005) he argues it is NP movement and not N movement (p. 317, fn 6): "... In Cinque (1996, 2000), to derive the order N Dem Num A, I actually posited N-movement, though the same order could be derived by moving the NP from spec to spec (without pied piping). Here, because of such redundancy, and, more crucially, because N-movement will prove unable to exclude the unattested orders, only phrasal movement

i. No movement, or

ii. Movement of [NP [XP]] (pied piping, *whose picture* type), or

iii. Movement of NP without pied piping, or

iv. Movement of [XP [NP]] (pied piping, *picture of who* type)

v. Total vs. Partial movement of NP with or without pied piping

vi. Neither head movement nor movement of a phrase not containing the (overt) NP is possible (except for focus)

These provide the descriptive mechanism to capture the observed phenomena. Possible explanations given are as follows.

Motivation for movement of NP is speculated to be "the presumable need for the various phrases that make up the "extended" projection of the NP (in Grimshaw's (1991) sense) to be licensed. Suppose that each phrase... needs to be endowed with a nominal feature to be licensed...,and that this can be brought about by merging above it an Agr(eement) head whose Spec ultimately comes to have such a nominal feature, either by movement of NP, or by Merge of such a feature, which enters in an agreement relation with the NP" in situ (Chomsky's (2000) Agree). Some languages employ the first method, some others the second and yet others, both. The result will be that some will have movement of NP all the way to the top, some will have no movement at all and others will have partial movement. However, why pied piping is needed is not clear. This, Cinque points out, might be explained by a general condition on movement/attraction proposed by Kayne (2005), according to which "what moves to the Spec of a functional head H is the category closest to H that is not the complement of H (nor, [Cinque adds:]... the Spec of the complement of H.)" Cinque proposes a definition of "closest to

(of NP—or of a larger XP including NP) will be assumed to be available." There is no more mention of the unavailability of [Gen N] raising. Also see note 1 above.

H" apparently crucial to this discussion (cf. Cinque's (9)): "The category closest to H is the category c-commanded by H that is dominated by the fewest number of nodes (where "node" includes every node, whether "category" or "segment," in Kayne's (1994) sense.)" This would make Agr_XP as the closest candidate to Agr_WP in (3), to derive (4b). However the non-pied piping case (4a) would need the NP to be the closest candidate to the head attracting it, viz the Agr projection above them. For this case the definition of "closest to H" would need to be limited to "category" only, and not "node". The general condition on movement will also ensure that head movement or remnant movement (without the NP) are prevented.

1.5.3 Syntax of adjectives

Cinque (2010) deals with the syntax of adjectives. Specifically he shows the difference in meaning/interpretation of adjectives in prenominal and postnominal positions in Romance and Germanic languages, and attributes such differences to the difference in the sources of these adjectives. While indirect modification adjectives are derived from reduced relative clauses, direct modification APs are generated as APs. The reduced relative clause/indirect modification APs are generated prenominally, specifically in the Spec of functional heads above the direct modification APs. The direct modification APs are generated closest to the NP.

The differences in interpretation are then explained as follows. In Germanic, this order of adjectives remains unchanged, unless "the indirect modification AP is "heavy" (with complements, adjuncts etc.)" and has to "raise to Spec Foc followed by remnant movement of [FP2 direct modification APs NP]". On the other hand, in Romance, [FP2 direct modification APs NP] raises around

indirect modification APs like it would around a (reduced) relative clause merged prenominally:

English (Germanic):

AP from reduced RC > "direct modification" AP > N > AP from reduced RC

Italian (Romance):

"direct modification" AP > N > "direct modification" AP > AP from reduced RC

The indirect modification (IM) adjectives are characteristically stage-level predicates (or optionally individual level), restrictive, implicit relative clause, intersective, relative (to a comparison class), have a comparative reading with superlatives, epistemic "unknown", discourse anaphoric, specificity or non-specificity inducing, 'different' deictic, having a literal interpretation, further away from N, not rigidly ordered and allowed in predicate position, whereas the direct modification (DM) adjectives are characteristically individual level, non restrictive, modal, nonintersective, absolute, absolute with superlatives, evaluative "unknown", plural NP dependent, specificity inducing, 'different' generic, having a possible idiomatic interpretation, closer to N, rigidly ordered and not allowed in predicate position. Some adjectives can enter either DM or IM regions.

1.6 Another Cartography of Adjectives: Longobardi (2001)

Longobardi (2001) deals with the structure of the DP. He draws a parallel between DP structure and clausal structure, and uses cross-linguistic data to find out the parametrized positions available in the DP structure for various elements. Some of the generalizations/claims that emerge from his study are as follows:

The arguments of the head noun in an NP are the external arguments P(ossessor), S(ubject) and the internal argument O(bject).There is a hierarchy among these arguments too, P>S>O, structurally represented as [P [S [O... N...]]]. Next, by looking at Genitive Case positions available for the arguments, he also comes up with the following possible structure (in principle, which languages may parametrize for) (his (10)):

(6) [**1** GenS **2** AP **3** GenO [$_{\alpha}$ P [S [O ...N...]]]]

"where 1, 2 and 3 stand for crosslinguistically possible surface positions for the noun, GenS and GenO are the high and low positions for the possessivized Genitive, and AP a potentially iterative position for attributive adjectives." P, S and O will be hypothetically the positions for the prepositional genitive(s), with linear order undetermined inside the phrase α but strict outside.

His conclusions with regard to the AP can be summarized as the following:

(7) 1. Adjectives occupy universally fixed positions in nominal structure and the positions available to N to raise parametrically differ.

2. Attributive adjectives always occur between GenS and GenO.

3. More detailed structure of the NP (his (50)):

[**1** GenS **2** [S(ubj/speaker)-oriented Adj [Manner$_1$ (appositive) Adj N [$_{w}$ Manner$_2$ (Restrictive) Adj [Argument Adj **3** GenO [$_{?e1}$ P[S[O ...N...]]]]]]]]

where W is "the potentially universal domain of restrictiveness" and the rest as defined earlier.

Now moving on to the whole DP, the five closed categories that are taken under the broad category of Determiner are: Demonstratives, Possessives, Quantifiers, Articles and Cardinal numerals. The definite article appears to occupy a position higher than any of the other categories that come under the broad umbrella of Determiners. The position of numerals and quantifiers

appears to be below that of the definite article (D) and the genitive subject (GenS), but above AP.

The structure of DP suggested by available cross-linguistic evidence on N-movement is as follows:

(8) [D [GenS [Num[H_1 [S-or [M_1 H_2 [M_2 H_3 [Arg H_4 [GenO [$_{?e1}$ P [S [O... N...]]]]]]]]]]]]

where H_{1-4} are the parametrized positions available for N to raise[7].

This means in languages where the N manages to raise out of ?e1, it has the positions H_{1-4} between the different types of adjectives to which it may raise. Demonstratives and Numerals[8] apparently occupy a position between the adjectives (or if the N raises to H_1 then N) and the genitive S.

This account therefore (almost) captures the insight of the cartography approach (specifically the Cinque system) that Dem>Num>Adj>N is the basic order, and that N can raise (strictly by head-movement) to positions between different adjectives and again higher than all the adjectives. It also gives

7 Longobardi (2001): "The four intermediate heads H are indicated as potential targets for N-raising. However, no individual language provides evidence for more than one of such heads, at least on the grounds of N-movement, so their number actually results only from a comparative perspective. It would thus be possible to describe nominal structures in terms of an autosegmental system, with the head sequence made available by UG only consisting of D-H-N, and the realization of the intermediate head H parametrically linked to crosslinguistically different positions in the universally fixed sequence of adjectives and genitival positions. In other words, the relation between H and the sequence of adjectives might be that between the following two (possibly universally ordered) levels, with a four-valued linking parameter (or two binary ones):

(80) a. [D [GenS [H [GenO [N]]]]; b. [S-oriented A [Manner1 A [Manner2 A [Argument A]]]]

The linking module would consist of the crosslinguistic condition (81) and the parametric statements (82):

(81) Only H may be linked inside the sequence (80b)

(82) a. The default value is for H to be linked to the extreme right of (80b); b. The typologically attested linking positions for H are immediately before Argument A, Manner2 A, or S-oriented A."

8 Longobardi (2001) does not consider languages/cases where both Num and Dem are present, and therefore does not bother about their relative order.

reasons why languages may or may not choose to raise the N to these various positions made available by UG. In addition, this approach also gives a finer distinction between the different types of adjectives between which the N may or may not move.

1.7 Dravidian and the Problems it poses for Cartography

Empirical evaluation of the Cinquean cartography for Dravidian

The cartographic account of Cinque (2005) does not seem to hold in Dravidian, as demonstrated below:

Whereas apparently Telugu and Gondi strictly allow only the Dem-Num-Adj-N surface order, Malayalam, Tamil, Tulu and Kannada seem to allow at least two orders Dem-Num-Adj-N and Dem-Adj-Num-N (9a-b). In addition, Malayalam possibly also allows Adj-Dem-Num-N in certain contexts (9c). However, Num-Dem-Adj-N is strictly not allowed (9d). (10-13) give the grammatical orders in Tamil, Kannada, Tulu and Gondi.

9	Malayalam:[9]					
(a)	aa	naalu	putiya	payyanmaaR	innu vannilla	4 3 2 1
	those	four	new	boys	did not come today	
(b)	aa	putiya	naalu	payyanmaaR		4 2 3 1
	those	new	four	boys		
(c) ?	putiya	aa	naalu	payyanmaaR	nammuDe 2nd year-il vanna [NP] ippo	?2 4 3 1

9 There are two more highly marked orders possible: ??aa pustakangaL paZayatu muunn-eNNam, ??aa paZaya pustakangaL muunn-eNNam. Both require special intonation, and have a sort of partitive reading (three out of the total number).

					eviDeyaa?	
	new	those	four	boys	Where are [] now, who joined in our second year?	
(d)	*naalu	aa	putiya	payyanmaaR		*3 _ _ _
	four	those	new	boys		
10	Tamil:					
(a)	anda	naalu	putu	pasangaL	innikku varala	4 3 2 1
	those	four	new	boys	did not come today	
(b[10]) ?	anda	putu	naalu	pasangaL		4 2 3 1
	those	new	four	boys		
11	Kannada:					
(a)	aa	naalku	hosaa	huDugaru	ivattu baradilla	4 3 2 1
	those	four	new	boys	did not come today	
(b)	aa	hosaa	naalku	huDugaru		4 2 3 1
	those	new	four	boys		
12	Tulu:					
(a)	aa	naalu	posaa	janakkuLe	ittu oLppe:ru	4 3 2 1
	those	four	new	persons	now where	
(b)	aa	posaa	naalu	janakkuLe		4 2 3 1
	those	new	four	persons		
13	Gondi:					
	av	naalung	cokoTnang	peeDik		4 2 3 1

10 Slightly odd for some speakers

(a)	those	four	good	girls		

Table 1: Order(s) of Dem, Num, Adj and N in Dravidian

This is interesting because Cinque's (2005) system would rule out (9c) (cf. his e.g. (6i-j)), as it will have to be derived from a sequence merged in the wrong order. Also, there is variation within Dravidian itself: two orders are allowable in Malayalam, Tamil, Tulu and Kannada unlike the other two[11] languages. Telugu and Gondi simply do not allow any order other than Cinque's base merge order of Dem> Num> Adj> N and allow no movement whatsoever inside the NP/DP. Why is the deviant order in (9c) allowed in Malayalam but not in the other languages? These facts suggest that there might be differences in the syntax of adjectives in these languages. Thus it is clear that we are not looking at the full picture here, and Dravidian may pose a challenge in front of cartographies like the above ones.

1.8 Concluding Comments

Cinque (2010) proposes that the differences in meaning/ interpretation of adjectives in prenominal and postnominal positions in Romance and Germanic languages are due to the difference in the sources of these adjectives. While indirect modification adjectives are derived from reduced relative clauses, direct modification APs are generated as APs. The prominent analysis for the syntax of adjectives in Dravidian is that they are reduced relative clauses. This will also be dealt with in detail in Chapter 3.

11 Telugu allows only the Dem-Adj-Num-N order: R Balusu (p.c.)

The questions that are needed to be raised are summarized below:

14) Is there one single theoretical account that can both explain the behaviour of adjectives in Dravidian and capture the variation within the language family that have been pointed out?

15) As has been shown above, Malayalam allows an order that the cartographic theory predicts to be impossible to be generated by any language. This is also not attested in any of the other Dravidian languages examined. Indeed, some of the other languages examined did not even allow any alternative orders other than the dominant or basic order. This variation is not captured by the P&P approach as well, even though it manages to capture most of the claims of the cartographic approach. Can a minimalist account be formulated to capture this variation?

16) The Malayalam suffix *-iTTu* that can only be used with the class of adjectives said to have been derived from reduced relative clauses in the predicative position in Malayalam presents another problem. This is not seen in the other Dravidian languages examined. Within Malayalam itself, this suffix cannot be used with actual relative clause or reduced relative clause modification. Nor do any of the theoretical approaches examined here seem to accommodate such a phenomenon.

17) The possibility of having direct modification adjectives in Dravidian, as opposed to compounding or prefixation, needs to be investigated.

1.10 Organization of the thesis

This thesis is primarily a survey of adjectives in six Dravidian languages, Malayalam, Tamil, Kannada, Tulu, Telugu and Gondi (Adilabad variety). The objective is to capture and explain syntactic variation in the domain of

adjectives within the Dravidian family of languages. Especially the reduced relative clause theory about Dravidian adjectives has to be evaluated. T

The current chapter will introduce the issues in the syntax of adjectives and how generative typology will be useful in understanding them better. It will conclude by giving an overview of how the thesis is organized.

Chapter 2 will deal with a morphological typology of Dravidian adjectives, showing the various morphological forms available to each of the Dravidian languages to construct adjectivals.

Chapter 3 will deal with the various claims about the syntactic behaviour of adjectives, especially the reduced relative clauses, and propose the analysis that Dravidian adjectives are participials.

Chapter 4 will investigate variation in the behaviour of adjectives in the different Dravidian languages under study, and attempt to explain the phenomena using a semantic account that links morphology, syntax and semantics of adjectives.

Chapter 5 will give the conclusion of the thesis.

II

Adjectival Morphology in Dravidian

Cinque (2010) and subsequent analyses view adjectives in languages like Dravidian as reduced relative clauses. However, I claim that such an analysis might not be entirely correct, and even if it turns out right, can only be the tip of the iceberg.

What is usually referred to as 'adjective' in Dravidian is usually only one of many different available forms. In order to understand the syntactic behaviour of Dravidian adjectives, it is essential to first glance through the different morphological strategies Dravidian adopts to form adjectives, and the different shapes adjectivals or attributive modifier elements assume in the Dravidian languages.

This chapter deals with a morphological typology of (attributive) adjectival modifiers in Dravidian, to show the historical evolution of adjectives in Dravidian, and the resultant variety in the constructions that come under the broad umbrella of attributive or adjectival modification.

2.1 Adjectival/ attributive modification in Dravidian: a morphological typology

The different morphological forms in which adjectival modification manifests are many in each of the languages surveyed. Later we will also see how the different forms have subtle differences between them too. In the subsections below, the forms available in the different languages are explained in detail. However, the lists for the languages other than Malayalam are, I suspect, far from exhaustive, and must therefore be only taken to be indicative at best.

2.1.1 Noun Modification Strategies in Malayalam

Listed below are the different morphological forms in which "adjectives" may occur attributively modifying a noun (I will call them all under the umbrella term adjectivals):

	root	Root + *-tu*	"True" ADJ	*-an*	V prtcpl	N+COP	Bare N	LOC+REL
paZaya 'Old'	paZam-		paZaya	paZanj-an	paZaki-ya	paZakkam uLLa		
putiya 'New'	putu-		putiya	putt-an		putuma uLLa		
nalla 'Good'	nal-		nalla			nanma uLLa		
ciitta 'Bad'	cii-		ciitta		ciinj-a			
uNangiya 'Dry'			uNakka		uNang-iya			
vattiya 'Dried up'					vatti-ya			
nananja Wet					nananj-a	nanavu uLLa		
wet				iiR-an				
ugran	ugra-			ugr-an				

Super								
niiNDa Long				niiL-an	niiND-a	niiLam uLLa		
ceRiya Small	ceRu-		ceRiya					
kuRiya Short	kuRu-		kuRi-ya		kuRuki-ya			
cuuDu Hot	cuDu-			cuuD-an		cuuDu uLLa	cuuDu	
taNutta Cold	taNu-			taNupp-an	taNutt-a	taNuppu uLLa	taNuppu	
kuLir						kuLir uLLa (?)	kuLir	
valattu Right	valam-	vala-tu						valatt-e
iDattu Left	iDam-	iDa-tu						iDatt-e
aDuttu Near					aDutt-a			
duure Far	duura-							duuratt-e
valiya Big	val/n-		valiya			valippam uLLa		
big	peru(m)-		periya (rare)		perutt-a			
bhaaram uLLa Heavy					bhaaricc-a	bhaaram uLLa		
kanatta Thick					kanatt-a	kanam uLLa		
kanam kuRanja Thin					kanam kuRanj-a	kanam illaatt-a		
parukkan rough				parukkan	(paruparutta)			
mukaLil Above	mukaL-							mukaLilatt-e
meele Above	meel-						?meel-	meeleett-e
kiiZe	kiiZ-						?kiiZ-	

Below								
taaZe Below	taaZ-							taazatt-e
aDiyil below	aDi-							aDiyilatt-e
veLutta White	veN-		veLLa	veLumb-an	veLutt-a		veLuppu	
kaRutta Black	kaRu-/ kari-/ kaaR-			kaRumb-an	kaRutt-a		kaRuppu	
cuvanna Red	cem-			?cuvapp-an	cuvanna		cuvappu	
pacca Green							pacca	
niila Blue					(niilicc-a)		niila	
manja yellow					(manjacc-a)		manja	
iniya (literary only) Sweet			iniya					
iLaya Young/ tender	iLam-		iLaya		iLatt-a			
muutta Mature	mutu-			mutukk-an	muutt-a	muupp uLLa		
pacca Raw			pacca			pacca aaya		
mun- Former	mun-				(munti-ya)			munnatt-e
pin- Later	pin-							pinnatt-e
vaTakke Northern				vaTakk-an				vaTakk-e
tekke Southern	ten-			tekk-an				tekk-e
kiiRiya torn			kiiRa		kiiRi-ya			
pinjiya torn					pinji-ya		pinju (tiny)	

Table 2: Morphological forms of Adjectivals in Malayalam

These strategies are discussed below. As demonstrated by Krishnamurthy (2003), there are roots that are bound morphemes (see column 2 of the table), and need to undergo some syntactic combining process in order to gain stability.

i) One option then is direct modification of a noun: through what has been described as a process of compounding. This is seen in the case of a small subset of adjectival roots. Krishnamurthy (2003) lists from *A Dravidian Etymological Dictionary (DEDR)* (Burrow and Emeneau 1984) a few examples for such compounding:

> "... the first element is a descriptive adjective qualifying a following noun head:
>
> ... 5496b *weNNey* 'butter' (**weL* + **ney*, lit. 'white ghee/oil')...
>
> 4411 Ta[mil]. *perum-puli* 'tiger', Te[lugu]. *pedda puli*, *be-bbuli* 'big tiger', Kol[ami]. *per-pul*, Oll[ari]. *ber-pul*, Gad[aba]. *ber-bullū* [**pēr/*per-V* + *puli* 'tiger' 4307]...
>
> 4954: Ta[mil]. *mutu* 'old', *mūtt-appan* 'father's father', Ma[layalam]. *mūtta-* 'old, grown', *mūtt-appan* 'father's elder brother, father's father', Ka[nnada]. *muttu* 'advanced age', *mutta-* 'aged', Kod[agu]. *mutt-ajjë* 'great-grandfather', *mut-tāy* 'great-grandmother', Te[lugu]. *mut-tāta* 'great-grand-father', *mutt-awwa* 'great-grandmother'."

These adjectival roots generally cannot be used predicatively and are non-intersective. In Malayalam such combinations give a kind of metaphorical meaning more often than not.

(17) putu-maZa

New-rain

'The first rain of the season'

ii) Another option is to become a nominal by taking agreement markers like *-tu* (NEUT) in certain (exactly two: *vala-tu* and *iDa-tu* in my list, see (18-19) below) cases or *-an* (MASC) (alternating with *-i* (FEM) in very few [+animate]/ [+human] cases) (20-21). Two or three other roots do the same but only in predicative position: eg. ****valu-tu*** *viiDu* 'big-3sn house' but *ii viiDu* ***valu-tu*** *aaNu* 'this house is big-3sn'. These could probably be vestiges from the earlier agreement system of Old Tamil where the root could directly take agreement markers.

(18) vala-tu kai

Right-3ns hand

'Right hand'

(19) iDa-tu vaSam

Left-3ns side

'Left side'

(20) paZa-(nj)an riiti-kaL

Old-3ms way-PL

'Old/outdated practices'

(21) kaRumb-i paSu

Black-f cow

'Black cow'

iii) There is another form which is the result of the root combining directly with the relativizer *-a* (22). This is the same relativizer that surfaces in (so-

called) relative clauses as well as verbal participles. In fact a lot of verbal and adjectival participles look like the same root of the adjective has first combined with something like a vP layer and then taken the relativizer *-a*. We will devote more attention to *-a* in detail in the next section.

(22) paZa-(y)a peena

Old-A pen

'Old pen'

iv) Then there are the relative/adjectival participles (23). These are the verbal participles used to attributively modify nouns. They are basically equivalents for lexical adjectives of the languages which have a distinct class of such adjectives.

(23) niiND-a raatRi

Lengthen.PRF-A night

'Long night' (Lit. lengthened night)

v) Another strategy is to have a noun combine with a copula first and then have the copula take the relativizer, like other verbal participles. This is a common stratagem for all the languages studied here, and syntactically it must be viewed as the same process as participialization of other verbs.

(24) candam uLL-a puuvu

Beauty be_{have}-A flower

'Beautiful flower'

vi) Then comes a phenomenon apparently peculiar to Dravidian (cf. Caldwell 1875), which is nouns modifying other nouns by simply being placed before it. This has been referred to as a process of compounding by Andronov (2003)

and Krishnamurthy (2003). However this looks different from the compounds discussed earlier in that those were roots that attached to the nouns they modified, whereas these are full nouns (clearly visible in the examples with colour modification).

(25) cuuDu paal

Heat$_N$ milk

'Hot milk'

vii) What seems to be a special form available only to Malayalam is the form wherein spatial or temporal nouns first (optionally) take a locative case marker and then a special type of relativizer or linker, *-e*[12].

(26) inn-(att)e vaaRta-kaL

Today-REL news-PL

'Today's news'

[Note: even though the English translation shows a possessive construction, the literal equivalent of that in Malayalam would be *?inn-(in)te vaaRta* 'today-GEN news'. *-e* seems rather to locate the noun in space or time.]

12 About the morpheme -e:

(i) I am as yet undecided between an analysis of the construction as root+LOC or as root+LOC+RELativizer.

(ii) This is NOT the usual locative case marker, though in some cases it seems to function as one: *meel-e* top-LOC 'above/ at the top'

(iii) There might be a possibility of *–e* being the GENitive marker and not Relativizer (notice the parallel between *kiZakk-e* > *kiZakk-ee-tu* 'eastern' and *ente* > *entee-tu* 'mine').

(iv) Also, there seems to be in some cases some sort of stacking of relativizers. I am not sure why that should happen: *mukaL-il-e-(tt)e peTTi* top-LOC-REL-REL box 'the box on top' [?the top box].

One thing to keep in mind is that all the above forms are not available to all the adjectives, as is evident from the table. We will come back to a plausible structure for modification by these adjectives in the next chapter.

2.1.2 Noun Modification Strategies in Tamil

Next, let us look at Noun Modification Strategies in Tamil:

	root	*-tu*	"True" ADJ	V prtcpl	N+COP	Bare N	loc
pa{L/Z}aya 'Old'	paLan-		pa{L/Z}aya	paLagiya (familiar), paLasaa pona (gone old/stale), paLayat-aana	paLass-aana, paLamai aana (ancient)		
toN- old	toN-					toNmai (ancient)	
putiya 'New'	putu		putiya (literary)		putuss-aana, putumai aana (modern)	putumai (modern)	
nalla 'Good'	nal		nalla		nallat-aana		
siranda good				siranda	siramai aana		
?senmai 'Good'	cem- (red/ fertile/ pure)				senmai aana		
good					selipp aana		
keTTa 'Bad'				keTTE, keTTu poona			
tiiya			tiiya				
moosam					moosam-aana		
u{N/L}anda				uLaRnda uLandana (prog)			

'Dry'							
kaanja dry				kaanja			
vattina 'Dried up'				vatti-na			
varanda				varanda			
vaaDiya 'Wilted'				vaaDina			
iiRa- Wet	iiRa				iiram aana		
nananja				nananja			
niiNDa Long				niiND-a	niiLam aana		
neTTa/neTTai 'Tall'				neTTa		?neTTai (possibly literary)	
osaram aana					osaram aana		
Small	cinnanjiru		cinna				
	siru (literary)		siRiya		siris aana		
kuLLam$_N$ kuTTai$_N$ Short	kuRu- (literary) kuLLanguTTa		kuLLa kuTTa		kuLLam aana kuTTai aana		
kaTTa Round (Short and fat)/(not long enough)			kaTTa				
suuDaana Hot	suDu-				suuD aana		
kodicca boiled				kodicca/ kaaccana			
kuLir Cold	kuLir				kuLir-aana kuLirmai aana	kuLir	

jill-	jill-taNNi jillinə taNNI						
valattu Right	valan- (literary)	vala-tu					
iDattu Left	iDan-	iDa-tu					
pakkattu Near							pakkattu
Close (intimate)				nerungiya	nerukkam aana		
duure Far					duuram aana		duurattu uravu (relation)
periya Big			periya		periyataan a		
small			cinna				
baaram aana Heavy					baaram aana		
light					lees aana		
Thin				melinta	meliss aana		
Above	meel-						
Below	kiil-						
White	veN-			veLutt-a		veLLai	
Black	kaaR- karum- karə			kaRutt-a/ karugiya		kaRuppə	
Red	cem-			sevanda		sevappu	
pacca Green						pacca	
manja yellow			manja				

iLaya Young/ tender	iLam-		iLaya				
muutta Mature	mutu-			mutti-ya			
pacca Raw			pacca		pacca aana		
Northern	vaDa-						
tekke Southern	ten-						
torn				kilinda			

Table 3: Noun Modification in Tamil

We see that Tamil also has similar processes as compared to Malayalam to make adjectives. These are discussed below.

i) There are roots that can directly modify nouns in compounding-like structures:

(27) paLangaalam

Old-time

'Olden days'

ii) Some roots combine with the default agreement marker *-tu*:

(28) valatu pakkam

Right side

'Right side'

iii) Then there is of course the "true adjective" group where the root directly combines with the relativizer *-a* to become the adjective:

(29) tii-ya paLakkam

Bad-A habit

'Bad habit'

iv) The next option, and like in Malayalam, one of the most productive strategies, is the participial.

(30) kaanj-a miin

Become.dry-A fish

'Dried fish'

v) The other most productive strategy is the noun+copula format:

(31) iiram aan-a tuNi

Wetness/Moisture be.PRF-A cloth

'Wet cloth'

vi) Then there is the noun that can attributively modify another noun without the help of any other element.

(32) veLLai puu

White$_N$ flower

'White flower'

vii) In addition Tamil uses a lot of reduplicated structures, which are not considered here as they are more like copular constructions, e.g., *veduvedu nu irukkira paal* (literally milk that is *veduvedu*) 'warm milk'. Speakers can describe the meaning of the whole contruction but more often than not do not know the meaning of the reduplicated word itself. These also bring out the different 'shades of' the same meaning, for example, something as simple as 'wet' in English might be 'dripping wet' (*sotE-sotE-nDRə*) or 'sticky wet (like

sweat)' (*pisə-pisə-nDRə*) or even 'not dripping but still irritatingly(?) wet' (*nasə-nasə-nDRə*) etc in Tamil.

2.1.3 Noun Modification Strategies in Kannada

Now let us move on to the adjectival strategies in Kannada[13].

	root	"True" ADJ	V prtcpl	N+COP	Bare N	N + GEN
haLeya 'Old'	haLe-	haLeya		haLett-aada / haLed-aagida		
hosaa 'New'	hosa-	hosaa		hosad-aada / hosatt-aada / hosad-aagida		
oLLe 'Good'	oLL-/oLLe-	oLLeya		oLLed-aada / oLLeyad-aagida		
good		canda		canda-(v)aada canda-(v)iruva canda-(v)uLLa		
good		cholo				
good				cennaada(?)	cenna (?)	
keTTu 'Bad'		keTTa	keTTu hogida			
				haaL aada / haaL aagida		
vaNag 'Dry/ Dried up'	vaNag	vaNaa?	vaNagida			
Wet			hasida	hasid-aagida		
vaddi Wet					vaddi(?)	
tyaao wet					tyaao(?)	
udda		udda		udda-vaagida		uddina

13 This data contains a lot of dialectal variation.

Long/ tall						(prob Old/archaic)
big		doDDa		doDDad-aagida		
saNNa Small		saNNa				
cikka		cikka				
			kiriya (Old/ archaic)			
bisi Hot					bisi	
tampu Cold					tampu	
bala Right				baledalli iruva(?)		
eDattu Left	eDa-			eDadalli iruva(?)		
Big		doDDa				
	her-		hiriya (archaic)			
Heavy				bhaara-vaada / bhaara-vaagida		
light				bhaara-vallaada		
dappa Thick		dappa				
Thick (liquid)				gaaDa-vaagida		
Thick (forest)		daTTa				
Thin				teLu-vaada		
White	biLi	biLiya		biLid-aagida		
Black				kappad-aagida	kappu	
Red				kemp-aada /kempu kempuninda kuDida		
Green	hasi			hasir-aada	hasiru	
		niiliya		niili aagida	niili	

Blue						
yellow		haLadiya		haLadi aagida	haLadi	
eLaya tender		eLaya				
Former	maa ji					
Next (beside)						pakka-da
Northern						uttara-da
Southern						dakSiNa-nda
above						mel-ina
below						keLag-ina

Table 4: Noun Modification Strategies in Kannada

i) Kannada also uses the root to directly modify a noun:

(33) haLe-gannaDa

old-Kannada

'Old Kannada'

ii) The root may take the relativizer *-a* and modify nouns:

(34) doDD-a mage

big-REL child

'the elder child'

iii) The verbal participial may also be used as an adjective:

(35) vaNag-i-da nadi

dry-PRF-REL river

‘dried river’

iv) Next is the noun + Copula form:

(36) bhaara-vaad-a peTTige

weight-COP-REL box

‘heavy box’

v) The bare noun can also modify another noun:

(37) niili aakaaSa

blue sky

‘blue sky’

vi) Kannada also has another strategy which Malayalam or Tamil did not have: the N + Genitive.

(38) pakka-da mane

side-GEN house

‘nearby house’

Thus Kannada also has a lot of strategies that it shares with Malayalam and Tamil.

2.1.4 Noun Modification Strategies in Tulu

Next, let us take a look at Tulu:

	-ttə[14]	"True" ADJ	V prtcpl	N+COP	Bare N	GEN	Deverbal N
paraa	paratt	paraa		posattə att-antəna			

'Old'	ə						
						dumbuda	
posa 'New'	posattə	posa		parattə att-antəna			
eDDe 'Good'				eDDe antəna	eDDe(?)		
'Bad'				booDc(i) aantəna (unnecessary)			
'Bad'						kuRteeləta (?)	kuRteelə
'Bad'				eDDe attəna / eDDe iddi-antəna			
uLangəna 'Dry'			uLangəna	uLangəna aayina			uLangelu
lungana 'Dried up'			lungana				lungElu
caNDi Wet				caNDi aayina / caNDi aav-antəna	caNDi (?)		
udda Long/tall				udda ittəna/ udda oND-o	udda (attr?)	uddata (?)	
kudya Short						kudyata (?)	
Short				udda iddiantəna			
Small ellya		ellya					
Small		kinni/ kiNNo					
Small				mallE iddiantəna			
beautiful				pOrLə ittana	pOrLu		
becca Hot		becca			beccə (?) besi		
tampu Cold					tampu		
caNDi					caNDi (?)		
balattə Right		balatta					
eDattə		eDatta					

14 I have not been able to ascertain what exactly this -ttə suffix is. The closest matches that I could find in Bhat's (1967) descriptive grammar are the Ablative case suffix -ttə/-tə and another suffix -tə which is a conjunctive participle forming suffix, which attaches to verbs giving the meaning 'having done V'. Clearly these are not what we are looking for.

Left							
giTTa Near		giTTa (attrib?)					
Near				muTTa ittə̀na			
duura Far		duura (attrib?)					
next						aapeta	
Big		malla/ mallO		malla antə̀na			
Big		doDDa					
baarə̀ Heavy					baarə̀ (attr?)		
Heavy					dinna (?)		
ghaTTid O[15]						ghaTTidO (?)	
Light				ghaTTi/ dinna iddiantə̀na			
dappandO Thick				dappandO (?)		dappada	
Thin						sappuurat a	
Thin				dappa iddiantə̀na			
mittə̀ Above						mittə̀da	
tirttə̀ Below						tirttə̀da	
jappa Below						jappada	
boLdu White				boLdə̀ aayina	boLdu	boLduda	
kappu Black				kappə̀ aayina	kappu	kappuda	
kempu Red				kempə̀ aaNDə̀/ aayina	kempu		
paccE Green					paccE		
niilE Blue					niilE		
manjaLə̀					manjaLə̀		

15 In most cases the sound /O/ is a dialectal variation for /-avu/ 3ns. This agreement morphology appears on adjectives only in one of the dialects (the high/Brahmin dialect).

yellow							
eLattə tender	eLattə					eLattəda	
proper				samaa attəna			
necessary				bOOD attəna			

Table 5: Noun Modification Strategies in Tulu

As may be observed from the above table, Tulu also has a number of strategies to modify nouns attributively.

i) The first thing one notices is that there are no "compound" structures of a root directly modifying a noun like we saw in Malayalam, Tamil and Kannada.

ii) There is one form in which the root takes a suffix -*ttə* (I am not sure what suffix it is exactly.) This needs to be investigated further before any comment can be made on it.

(38) posattə illə

new-TTə house

'new house'

iii) Then there are the forms ending in -*a*, resembling the Malayalam and Tamil root+-*a* forms. When no nouns follow this form, inevitably an agreement marker has to be attached. This seems to be the most productive strategy for attributive modification (after the noun+copula construction). Thus it looks like there are more "true" adjectives in Tulu than in Malayalam or Tamil.

(39) elly-a jookkuLe

small-A children

'small children'

vi) The next is the verbal participle form, which, surprisingly, appears to be not so productively used for attributive modification, as compared to Malayalam or Tamil.

(40) uLunga-(n)a[16] kuNTu

become.dry-A cloth

'dry cloth'

vii) There are also a few deverbal nouns (as described by Bhat 1967) derived from the above that also can modify other nouns in attributive position.

(41) lungeelə miinə

dry_N fish

'dry fish'

viii) The most productive strategy seems to be, as mentioned above, the noun+copula form. Note that even adjectives with other forms available can use this form, and that this includes the noun+negative copula to express the opposite meaning. None of the other language speakers even wanted to mention this kind of a construction.

(42) udda ittə-na

length be.PRS-(n)a baLLə

'long rope'

ix) Tulu has some noun-noun compounds where a noun modifies another noun by simply preceding it.

(43) tampu gaaLi

16 Brigel (1872) considers the whole -na- to be a euphonic particle added to avoid hiatus when the agreement morphology (which he considers to be the person pronoun) is added.

cold$_N$ wind

'cold wind'

x) Finally there is a strategy that neither Tamil nor Malayalam use, but is apparently found in Kannada: Genitive case marked nouns modifying other nouns. This seems to be quite a productive construction in Tulu.

(44) eLa-tt*ə*-da kaayi

tender-TT*ə*-gen fruit

'Tender fruit'

Thus we see some definite differences emerging between the Malayalam-Tamil group and the Tulu-Kannada group. Tulu does not seem to use bare roots to directly modify nouns, there seem to be more 'true' adjectives of the root + *-a* form, the N + copula form is the most productive, and it shares with Kannada what looks like a very productive process of using N + GEN for attributive modification. In addition we see the high (Brahmin) variety of Tulu use some sort of agreement morphology on adjectives (I did not find a rigid agreement paradigm like in Gondi; it is possible that there is only a token default agreement), which is not used the low (non-Brahmin) variety.

2.1.5 Noun Modification Strategies in Telugu

Telugu has the following Noun Modifying strategies:

adj	cmpnd	'true' adj	participial	N+COP[17]	Adv+COP	Bare N	N+GEN

17 I have not included the form 'adjectival-paDina noun'. paD- is a light verb 'fall' that shows irreversability of the process of the noun "becoming" what the adjectival signifies. eg. eRRa paDina gulabi 'the rose that became red.' Morphologically the light verb just takes the participial form, so I would consider it under the column participial. However in giving the 'become' meaning it acts like a copular construction.

paaTa old	paaT-	paaTa / paanta		paaT-aay-in-a	paaTa-gaa unna		paaTa-ni
kotta new	kott-	kotta		kott-aay-in-a / ? kotta-danam unna	kotta-gaa unna		kotta-ni
manci good		manci		? manc-aay-in-a / ?manci aay-in-a / manci-tanam unna	manci-gaa unna		
ceDDa bad		ceDDa		? ceDD-aay-in-a / ceDDa-tanam unna	ceDDa-gaa unna	ceeDu	ceDDa-ni
dry			aar-in-a				
Dried up		enD-a	enD-in-a				
taDi wet				taDi-tanam unna	taDi-gaa unna	taDi	
poDavu long				poDav-ay-in-a	poDavu-gaa unna	poDavu	
cinna		cinna			cinna-gaa unna		cinna-Ti

small							
poTTi short				poTT-ay-in-a	poTTi-gaa unna	poTTi	
veeDi hot				veeD-ay-in-a / veeDi-tanam gala	veeDi-gaa unna	veeDi	
celi cold	sali-	calla salla		calla-danam unna	calla-gaa unna	celi	calla-Ti/ni
kuDi right		kudi					
eDama left		eDama					
deggara near				deggar-ay-in-a / deggar-unna	deggari-gaa unna	deggar-a/-i	
duuramu far				duuram aay-in-a / duuram unna	duuram-gaa unna	duurapu(?)	
pedda big		pedda		pedd-ayina / pedda-rikam gala	pedda-gaa unna		pedda-ni

baruvu unna heavy				baruv-ayina / baruv-unna	baruvu-gaa unna		
laavu thick/fat				laav-ay-in-a / laav-unna	laavu-gaa unna	laavu(?)	laavu-Ti
bakka thin					bakka-gaa unna		bakka-Ti
paina above	pai-	paina			paai-gaa uNDe		
kinda below							
tella white		tella			tella-gaa unna	telupu	tella-Ti
nalla black		nalla			nalla-gaa unna	nalupu	nalla-Ti/ni
eRRa red		eRRa			eRRa-gaa unna	erupu	eRRa-Ti
pacca green		pacca		pacca-danam unna	pacca-gaa unna		pacca-Ti
niila blue					niilam-gaa unna		
tiipi / tiyya					tiyya-ga unna	teepi	tiyya-Ti

sweet							
pacci raw						pacci	
mundu next/ahead						mundu	munda-Ti
cirigina torn			cirig-in-a				
paDama-Ti western							paDama-Ti

Table 6: Noun Modification Strategies in Telugu

We see that Telugu has some strategies common to the other Dravidian languages as well as has one or two strategies that are uniquely its own.

i) Though quite rare, bare roots can sometimes modify nouns like in Tamil and Malayalam:

(45) kott-illu

new-house

'new house'

ii) Some roots combine with *-a* to give 'true' adjectives:

(46) eRR-a gulabi

red-REL rose

'red rose'

iii) Like we observed in the case of Tulu, verbal participials seem to be used rarely for attributive modification in Telugu:

(47) cirigin-a cokkaa

tear.PRF-REL shirt

'torn shirt'

iv) The most productive strategy seems to be, again, noun + copula, where the copula is participialized.

(48) laav-ay-in-a ceTTu

fat-be-PRF-REL tree

fat tree

v) A strategy that seems unique to Telugu is the manner adverb forming particle *-gaa* attaching to nouns, which can then modify other nouns:

(49) veeDi-gaa unna annam

heat-GAA be_{have}-A rice

'hot rice'

vi) Many nouns can directly modify other nouns by just preceding them:

(50) ceeDu alavaaTu

badness habit

'bad habit'

vii) Finally, Telugu shares with Kannada and Tulu the strategy of using the genitive case as a modification strategy:

(51) cinna-Ti vishayam

small-GEN issue

'small issue'

Thus we see that Telugu also uses many different strategies for nominal modification, most of which are found in other Dravidian languages too, but also has one or two unique strategies of its own.

2.1.6 Noun Modification Strategies in Gondi

Now let us look at the noun modification stratagies used by Gondi:

	Standalone form	adj+agr	?N + gen	N + COP	participial	Other derived	Borrowed?
Old paDaana		sn: paDaa-naa[18] 3pm: paDaan-uur					
ancient		tott-oor/uur Old-sm/pm 'Ancestors'	tollee-taa Previous-GEN 'Of ancient times'	tott-aay Old-become (?)			
New puunaa		sm: puu-naa					
Good cokoT-AGR		sm: cokoTnoo					

18 For *paDaanaa* and *puunaa* it looks like agreement morphology, and I got only one instance of actual agreement on *paDaanaa*. So I am not certain to assert that it is a root + agr form, but it is a surmise. Subrahmanyam (1968) does not recognize it as agreement though he does for some other adjectives.

		r sn: cokoTna NHum: cokoT					
						saajraal?	saadree aslii
fresh							taatoo
Bad vaayiT	vaayiT			cokoT sell-AGR (attr?)		laagvaal (attr?)	
big						S: Dagguur P: Dagguuk- na	
		pers-oor pers-uur pers-aa					
small						S: cuDuur P: cuDuuk	
tall	Daŋŋal			Daŋŋal aattoor			
short	poTTi (Telugu)						
long	laam						lamboo
short	laaNDi aahkuDu (attr?)						
wet					puur-t-aa Become.w et-PST- 3sn		
		pahaanaa					

Dry (cloth etc)					vat-t-aa		
Dry (evaporate)					aaTeemaa -t-aa (attr?)		
right		tinnaa (?)					
left		Demmaa (?)	Demma kaak-na Left side-GEN				
narrow							baariik
thick	raT dal	Tos-uur (?) jhunjh-uur (?)					
thin		sapp-uur(?) paat-uur(?)					patloo patlii
tight							gaT
round						gooylaal?	
heavy	jaD/vajan (?)						
Light (weight)							halkoo halkii halkal
Full nindoo					nindoo (from vt nind- 'to be filled') <morphology just like borrowed >		

					(attr?)		
empty							rittoo
black	kaari					kaaryaal?	
white						daural	
green						hirvaal	
red						raggaal	
yellow			kamkaa?			booDal	
blue							niilii
golden							soone
silver							caandii
copper			tamma?				
Tender, young		koDkeel-aa/NG -sg/pl (attr?)					
young		Diyy-oor Diyy-uur Diyy-aa					
sweet	gooD						
Bland (without sugar)	capDii						

Table 7: Noun Modification Strategies in Gondi

i) As can be seen, Gondi seems to have retained the agreement on adjectives that Andronov has proposed for earlier Dravidian languages. However this is not the case with all the adjectives: some of them seem to have lost it. Subrahmanyam (1968) also says only a few adjectives show this agreement phenomenon.

(52) pers-oor

big/great-3sm

'big/ great one (masc)'

ii) Unlike the other Dravidian languages Gondi does not show bare roots directly modifying nouns. But there are some 'standalone' forms, most of which do not occur in any other form:

(53) vaayiT kaaNDi

bad boy

'bad boy'

iii) There are a few instances of Genitive being used as a modification strategy:

(54) tollee-taa

previous-Gen

'Of ancient times'

iv) Noun + Copula forms are also surprisingly fewer than would be expected:

(55) Daŋŋal aattoor kaaNDi

tall be.PST-3sm boy

'tall boy'

v) The next are the two participial forms: root+agr forms and verb+ -*val* forms.

Interestingly, unlike in the other Dravidian languages, Gondi participials and relative clauses (just as we saw above for 'true' adjectives) also seem to agree with the head noun in most cases. It looks like the relativized noun and the participial verb have simply exchanged places:

(56) kapaDiŋ vattaŋ

Cloth-3pn dry-PST-3pn

'The clothes dried.'

(57) vattaŋ kapaDiŋ tar

Dry-PST-3pn cloth-3pn bring

'Bring the dried clothes.'

The alternative form in adjectives, participles and relative clauses is Verb root + *-val*, which is an affix that forms "verbal nouns" according to Subrahmanyam (1968: 71). This can signify either "the action denoted by the verb" or "the subject that does or the object that is used in performing the action denoted by the verb base", and it "can be used adjectivally before a noun."

(58)

He gives examples showing agreement appearing after *-val* has been attached to the verb root, but the data I collected contains no such instances. Instead it seems to stand in for the infinitive form of verbs now:

(59) dis-val

see-INF

‘to see’

vi) Words borrowed from Indo-Aryan take an *-oo* suffix.

(59) lambo nooDe

long rope

‘long rope’

2.1.7 Conclusions from this section

We have seen in the preceding sections the various different morphological strategies used by the different languages under study for attributive modification of nouns. There are some strategies that are available in all the languages (eg. Noun+copula), whereas there are also some strategies that are shared by some but not the others (eg. the noun+genitive construction). Each language also seems to possess a unique strategy not available to the other languages. (eg. the locative relativizer of Malayalam.)

Thus much variation can be observed within the same language family Dravidian in the domain of attributive modification alone. In the next sections we will pick up one particular strategy that seems the most used (and the most discussed in Dravidian literature) and attempt to unravel its functioning. Chapter 4 will look closer at the larger question of syntactic variation.

2.2 An “elsewhere” form

Despite the different derived forms available in each language for adjectival modification, there is one form that is universally considered as equivalent to the lexical adjectives of other languages like English. I will call this form the "elsewhere" form for Dravidian, for the sake of ease of reference. This is the root+*a* form in Malayalam, Tamil, Kannada, Tulu and Telugu. (Gondi, as we have seen, does not use this kind of strategy.)

(60) paZa-ya Malayalam, Tamil

(61) haLe-ya Kannada

(62) paR-aa Tulu

(63) paaT-a Telugu

Thus it is clear that the characterization of *-a* as an adjectivalizing particle is more or less on the right track as far as these languages are concerned. The next step is then to figure out what *-a* really is. How does it make something an adjective?

2.3 Historical evolution of Dravidian adjectives

The traditional grammars and historical linguistic analyses of the Dravidian languages point to the existence of Proto Dravidian roots that take affixes that determine the categorial status of the lexical item thus formed.

For instance, Caldwell (1956) established that a family of words (of different syntactic categories) were formed by addition of different 'formative suffixes' or 'specializing particles' to the same (usually monosyllabic) root. He classified these roots as verbal roots that occur either as verbs or as nouns, and other roots that occur as nouns and cannot be derived from any verbs. (cf. Caldwell 1956:196) *apud* Krishnamurthy 2003). Krishnamurthy (2003), continuing from Krishnamurthy (1997a), makes the strong claim that through different stages of development within Proto-Dravidian, many inflectional suffixes incorporated into the stem (i.e., the monosyllabic root), giving rise to primary lexical items belonging to different syntactic categories. For instance, sounds and sound clusters that used to be inflectional affixes showing tense have now incorporated into the root to give verbal stems showing transitive/intransitive difference.

In the same vein, reading Andronov (1972, 2003) in continuation with Krishnamurthy's claims allows us to understand Andronov's claim that Tamil (but also most other Dravidian) adjectives, usually of the form root + *-a*, were

actually substantives denoting things possessing the quality represented by the root:

> (x) One of the most common suffixes of the adjectives is *-a*; e.g. Ta[mil]. periya 'big', Ma[layalam]. pudiya 'new', Kod[agu]. nalla 'good', Ka[nnada]. doDDa 'big', Tu[lu]. posa 'new', Te[lugu]. cakka 'nice', Pa[rji]. tirra 'sweet', Pe[ngo]. gaja 'big', Kon[da]. kota 'new'. Adjectives of this type are relatively late in origin. As is evident from the analysis of Old Tamil texts, they have developed from neuter personal nouns of the 3rd person plural on the pattern *nalla* 'good they' (n.), 'good objects' > 'good' (Andronov 1972, 1-9).

Thus the *-a*, treated even by Krishnamurthy (2003) as adjectival suffix, was originally an agreement marker denoting 3rd person neuter plural.[19] This is also corroborated by Lehmann (1993), who says that the third person plural neuter suffix *-a* of Old Tamil

> ...lost its opposition to other [agreement suffixes] and has, therefore, ceased to function as pronominal suffix. Moreover, the whole word form has lost the syntactic property of a pronominal... These forms are thus syntactically frozen to the pre-nominal noun modifier position. For these reasons, word forms like *nalla* and *azakiya* are syntactically reanalyzed to adjectives (Adj) in Modern Tamil and cannot be segmentized anymore. Lehmann (1993)

Building on Andronov (1972), he lists the following paradigm of the Old Tamil word formation process of adding a pronominal suffix to a nominal (eg. *val-*) or adjectival root (eg. *nal-*):

19 Note that Dravidian 3np pronoun is *a-(v)a* 'that(distal)-3np = they'.

(64) *"vall-een* 'I who have strength'

vall-aay 'you who have strength'

vall-aan 'he who has strength'

(etc.)

vall-a 'they (things) that have strength'

nall-een 'I who is good'

nall-aay 'you who is good'

nall-aan 'he who is good'

(etc.)

nall-a 'they (things) that is good'"

This kind of agreement phenomenon is still visible in Modern Gondi, lending weight to Andronov's and Lehmann's observations on Old Tamil. In Gondi, many adjectives show person, number and gender agreement in attributive as well as predicative positions (more in the next section), and the agreement morphemes attach directly to the root:

(65a) pers-oor

Big/great-3ms

'Great (man)'

(65b) pers-uur

Big/great-3mp

'Great (men)'

(65c) pers-aa

Big/great-3np[20].[+human]

'Great (women)'

Coming back to Tamil, Old Tamil *nall-a* 'good things' was parallel to *nall-en* 'good I', *nall-iir* 'good you.PL' etc., none of which are used in Modern Tamil. If Andronov, Lehmann etc are on the right track, this means the third person neuter plural marker *-a* alone has survived from Old Tamil, but after losing its agreement features. Attributive modification of other nouns using root+ *-a* is still possible as it was, but instead of agreement its function has changed to that of an adjectivalizing suffix. Andronov (2003) gives an Old Tamil example where the adjectives with the agreement marker *-a* could be conjoined using *-um*:

(66) periya-(v)um siriya-(v)um aak-iya maadaLangani vidai-kaLai-(p)poola

big-CONJ small-CONJ be-? pomegranate seed-PL-like

'Like big and small seeds of pomegranate'

However, contemporary Tamil speakers actually find the sentence weird. (They prefer to stack the two adjectives without any conjunction markers whatsoever: *periya siriya...* 'big (and) small...' In Malayalam adjectives cannot be conjoined unless they are first nominalized, usually using *-tu* (default neuter agreement marker) (for a detailed discussion see Jayaseelan 2014):

(67) valiya-t-um ceRiya-t-um aay-a...

big-NOMLR-CONJ small-NOMLR-CONJ be.PRF-A

'big and small'

20 Even though the gender distinction in Gondi is between masculine vs. Non-masculine, this particular plural marker apears to be used only for [+human] nouns, in effect becoming a feminine marker.

Anyway, Andronov (and others) conclude that the *-a* has been reduced to an adjectival suffix. In Modern Tamil and Malayalam, substantives (called by Anandan (1985) as predicate nominals) can be formed by adding agreement markers after attaching the *-a,* especially visible in the predicative use of adjectives:

(68) Malayalam

avan nall-a-van aaNu

he good-A-MASC be.PRS

'he is a good person'.

The Old Tamil form of *nall-a-van* 'good-A-MASC was *nall-aan* 'good-MASC'.

On a similar vein, Andronov (1982) mentions for Kannada:

> ... the base *oLLida-* (*oLLidanu* 'good man') could give the nouns *oLLid-em* (also *oLLidan-em*) 'I who am a good man', *oLLid-ay* 'thou who art a good man', *oLLida-am* 'he who is a good man', *oLLid-evu* 'we who are good men', *oLLid-iir* 'you who are good men', *oLLid-ar* 'they who are good men', etc. Nouns formed in this way do not occur in Middle and Modern Kannada. Andronov (1982)

Thus the *-a* seems not to be the same agreement marker as in Old Tamil.

However in the case of examples like *oLLeya* 'good', Andronov analyzes it as the genitive form of *oLLe* 'kindness/ beauty'. According to him there are other nouns that use the genitive in order to be able to attributively modify, eg. *himada pradeeSa* 'region of snow'. However, Andronov also mentions that participles are formed using the suffix *-a*, which is added to the verbal root plus tense morpheme (cf. 1982: 49)[21]. These participles actually stand in for

21 For a recent analysis of *-a* as a syncretic genitive case marker cum relativizer in Kannada, see Herur (2016).

relative clauses in the absence of relative pronouns. (cf. Andronov's (1982:76) example for a participle used as an attribute: *naanu bareda kaagadavu* 'the letter which I wrote').

The problem is again that a genitive analysis of *-a* cannot be generalized to all the Dravidian languages. The genitive case marker is not the same for all the languages (unlike the relativizer):

(69) raman-te / siita-(y)uDe pustakam Malayalam

Raman-GEN/ Sita-GEN book

'Raman's/Sita's book'

(70) raman-ooDa viiDu Tamil

Raman-GEN house

'Raman's house'

(71) mara-(d)a ele-gaLu Kannada

Tree-GEN leaf-PL

'Leaves of the tree'

(72) mara-ta kaayi Tulu

Tree-GEN fruit

'fruit of the tree'

(73) cettu (yokka) aaku-lu Telugu

Tree-(GEN) leaf-PL

'The leaves of the tree'

OR

(74) raamu-Di kalam

Rama-GEN pen

'Rama's pen'

(75) naaT-(n)aa-ŋ phorool-k Gondi

Village-GEN-3np name-PL

'The names of the village'

For this reason, we deem it proper to refer to *-a* as a relativizer than as an adjectival suffix (without committing to its syntactic category for the time being).

Interestingly, the participle with *-a* also stands in as the equivalent of adjectives in the Dravidian languages, except for Gondi. In fact we will propose that the "elsewhere form" of adjectives in Dravidian is that of the participle.

Let us examine the functions and characteristics of *-a*:

(76) (i) *-a* occurs on adjectives, participials, relative clauses and clausal complements of N, as well as, at least in Malayalam, clefts.

(ii) *-a* cannot stand alone, needs a nominal or agreement following it.

(iii) *-a* changes a finite clause to non-finite.

(iv) *-a* eats up the case on the N that it modifies (and promotes)

(v) Cannot be coordinated.

With all these above properties, what is this *-a*? The available literature on Dravidian relative clauses, participials and adjectives are quite varied on the question of the identity of *-a*. Let us first take a look at some of these.

2.4 Analyses of *-a*

2.4.1 Anandan (1985)

Anandan (1985) initially analyzes the "adjectivalizing suffix *-a*" as a demonstrative and therefore a Det(erminer) that precedes and modifies an NP. His reasoning is as follows: According to him the agreement features on adjectives, demonstratives and numerals in the predicative position in Malayalam make them predicate nominals. This is because they come with an empty (agreement) feature matrix that can be "filled in" by an operation of Copying.

This is based on Amritavalli's (1984) proposal for explaining the anaphor-like behaviour of right dislocated quantifiers pointed out by Jaeggli (1980). Jaeggli pointed out that these quantifiers behave like anaphors with respect to the NPs they move out of, and must contain an agreement element AG showing agreement with the NP. Amritavalli proposes that AG cannot be lexically specified as an anaphor; instead it is a feature matrix of unspecified features that has to be 'filled in' by a rule referring to some NP in the sentence, which anaphorizes AG. Anandan (1985) adopts this mechanism of empty feature matrix, which comes with demonstratives, numerals and adjectives from the lexicon. When these elements prenominally modify an NP, the feature matrix is does not need to be "filled in"; but postnominally (I.e., in the case of predicative modification) the NP c-commands these elements, and through an operation of Copying adapted from a rather complicated system of agreement proposed by Batistella (1982), the (phi-) features of the NP

percolate to the demonstrative/ numeral/ adjective, filling in the feature matrix. In cases where these predicate nominals occur as arguments of verbs, without any NP from which to Copy features, a non-lexical phonetically null NP is posited, with only phi-features. This is based on Chomsky's (1981) suggestion that "the element AGR itself is a nominal that can be considered identical to PRO with features [+N, -V]." This allows the above phrases to then function like NPs. This also helps explain the suffixal nature of the agr morphemes in question.

Thus *-a* is a reanalyzed instance of the demonstrative, which can therefore undergo the above process. When the NP modified by the relative clause/adjective is overt, the agreement feature matrix of *-a* remains empty. When it is postnominal the features percolate from the NP which c-commands it. The agreement suffix is the overt manifestation of the now-filled feature matrix of *-a*. If the NP is covert, the adjective/relative clause becomes a predicate nominal.

However, later on Anandan revises his position and concludes that the *-a* must be a COMP, by positing that the Doubly Filled COMP filter does not apply to Malayalam. (For a more recent claim for *-a* as C, see Jayaseelan 2014).

2.3.2 Menon (2012) and others

Menon (2012, 2014), Menon and Pancheva (2014) basically adopt Anandan's (1985) characterization of *-a* as a relativizer, which according to Menon can only attach to verbs. It differs from relative pronouns in English in that it does not open up an argument position, neither does it contribute anything semantically. The roots that take *-a* to make adjectives (what we have described above as 'true' adjectives), which she classifies as Class 1 roots, are

traditionally considered deverbal. This prompts her to posit a null verbalizer *v* head to take the root in its complement position. *-a* then attaches to this *v*P. Thus *-a* is "not an A' operator but a morpheme on the verb that marks what argument has been relativized". And *-a* does not contribute any semantics except to "make the ... verbalized root into a relative clause".

2.3.3 Mathew (2005)

Mathew (2005) characterizes *-a* in the following way: "*-a* has some feature that seeks validation from a nominal element...". Under a Pesetsky and Torrego (2004/2007) system of Agree as feature sharing, then, *-a* is a probe with feature specification [iF unvalued]. The participle relative clause (PrtRelC) headed by *-a* is a weak phase, and adjoins to the head noun which is in the matrix sentence CP, which is being simultaneously built in the workspace. Though she makes no commitment as to what the syntactic category of *-a* is, her references to Pesetsky and Torrego's inferences indicate that she takes *-a* to be a C.

2.3.4 Jayaseelan (2014)

For Jayaseelan (2014), even though he starts with a tentative assumption that *-a* is a D and a reduced form of the distal demonstrative *aa*, he goes on to say that in the cartographic structure for (prenominal) relative clauses, *-a* can logically occupy only the C position and not D. A major motivation for this analysis comes from the correlations he explores between coordination, relativization and finiteness in Malayalam and other Dravidian languages: that "finite clauses cannot be coordinated, relative clauses cannot be finite and relative clauses cannot be coordinated". This, according to him, is because finiteness (instantiated by the finite negation marker *illa*), relativizer

and coordination marker/operator compete for the same position, which he argues to be MoodP within the C domain.

2.3.5 de Vries (2001, 2002)

The morpheme *-a* that has been glossed as REL(ativizer) is classified in De Vries' (2002) typology of relative clauses as a relative marker, as opposed to relative pronoun or complementizer.[22]

In De Vries (2001) he says that there is no other information available on the *-a* except that it is a relative marker, and that in comparison with Korean and Greenlandic, it might be a "temporal affix that can replace T on V".

2.4 Conclusion: Unanswered questions

Thus we have seen in the previous subsections what the different scholars have thought of *-a*, summarized below. Let us evaluate how these observations and inferences can account for the characteristics of *-a* that we listed out in sec 2.3.

We have seen that though Anandan (1985) starts off with an analysis of *-a* as D, his final analysis corresponds to Jayaseelan's (2014) final analysis of *-a* as C. Jayaseelan also has an impressive array of observations that support the analysis. Mathew's (2005) analysis also seems to fall within the ambit of this view.

22 However De Vries does not have any account of what the position or category of -a is. In De Vries (2001) he suggests, in passing, that it is a "temporal affix that can replace T in V", like in Greenlandic and Korean. However *-a* is not temporal; and it does not replace T. What looks like replacing the Tense morpheme is only a phonological rule of deleting an /u/ sound when followed by /a/; when the Tense morpheme is /-i/ it does not get deleted (except for *pooy-i* 'go-PST' which becomes *pooy-a*. I have no explanation for this.): *koDutt-u + -a* becomes *koDutt-a* but *ett-i + -a* becomes *etti-ya*, not **ett-a*.

For Menon (2012, 2014, n.d.), *-a* does not contribute anything semantically, it is just a morpheme that relativizes verbal elements. She asserts that *-a* is not an A' operator, but does not commit to any claim as to the syntactic category of *-a*. Similarly de Vries (2001, 2002) claims that *-a* is a relative marker as opposed to relative complementizer, but says no more data is available on its identity. Comparing with Korean (and Greenlandic) he goes on to suggest in de Vries (2001) that it might be a "temporal affix that replaces T on V".

The C analyses consider the adjectives, participials and clausal complements of N all as some sort of relative clauses. Even clefts can be accommodated under this analysis. Only Jayaseelan (2014) clearly addresses the lack of finiteness in these constructions and their inability to be coordinated using the conjunction *-um*.

On the other hand, whether one follows the analysis of *-a* as a Demonstrative or agreement morphology, or even the Genitive as suggested by Andronov (1982) and hinted by Amritavalli (2008), what all these point to is the nominal nature of the relative clause as has been noticed for languages like Arabic and Amharic (cf. Ouhalla 2004), among others. This will be our route of enquiry to be followed in the next chapter.

III

ADJECTIVES, PARTICIPIALS AND RELATIVE CLAUSES

As has been mentioned in passing in the previous chapters, Dravidian adjectives are considered to be reduced relative clauses. Consider the data below. An adjectivalizing suffix or relativizer *-a* shows up on adjectives, participles and relative clauses in Malayalam, Tamil, Kannada, Tulu and Telugu (77-81).

(77) Malayalam

(a) cuvann-a puu (adjective)

Red-A flower

'Red flower'

(b) ooD-unn-a kuTTi (participial)

Run-prog-A child

'Running child'

(c) innale vann-a payyan (relative clause)

Yesterday come.PRF-A boy

'The boy who came yesterday'

(78) Tamil

(a) paLa-(y)a viiDu (adjective)

Old-A house

'Old house'

(b) kodikk-ir-a paalu (participial)

Boil-PROG-A milk

'Boiling milk'

(c) naan neettu paaRtt-a payyan (relative clause)

I yesterday see.PRF-A boy

'The boy I saw yesterday'

(79) Kannada

(a) haLe-ya mane (adjective)

Old-A house

(b) ooDi-tt-iru-va huDuga (participial)

Run-?-PROG-A boy

'Running boy'

(c) naanu nooD-itt-a huDuga (relative clause)

I see-PST?-A boy

'The boy I saw'

(80) Telugu

(a) kott-a illu (adjective)

New-A house

'New house'

(b) marugu-t(uu)-unn-a paalu (participial)

boil-PROG-A milk

'boiling milk'

(c) neenu cuus-in-a abbayi (relative clause)

I see-PST-A boy

'The boy I saw'

(81) Tulu

(a) par-aa illu (adjective)

Old-A house

'Old house'

(b) poo-and-ittə-na gaaDi (participial)

go-PROG-COP-A vehicle

‘moving vehicle’

(c) jooNə tuu-yi-na baale (relative clause)

John see-PRF-A child-seen

‘The child that John saw’

This Chapter evaluates the claim that barring a few "true" adjectives, Dravidian adjectives are reduced relative clauses. The next few sub-sections detail the various analyses proposed for such structures, and try to see if Dravidian actually fits into this story. However, for the sake of a focused discussion we will restrict ourselves to Malayalam in this chapter, assuming it to be representative of the Dravidian family. Any variations and deviations will be addressed in the next chapter.

3.1 The "C" analyses

Almost all the analyses for Malayalam adjectives and participials treat them as reduced relative clauses. This is common for many languages of the world, especially in head final or SOV languages.

In this section I look at various analyses of relative clauses and reduced relative clause adjectives that (implicitly or explicitly) treat the relativizer as a C category element.

3.1.1 Kayne (1994)

Kayne (1994) proposes a raising analysis of relative clauses (in continuation of similar proposals by Vergnaud (1974) and others), which falls out as a consequence of the Linear Correspondence Axiom (LCA) for linear order (of terminals) and heirarchical structure (of non-terminals) in language. According to him relative clauses are uniformly CP complements of D:

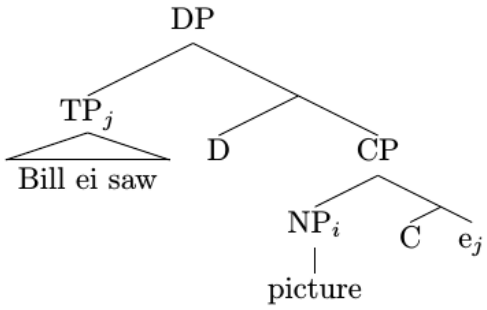
(82) the $[_{CP}$ [picture]$_i$ that $[_{TP}$ Bill saw $e_i]]$

In languages like English the nominal subject of the relative clause CP moves from within the complement of C out into Spec CP, making the relative clause postnominal.

On the other hand, in languages with prenominal relative clauses, which are verb final languages, the structure is:

(83a) $[_{DP}[_{TP}$ Bill e_i saw$]_j$ D $[_{CP}$ $[_{NP}$ picture$]_i$ C $e_j]]$

(83b)



This is because N cannot come to the final position in the relative clause by moving it in a mirror-like manner compared to the N-initial type of languages. In many of these languages the absence of an overt definite article makes the D null or invisible; however, based on the behaviour of D in Amharic which is an N-final type language with an overt definite article, Kayne proposes that the relative clause itself has to move to Spec DP (stranding the head N in Spec CP), and therefore what moves is not the whole CP but only the TP.

Kayne notes that English prenominal participles cannot have complements to the verb (in Spec CP) but may allow material like adverbs to its left. This and other comparable phenomena between participles and relative clauses make him extend the (abstract) initial structure [D° CP] to participles as well. He goes on to compare prenominal adjectives next and gives the following structure for adjectives:

(84) the $[_{CP}[_{XP}\ [e]_i$ yellow$]_j$ $[C^o\ [_{IP}[$sweater of John's$]_i$ $[I^o\ [e]_j]]]]$

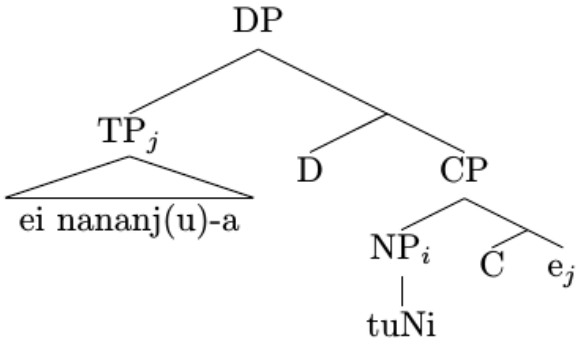
Thus, extrapolating from the above, we can arrive at the following structure for Malayalam adjectives under the Kaynean reduced relative clause analysis:

(85a) $[_{DP}[_{TP}\ e_i$ nananj(u)-a$]_j$ D $[_{CP}[_{NP}$ tuNi$]_i$ C $e_j]$

Wet-A cloth

'Wet cloth'

(85b)



This is a mere first approximation and we can see that *-a* has not been analyzed as any category here. We will look at other analyses that treat adjectives as reduced relative clauses and have something to say about *-a*, in the following sections.

3.1.2 Anandan (1985)

Anandan (1985) has one of the earliest analyses of Malayalam adjectives as reduced relative clauses. He draws a parallel between adjectives and relative clauses following the "native speaker intuition" that adjectives are actually verbs + 'adjectivalizing suffix' *-a*, which is also found in relative clauses.

The suffix *-a,* when it attaches to verbs to make adjectives, requires a nominal head position to be filled, either by an overt lexical noun or by a covert empty noun with agreement features. As has been shown in sec. 2.3.1, in his initial analysis, the *-a* comes with an empty feature matrix which has to be filled by an operation of Copy, by modifying an overt or covert NP. In the cases where the NP is covert, the filled feature matrix of *-a* shows up in the form of agreement and the whole verb/adjective complex becomes a predicate nominal. Thus some sort of phi feature agreement is taken to be at the core of adjectival modification.

His initial structures for a relative clause (86a) and adjective (87a) are illustrated in (86b) and (87b) respectively:

(86)(a) njan vaayicc-a pustakam (relative clause)

I read.PAST-A book

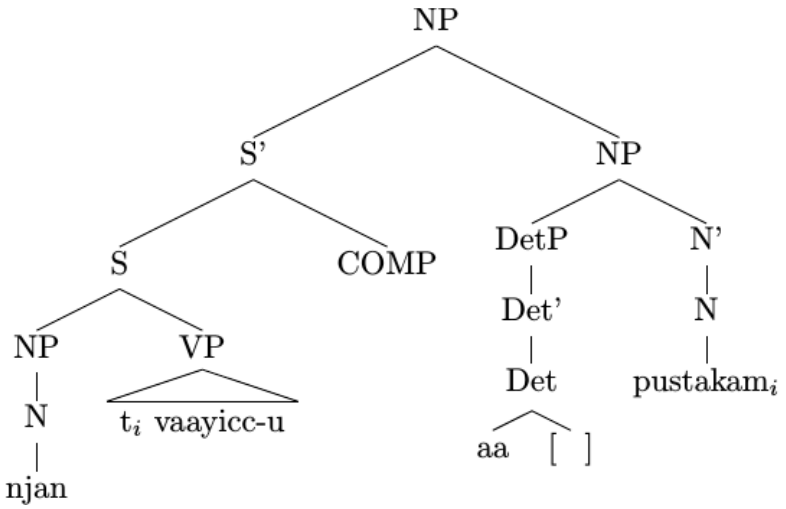
'The book (that) I read'

(b) $[_{NP}[_{S'}[_{S}[_{NP}[_{N}$ njan]]$[_{VP}t_i$vaayicc-u]]$[_{COMP}]]$$[_{NP}[_{DetP}[_{Det'}[_{Det}$ aa][ ]]]$[_{N'}[_{N}$ pustakam$_i$]]]]

I read-PST-A book

'The book (that) I read'

(c)



(87)(a) muSiɲɲ-*a* tuNi-kaL (adjective)

Become.dirty.PAST-A cloth-PL

'Dirty clothes'

(b) $[_{NP}[_{S'}[_{S}[_{NP}\ e_i][_{VP}$ muSiɲɲu$]]][_{COMP}]][_{NP}[_{DetP}[_{Det'}[_{Det}$ aa$][\ ]]][_{N'}[_{N}$ tuNikaL $]]]]$

Become.dirty -A clothes

'Dirty clothes'

The reason why Anandan chooses to put the relativizer in Det position in the projection of the head noun rather than in COMP is because the Multiply Filled COMP filter *a la* Chomsky and Lasnik (1977) would rule out structures like (88) below:

(88) $[_{NP}[_{S'}[_{S}[_{NP}$ayaaL$]$ $[_{VP}$vann-u$]]$ $[_{COMP}$enn-*a*$]][_{NP}[_{N}$kaaryam$]]]$

He came-PAST that-A matter

'The matter (fact) that he came'

Thus there is already a complementizer *ennu* 'that' in C(OMP). The Multiply Filled COMP filter would not allow the relativizer -*a*also to occupy COMP. Hence the -*a*is put in the D(et) position of the N *kaaryam* 'matter/ fact', instead of in C. He gives the internal structure of -*a kaaryam* as follows:

(89) $[_{NP}[_{DetP}[_{Det'}[_{Det}$ aa$][_]]][_{N'}[_{N}$ kaaryam$]]]$

He now analyzes the -*a* as in fact being the same distal demonstrative *aa* 'that', which occupies the Det position in NPs and also, in Malayalam, takes the agreement suffixes to form the demonstrative pronouns *a-van* 'he', *a-vaL*

'she' and *a-vaR* 'they' (cf. Jayaseelan (1999) for the formation of pronouns from demonstratives[23]).

As can be observed, "translating" Anandan's above story to more current terminology and framework would yield Kayne's (1994) proposed structure exactly. We indicate the possible steps for such a derivation in (90a-c) below:

(90a) $[_{DP}$ aa$_D$ $[_{CP}$ C $[_{TP}$njan pustakam$_i$ vaayicc-u e$_i$]]]

(90b) $[_{DP}$ aa$_D$ $[_{CP}$ $[_{NP}$pustakam$_i]_j$ C $[_{TP}$njan e$_j$ vaayicc-u e$_i$]]]

(90c) $[_{DP}$ $[_{TP}$njan e$_j$ vaayicc-u e$_i]_k$ aa$_D$ $[_{CP}$ $[_{NP}$ pustakam$_i]_j$ C e$_k$]]

Even though it has quite a few problems, this view seems to have at least indirect evidence in support of *-a*being a D element. For instance, the typological literature shows that grammaticalization of demonstratives into relativizers is a common process in languages. Diessel (1999) describes eighteen "channels of grammaticalization" through which demonstratives grammaticalize into third person pronouns, relativizers, complementizers, definite articles, linkers etc. Drawing on the works of Lehmann (1984), Behaghel (1923-32), Paul (1916-20), Lockwood (1968), etc. on Old German, he shows how there are various accounts for the grammaticalization of the demonstrative into a relativizer, in this case a relative pronoun. He quotes examples from Lehmann (1984) which show the same relativizer occuring on attributive adjectives and participial constructions. Moreover the relativizer nominalizes the participial, which looks exactly like the relative clause, with a non-finite verb. These facts are exactly similar to the facts of Malayalam.

Similarly, indirect evidence for the presence of D comes from the diagnostics for DP- vs NP-languages from Boskovic (2008a, 2012). These diagnostics

23 This process is common for all the Dravidian languages under study here. Cf. also Lehman (1989) for Tamil, Sridhar (1990) for Kannada, Krishnamurthy and Gwynn (1985) for Telugu, Bhat (1994) for Tulu and Subrahmanyam (1968) for Gondi.

indirectly suggest that Malayalam might be a DP language, even though it has no overt definite D[24].

Anandan's account runs into problems when trying to derive the predicate nominal in the predicative position by rightward movement of the adjective: for instance, *muSiɲɲ-a*'dirty' in (87b) above is not a constituent and cannot be moved. Therefore, claims Anandan, the attributive and predicative forms of adjectives are independently generated and not derived through movement.

However, another obvious and unsurpassable problem surfaces: an analysis of *-a*as a determiner inside the NP projection of the head noun will not be able to generate a relative clause/adjective in which the head is a DP headed by a demonstrative *ii* as in (91a) below, or explain the cases of stacking of adjectives/ relative clauses/ participials (91b, c):

(91)(a) muSiɲɲ-a [ii tuNikaL]

Become.dirty-A Dem clothes

Lit. 'These clothes that are dirty'

(b) innu vann-a puti-(y)a tiiccar

today come.PRF-A new-A teacher

'The new teacher (who) came today'

(c) aa vali-ya cuvann-a vaTT-a patram

that big-A red-A round-A utensil

'That big red round utensil'

Also, in some varieties of Malayalam (eg. Malabar Malayalam) the demonstrative typically attaches to the following noun and the initial

24 We will explore this idea further in Sec 3.3.

consonant of the noun is geminated (92a). This does not occur in relative clauses in these dialects (92b).

(92a) a-kkuTTi

That-child

'That child'

(92b) *njaan kaND-a-kkuTTi

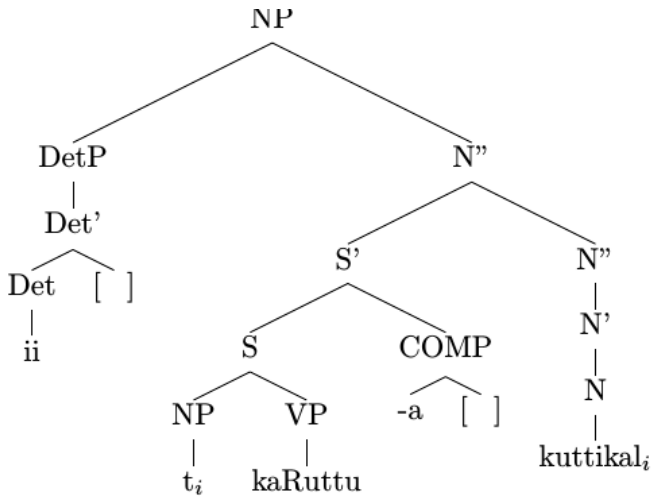
1s see.PRF-A-child

(intended: the child that I saw)

Anandan therefore revises his position and claims that the demonstrative *aa*has grammaticalized into a complementizer *-a*, generated in COMP. It has, however, retained its empty feature matrix, needed to be filled when there is an empty head noun in the case of predicate nominals. The crucial assumption needed to enable this analysis is that Malayalam does not display the Doubly Filled COMP filter. His new structure is shown in (93) below (his 57).

(93a) $[_{NP}[_{DetP}[_{Det'}[_{Det}$ ii][]]][$_{N''}[_{S'}[_{s}[_{NP}$ t][$_{VP}$ kaRuttu]][$_{COMP}$ a []]][$_{N''}[_{N'}[_{N}$ kuttikal]]]]]

(93b)



This analysis of *-a* in C is taken up by Jayaseelan (2014). We will take a look at his analysis in the next section.

3.1.3 Jayaseelan (2014)

Jayaseelan (2014) considers Malayalam adjectives to be reduced relative clauses. In the course of unifying three seemingly disparate phenomena in Malayalam, he shows that the relativizer *-a* is a C element.

Based on the observations that in Malayalam, relative clauses are never finite, finite clauses cannot be coordinated and that relative clauses cannot be coordinated, he proposes that the relativizer, the finite negative *illa* and the conjunction operator compete for the same C position, which is also the Mood head.

Jayaseelan first shows that coordination is not allowed between finite clauses (94a) (his (2a)). The only option to coordinate two such clauses is a periphrastic strategy of conjoining the clauses with their verbs in the non-

finite form, and then have a dummy *cey-* 'do'verb host the aspect/tense marker (94b) (his (3a)).

(94)(a) jooN vann-u-um meeri poo-yi-um

John come-PRF-Conj Mary go-PRF-Conj

'John came and Mary went.'

(94)(b) jooN var-uka-yum meeri pook-uka-yum ceyt-u

John come-INF-Conj Mary go-INF-Conj do-PRF

'John came and Mary went.' (Lit: 'John to come and Mary to go, did')

Finiteness in Dravidian targets MoodP (Amritavalli and Jayaseelan 2005).

Next he shows that even though non-finite, relative clauses cannot be coordinated in Malayalam (95a)(his (10)):

(95)(a) *njaan konn-a-(w)um nii tinn-a-(w)um koozhi

I kill.PERF-REL-CONJ you eat.PERF-REL-CONJ chicken

Intended meaning: 'the chicken that I killed and you ate'

Coordination of two relative clauses also requires a periphrastic strategy: nominalization of the relative clauses and insertion of the copula to host the relativizer (95)(b) (his (11)):

(95)(b) njaan konn-a-t-um nii tinn-a-t-um aay-a koozhi

I kill.PERF-REL-NOM-CONJ you eat.PERF-REL-NOM-CONJ be.PERF-REL chicken

'the chicken that I killed and you ate'

Similarly clauses with the finite negation *illa*(which originates in NegP and incorporates into the Mood head -- cf. Amritavalli and Jayaseelan (2005)) also cannot be coordinated (96)(his 21):

(96) *John wann-illa-um, Mary pooy-illa-um.

John come.PERF-NEG-CONJ Mary go.PERF-NEG-CONJ

Intended meaning: 'John didn't come and Mary didn't go.'

Periphrastic strategies involving *do*-support are necessary for such coordination too.

What all this add up to for Jayaseelan is that the MoodP (on which only one of agreement, true modals and finite negation *illa* can show up), the coordination marker and the relativizer are in complementary distribution, because they compete for the single position available in the C domain below the ForceP. He demonstrates in detail the composition of the C domain and the positions available in it, which I do not detail here as it is not crucial to the issue at hand; suffice it to say that Merge of *-a* in C prevents Merge of Mood, which prevents finiteness as well as coordination.

Adjectives are reduced relative clauses, and the same phenomena are found for adjectives too (his 13, 14):

(97) *kaRutta-(w)um weLutta-(w)um

black-CONJ white-CONJ

'Black and white'

(98) kaRutta-t-um weLutta-t-um

black-NOM-CONJ white-NOM-CONJ

'black and white'

Now, Bhatt (2014) refutes the part of Jayaseelan's above argument about the co-occurence restriction on coordination: he argues that such a co-occurence restriction could be the fallout, incidentally, of a subcategorization restriction on coordination. He shows that a restriction on the nature of the complement that Malayalam coordination subcategorizes for can easily derive the same effect, and that it does not necessarily have to do with a competition for the C position with the relativizer and Mood.

However, the part of Jayaseelan's (2014) story relevant to this dissertation, viz, relativization, also faces unanswered[25] questions Jayaseelan mentions that according to Amritavalli and Jayaseelan (2005) Mood comes with an agreement matrix similar to Chomsky's (1998) Tense. If agreement is the reflex of finiteness, and *-a* competes for the C/Mood position that hosts agreement, then the agreement features should in fact not surface in relativization contexts because these are never finite. In fact, however, when relative clauses/adjectives occur in the predicative position (99a), or are nominalized (99b) or are free relatives (99c), they all show default agreement, Consider (99a) where the agreement marker is *-van*, and (99b-c), where it is *-tu*:

(99)(a) raaman muutt-a-van aaNu

Raman mature-REL-3MS be.PRES

25 In fact there are other unanswered questions and counterarguments to Jayaseelan's (2014) analysis. For instance, neither Jayaseelan (2014) nor Bhatt (2014) would be able to explain the acceptability of sentences like (x) below where there seems to be coordination of two finite verbs, with the imperfective aspect marker *unnu* hosted by the copula:

(x) (kalyaaNa-viiTT-il) aaLkkaaR vannum pooyum irunnu

Wedding-house-LOC people come.PRF-Conj go.PRF-Conj be-IMP

Intended: 'People kept coming and going (to and from) the house at which the wedding was taking place.'

I will not attempt an explanation for this at present as it is not directly related to my object of inquiry.

'Raman is elder' OR 'Raman is the elder one.'

(99)(b) avaL vann-a-tu nann-aay-i

3FS come.PRF-REL-3NS good-be-PRF

'It is good that she came' (Lit. Her coming was good.)

(99)(c) nii paRanj-a-tu

2S say.PRF-REL-3NS

'What you said'

3.1.4 Mathew (2007)

As mentioned before, Mathew (2007) in her analysis of Malayalam adjectives as participial relative clauses (PrtRelCs) (following Asher and Kumari (1996)), seems to consider *-a* to be in C like Anandan (1985) and Jayaseelan (2014). However, her account is built around the agreement facts, as will be detailed below.

Mathew distinguishes PrtRelCs from true participials, which according to Chomsky (2004/2008) cannot license a nominative subject because they lack a person feature (T_{def}). Unlike true participials, Malayalam PrtRelCs can have a nominative subject[26].

She classifies PrtRelCs into two types: Type I essentially has a gap in the relative clause for the argument that has become the head noun (100), whereas Type II has no gap and has been called "headless" (101, 102):

(101) jo:N me:ri-kku koDutt-a pasu

26 However in some other languages, participials of transitive and unergative verbs are taken to be able to license external arguments unless they are passive participles. Cf. Estela (2007) among others. Also see section 3.5 below.

John Mary-DAT gave-REL cow

'The cow that John gave to Mary'

(102) jo:N me:ri-kku pasu-(in)e koDutt-a-tu

John Mary-DAT cow-ACC gave-REL-sg.neut

'That John gave Mary a cow'

(103) jo:N me:ri-kku pasu-(in)e koDutt-u enn-a-tu

John Mary-DAT cow-ACC give-PST COMP-REL-sg.neut

'That John gave Mary a cow'

Both the types of PrtRelCs have the relativizer *–a* (which she calls the participial marker, following Asher and Kumari 1996). This element has to be either obligatorily succeeded by a nominal (104a) or take the agreement marker for the noun it is modifying (104b):

(104)(a) ka:N-unn-a *(kuTTi)

see-PRES-REL child

'The child that sees'

(b) ka:N-unn-a-van

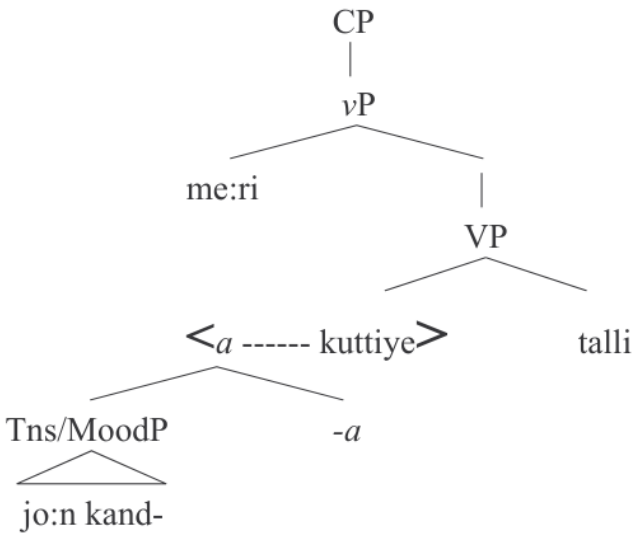
see-PRES-REL-3sm

'The one who sees'

It is the feature description of –*a*, she argues, that can explain this[27]. As explained in section 2.3.3, following the Pesetsky and Torrego (2005) system of valuation of features, the feature description of –*a* is suggested to be [iΦ unvalued], which probes into the following nominal for valuation of its features. This is exactly what happens in the case of Malayalam adjectives too.

In the case of Class I PrtRelCs, the matrix clause and the PrtRelC are simultaneously built in the workspace. Once the PrtRelC is completely merged, the unvalued features of -*a* require it to be pair merged to the head noun in the strong phase (matrix CP) in order to prevent the derivation from crashing. Her structure is as shown below.

(105)



27 This is reminiscent of Jayaseelan's (1995/1999) suggestion that Malayalam third person pronouns avan, avaL, atu, ivan, ivaL, itu are derived from demonstratives aa 'that' and ii 'this', which take the gender and number inflection of the absent noun complement in order to be able to "stand alone" in D. However in his earlier work, the –a is actually claimed to be a 'relative pro-form' that takes the gender and number agreement marking.

For her, adjectives are of two types, either Root + *a* (106) or a frozen form of a PrtRelC (107). Thus in predicative position, where there is no nominal following the adjective, it takes the number and gender agreement morpheme (108):

(106) nall-a pe:na

good-REL pen

'Good pen'

(107) kaRutt-a pe:na

black.PRF-REL pen

Black pen

(108) pe:na kaRutt-a-tu a:Nu

pen black.PRF-REL-sg.neut be.PRES

The pen is black.

The fact that both adjectives and relative clauses use the same *-a*, she adds, is an explicit evidence for Pesetsky's (2004/2007) claim about the resemblance between adjectives and RelCs. The basic difference between the two types of PrtRelCs is in the way the *–a* is valued. While the type I PrtRelC is pair-merged to the head noun that it modifies, type II PrtRelCs either agree with the subject or undergo default singular neuter agreement. Applying this account to explain the behaviour of adjectives, at least one type – the Relative clause-like class – behaves in both ways: in attributive positions they behave like Type I and in predicative like Type II PrtRelCs.

Even though Mathew does not explicitly state what category she considers *-a* to be, it is clear from her mention of Pesetsky's (2005) argument about the

feature composition of C in relative clauses that she considers *-a*as a C element (Mathew 2007: 230):

> "Pesetsky (2005) has, in fact, argued that the C-layer of RelCs has unvalued Φ-features. It differs from declarative C (but resembles adjectives) in lacking valued Φ-features of its own. This is exactly what happens in the case of PrtRelCs in Malayalam; *-a*is the morphological manifestation of [iΦ unvalued]."

Thus it can be seen that Mathew (2007) also goes for a phi-feature agreement based story, different from Jayaseelan (2014). A similar account has been proposed by Baker (2003b) for Japanese. We will look at it in the next section.

3.1.5 Baker (2003b)

Baker (2003b) analyzes a class of adjectives in Japanese that he calls verbal adjectives. They obligatorily take a tense suffix when modifying a noun attributively (109a) and predicatively (109b) (Baker's examples 1 and 5 respectively), and are considered to be more "verby" than other adjectives:

(109)(a)utsukushi-*(i) onna

Beautiful-PRES woman

'a beautiful woman'

(109)(b)Hanako-wa utsukushi-i

Hanako-TOP beautiful-PRES

'Hanako is beautiful.'

The tense marker is a "fusion of a copular element and a tense marker", making the adjective a relative clause. Other properties of relative clauses are also found to be applicable to these adjectives: no strict restriction on the

order of the adjectives when they stack, unavailability of nonintersective readings, etc.

However they do show properties of adjectives like the ability to appear in resultative secondary predication structures and in the complement of Degree Phrases. They also behave differently from unaccusative verbs in the unaccusativity diagnostics like the floated quantifier test. Thus they are not an intermediate category between verb and adjective, they belong to the category of adjectives except that they cannot attributively modify nouns.

Drawing on data on adjectival modification in various languages, he posits that the Japanese-type adjectives lack the phi-features needed to agree with the noun in order to modify the noun, which is in turn a requirement for adjunct modification since unlike complements adjuncts do not have selection relationship with the head[28]. Therefore these adjectives cannot enter an attributive modification relation with the noun, and instead have to form "relative clause-like structures" like verbs.

In a concluding note he suggests that relative clauses in languages like Japanese may have a null NP operator in its Spec CP. This null NP operator has phi features that can agree with the head noun, enabling the relative clause to modify the head noun.

One can see the similarities with the other accounts examined in previous sections, especially with Mathew (2007). The Malayalam relativizer *-a* could be a candidate to be the lexical version of the null empty operator posited by Baker.

28 This is following Chomsky (1995), where Merge requires a feature checking relationship. In a non-selectional relation between two elements, phi-feature checking becomes necessary.

However a problem with Baker's (2003b) account is that it assumes that these reduced relative adjectives are CPs, something that I will challenge later on in the case of Dravidian.

3.2 Alternative analyses

All the analyses we have explored so far have considered adjectives as reduced relative clause CPs, with the relativizer occupying the C position. However, there are indications from certain phenomena that suggest the unavailability of the C projection for the structures we have been investigating. For instance, consider the following adverb test (110) involving the speech act adverb 'unfortunately'. In (110a) it is placed above the root C; however when the (object of the) sentence is relativized, the adverb has to obligatorily be inside the vP (110b):

(110) Context: I did not go to the office today.

(a) niRbhaagyavaSaal enn-e or-aaL anweeSicc-u vann-u

unfortunately 1s-ACC one-person search.PRF-CnjPcpl come.PRF-PST

'Unfortunately a person came looking for me.'

(b) niRbhaagyavaSaal enn-e anweeSicc-u vann-a aaL ...

unfortunately 1s-ACC search.PRF-CnjPcpl come.PRF-A person

'The person who unfortunately came looking for me...'

The adverb ceases to be speaker oriented when the sentence is relativized. Instead it is grammatical in the interpretation of being unfortunate for the relativized object *enne kaaNaan vanna aaL* 'the person who came looking for

me'[29]. The unavailability of speaker oriented meaning points to the lower position that the adverb is now occupying. Taken together with the other problems noted in the discussion of Jayaseelan's (2014) analysis, our contention is that there is no C layer in any of these 'relativized' structures.

However these are not the only kind of analyses available for relative clauses and thereby adjectives. As mentioned before, de Vries (2001, 2002) considers relative markers, relative pronouns and complementizers to be different from each other.

We will examine a few alternate analyses for relative clauses and reduced relative clause structures in the following sections before attempting to propose an analysis of our own.

3.2.1 Menon

Menon (2012, 2014) and Menon and Pancheva (2014) take a different view of the structure of adjectives in Dravidian. They incorporate the perspective of Distributive Morphology framework to explore the semantics of the different syntactic processes they distinguish between, in order to characterize the adjective in Malayalam.

Menon's main thesis is that there is no lexical category called Adjective in Malayalam. Adjectives are neither available from the lexicon nor created in the syntax. For attributive modification a relativization structure is derived in the syntax, and for predicative modification a nominalized structure is derived. What comes from the lexicon are category-neutral primitive property concept roots of the semantic denotation type e^k (kinds). These roots combine with verbal or nominal heads and then get relativized (in the case of

29 The same holds for at least Tamil and Telugu as well: Janani K and KV Subbarao p.c.

attributive modification) or nominalized (in the case of predicative modification).

Menon classifies adjectivals derived from these property concept roots into two classes. Class 1 adjectivals consisting of Relativizing roots first combine with a null verbal head (explaining the claims as to their (de)verbal origins). This changes the root to an <e,t> type. They then take the relativizer *-a*, and can appear in attributive position. Class 2 adjectivals consisting of borrowed, Nominalizing roots are first 'nativized' by adding a nominal suffix *-am*, which changes them to type e. They are thus nominals and need the copula to be able to occupy the attributive position to modify other nouns. The copula is the overt counterpart of the null verbal head of the Class 1 adjectivals and changes the nominal Class 2 adjectival to <e,t> type. The copula then hosts the *-a* that relativizes the adjectival, enabling it to occur in attributive position. However, the *-a* by itself apparently does not contribute any semantics to the adjectival thus formed. Syntactically too, it is not an A' operator, only a morpheme that indicates the constituent that has been relativized.

Predicative modification on the other hand requires nominal(ized) adjectivals. So Class 1 roots modify a pronominal in a relative clause structure (indicated by the number, gender marking on the adjectival) to become nominalized and appear with the equative copula, whereas Class 2 roots directly appear as complements of the existential copula, assigning Dative case to the subject being modified (111-112, which are her (10-11)).

(111) avan nall-a-van aaNu
3MS good-REL-MS be.PRES

'He is good.'

(112) kuTTi-kku dukkham uNDu

Child-DAT sorrow be.PRES

'The child is sad.'

However, there seem to be a few significant gaps in Menon's analysis of Malayalam adjectives. For instance, she asserts that Class 1 and Class 2 adjectivals occur with the equative and existential copulas respectively. However this is not the full picture; especially Class 2 adjectivals can occur with the equative copula too, where it resembles the morphological shape of the Class 1 adjectivals in showing number and gender marking:

(113) kuTTi dukkhi-tan aaNu

Child sad-MS be.PRES

'The child is sad.'

She herself has given data in Malayalam and Tamil where the copulas are used in the opposite class. Some of her assumptions about predicative modification in South Central Dravidian also seem misplaced. Similarly, her account cannot explain some other facts like the permissibility of adjectivals with an aspectual light verb *iTTu* in the predicative position[30] (114). Recall that according to her analysis only nominalized adjectivals can occur in the predicative position.

(114) avan veLutt-iTTu aaNu

3MS white-ITTU be.PRES

'He is (rather) fair.'

30 Hany Babu (p.c.)

Thus there is more to the story than described by her. However, without detracting too much into things that might be out of the scope of our enquiry here, we wish to point to yet other alternatives to the reduced relative clause analysis of adjectives.

The next section deals with an analysis of relative clauses where the relative marker is a D° instead of C°. We examine this analysis in order to explore the possibilities for analyzing the Malayalam relativizer *-a* also as a D.

3.2.2 Ouhalla (2004)

Ouhalla (2004) proposes an alternative analysis to that proposed by Kayne (1994) for Amharic and other N-final (i.e., prenominal) relative clauses, because of the similarities with another Semitic language Arabic. Arabic is an N-initial (i.e., postnominal) type language with two types of possessive structures, called the *free state* possessive and *construct state* possessive. Ouhalla shows that the structure and properties of relative clauses also closely resemble the two types of possessives.

Based on this comparison, and based on the current analyses for the two possessives, he proposes the structures in (115b) and (116b) below for the free state and construct state relatives in (115a) and (116a) respectively:

(115a) l-baTT-a illi ?akalnaa-ha ... (Ouhalla's (1))

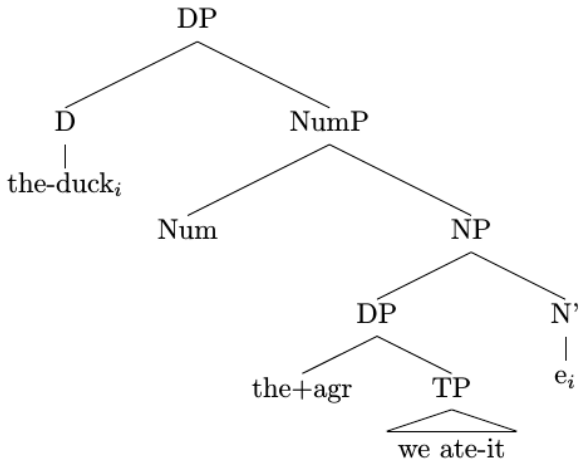
the-duck-F the+Agr we.ate-it

'the duck we ate . . . '

(115b) $[_{DP}$ the$_{D}$-$[_{N}$duck$]_i$ $[_{NumP}$ Num $[_{NP}[_{DP}$ the+agr $[_{TP}$ we ate-it$]][_{N'}$ e$_i$$]]]]$

(his (18))

(115) (c)



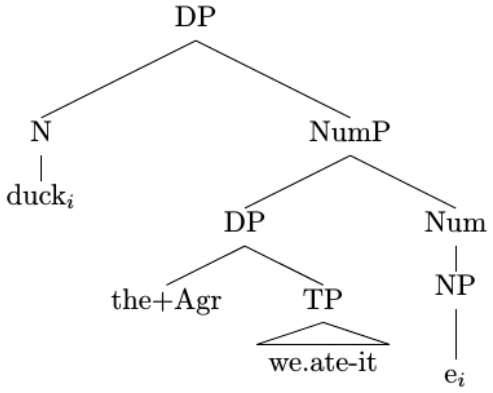
(116a) baTT-it illi ?akalnaa-ha ... (his (10))

duck-F the+Agr we.ate'

the duck we ate . . . '

(116b) $[_{DP}[_{N}$ duck$]_i$ $[_{NumP}[_{DP}$ the+Agr $[_{TP}$ we.ate-it]] [Num $[_{NP}[e]_i]]]]$ (his (17))

(116) (c)



The relative clause is thus analyzed as a DP with the relative marker, described as "the definite article with additional number and gender

inflection" (cf. Aoun and Choueiri (1997) *apud* Ouhalla (2004))[31], as the head, and the initial structure of the relative clause as [D TP] instead of Kayne's [D CP].

For Amharic, which is N-final (see (117a), which is Ouhalla's (19)), he makes the same observation that the relative clause structure and properties resemble that of the possessive, and proposes the structure in (117b) (his (27)):

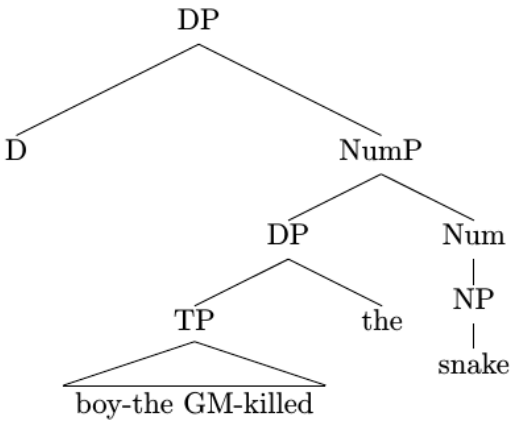
(117a) lij-u ya-gaddala-w ibaab

boy-the GM-killed-the snake

'the snake the boy killed'

(117 b) [$_{DP}$ D [$_{NumP}$[$_{DP}$[$_{TP}$ boy-the GM-killed] the] [Num [$_{NP}$ snake]]]]

(117) (c)



Thus the structure of the N-initial Arabic relative clause and N-final Amharic relative clause is the same, a DP that occupies the genitive position Spec Num,

31 In the case of Hebrew, which has the same complementizer in both the constructions, Ouhalla proposes that the Hebrew relative clause is a [C TP] structure, and suggests that this is a parametric difference within Semiticbetween languages based on the complementizers. Except for this the suggested structure for relativization is the same.

and the word order difference is due to the head raising of the N in Arabic to D, which is widely attested in Arabic noun phrases according to Ouhalla.

This analysis also serves to explain why Arabic, even though an N-initial language, displays typological properties typical of N-final languages, viz. the absence of relative pronouns (cf. Downing 1978:392-394, Keenan 1985:149 *apud* Kayne (1994)) and the presence of different complementizers in sentential complementation and relative clauses (cf. Keenan 1985:160 *apud* Kayne (1994)). These properties follow from the DP analysis of relative clauses, according to Ouhalla.

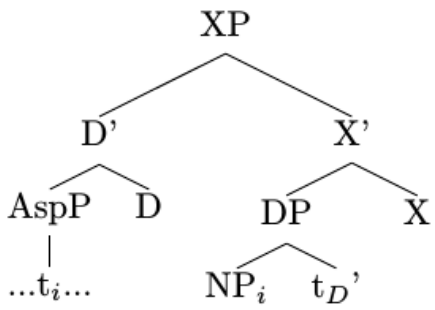
3.3 Towards an alternative analysis

As has been shown in earlier sections, *-a* is referred to as a relative marker or relativizer in the literature on Malayalam relative clauses. It has been claimed to have been grammaticalized from a (plural neuter) agreement marker by historical linguists (cf. Andronov (1975, 1985, 2003), Krishnamurthy (2003) etc.). An alternative suggestion in the context of Kannada has also been put forth that *-a* could be the Genitive case marker that doubles up as a relativizer, as seen in Kannada, Tulu and Telugu. This makes a DP analysis of relative clauses (and therefore of participles and adjectives) plausible, comparable to Ouhalla (2004).

If *-a* is a D, the feature composition of *-a*may include a Baker (2003a) type referential feature, which has to be checked by a following nominal, overt or covert. This nominalizes a participial clause. The *-a* in D then selects the AspP (or TP, if one does not subscribe to Amritavalli and Jayaseelan's (2005) claim of the absence of Tense in Dravidian) as its complement, forming the participle. *-a* because of its own syntactic makeup (the referential feature

mentioned above) probes for a nominal to get the relevant features checked. For this it has three options, viz, promotion of an NP from within the AspP/TP complement to its specifier (participialization or relativization), or Merge of a null N with only phi features, which turns up usually as the default 3sn, resulting in nominalization of the participle, or Merge of an external NP (in which case it becomes a noun complement construction). Further (remnant) movement of D' to some higher Spec position, which for now I will just call XP like Bianchi (1999) and Bhatt (2002) (it could be NumP as discussed in the literature on nominals: that is not crucial for the topic at hand) gives the final word order.

(118)



A consequence of such an analysis is to say that Malayalam relative clauses are actually participials, which is in fact the position I will arrive at in the later sections of this chapter.

The two major problems with this analysis are the lack of evidence for the presence of D in the form of definiteness and other effects, and the stipulation of remnant movement to get the correct word order. These are serious problems and therefore this analysis cannot be entertained.

3.4 Taking stock

We have looked at various analyses for relative clauses and reduced relative clauses in the previous sections, and have found all of them to be lacking in some way or the other in terms of explaning the Malayalam adjective facts. Some questions are still left unanswered.

However we have conjectured based on adverb tests that there may not be a C layer in relative clauses in Malayalam. What then could be a possible structure of the so-called relative clause? We have noticed that participials and relative clauses look alike in Dravidian. Therefore, a possible solution seems to lie in the analysis of participles. This is what we explore in the next section.

3.5 Participles: Estela (2007)

Participles are used in many languages in place of adjectives to modify nouns. In fact the literature is full of 'participial adjectives', 'adjectival participles', 'participial relatives', 'relative participles' etc. Instead of trying to comb through the all of them here, we focus on a recent analysis of participials that seems closer to capturing the Dravidian picture better.

Estela (2007) proposes a minimalist analysis of relative participials as vP phases in languages like English and the Romance languages, and as CP phases in Basque, on the basis of syntactic similarities and differences between the constructions in these languages.

English and Romance past participial relatives cannot relativize the subject or causatives, and there are predicate restrictions on participialization. Thus unergatives are banned, unaccusatives are allowed, and only the passive object of transitive verbs can be relativized using the participle. Even though

traditional grammars and early generative accounts attributed these properties to passivization (these relatives were indeed called passive participles), Estela convincingly demonstrates that the participles are often found to have active interpretations as well. Finally he accounts for the behaviour of these constructions by refuting the claim that they are reduced relative structures, and showing instead that they are actually vP phases, of which only the VP is visible.

Basque, on the other hand, allows subject relativization and does not impose restrictions on the predicates that can be participialized. Both unergatives and unaccusatives are equally good for participialization, and transitives may have an active interpretation. It also has a finite relative clause with slightly different morphology. Thus under the phase complement analysis Basque PPRs are attributed the structure of a CP phase with tensed or tenseless complements.

In allowing the phase complements to be spelled out without the whole phase doing so, Estella argues for non-finite relatives and participials to be instances of Intermediate spell out[32].

32 However, his other thesis that the smallest participials are passives and all others perfect participials is not borne out in terms of the syntactic analysis proposed. A drawback of Estella's analysis is the insufficient differentiation in terms of syntactic structure between the Perfect participle and the passive participle even though he makes such a differentiation in theory. For him, the smallest participle (the spellout of the complement of vP) is passive and the rest (tensed or tenseless complements of CP) are perfect participles. However, Malayalam demonstrates that this is not enough:

(a) njan eZut-i-ya pustakam

1s write-PRF-REL book

'The book I wrote'

(b) enn-aal eZut-a-ppeTT-a pustakam

1s-INSTR write-?-PASS-REL book

'The book written by me'

The passive participle in (x) clearly has more structure than the perfect participle in (x)

3.5.1 Malayalam Adjectives

Under an Estela (2007) type analysis, we find that Malayalam adjectives behave like the defective PPRs of English and Romance. Malayalam adjectives exhibit some predicate restrictions similar to those found in English and Romance PPRs. Just as in English and Romance PPRs, Malayalam (participial) adjectives impose restrictions on the allowed predicates. Basically these adjectives (or adjectival participials) are unaccusative:

(119) uRacc-a tiirumaanam

Become.firm.PRF-REL decision

'Firm decision'

English allows only unaccusatives to be participialized (120) and bans participialization of unergatives (121). Similarly only unaccusatives can be adjectives in Malayalam (122), not unergatives (123) or transitives (124). (Note that these structures are not ungrammatical; the restriction is on being interpreted as adjectives. They are fine as participials: a fact that we will explore in the next section.)

(120) Broken bottle

(121) *run boy

(122) uNang-i-ya tuNi

Dry-PRF-REL cloth

'Dry cloth'

(123) ooD-i-ya kuTTi

Run-PRF-REL child

'The child who ran'

(124) jooN kaND-a paDam

John see.PRF-REL movie

'The movie that John watched'

(ok as participle/relative clause, not adjective)

Most literature on PPRs give a reduced relative clause analysis for the construction (eg. Kayne 1994). However, we have seen that Estela (2007) shows that participles are not reduced relative clauses. English and Romance PPRs are vP phases, of which only the VP is spelt out (Intermediate Spellout). Comparing the Malayalam and English data, we can then extend the Phase Complement analysis to Malayalam as well: Malayalam adjectives are plausibly vP phases like the English and Romance PPRs, with only the complement of the v getting spelled out. Thus the relativizer *-a* selects the vP as its complement, and in order to check an EPP feature it probes for an NP that it can Agree with.

A likely obstacle that can face us is the perfective aspect that appears on these adjectives. However, there have been analyses that show the perfective to be much lower in the verbal projection compared to the other aspects (cf. Cinque (2014), Coon (2013) etc.) Thus we will assume that the perfective is in a vP internal projection, and its presence on adjectives per se will not be a hindrance to this analysis. We will come back to this in the next section.

Thus we have seen that adjectives are participials in Malayalam. Before we go into the details of the Phase complement analysis of adjectives, we will take a look at the larger picture of participialization in Malayalam, because it brings to fore some interesting facts.

3.5.2 Malayalam participles

We have noted in the previous section that unergatives and transitives are not allowed as adjectives in Malayalam, just as in English. However, an interesting contrast can be observed when we look at Malayalam participialization in general. We find that unlike in English and Romance, the participialization of unergatives and transitives is not blocked by the grammar in Malayalam. This is why unlike (121) above, (123) and (124) are not ungrammatical structures.

Examining the Malayalam data in the light of Estela's (2007) Phase Complement analysis, one finds that Malayalam participials pattern with Basque PPRs rather than English. Thus Malayalam allows subject relativization (125), admits unergatives (126a) as well as unaccusatives (126b), as well as allows both the subject and the object of transitives to be relativized (127a,b).

(125) kuTTi-ye kaND-a amma

Child-ACC see.PRF-REL mother

'(The) mother who saw the child' (Lit: the child-seen mother)

(126)(a) ood-i-ya kuTTi

Run-PRF-REL child

'The child who ran' (Lit: the ran child)

(126b) tiLakk-unn-a veLLam

Boil-PROG-REL water

'Boiling water'

(127a) [meeri kaND-a aaL] jooN aaNu

Mary see.PRF-REL person John be.PRES

'The person who Mary saw was John.'

(127b) [meeri-ye kaND-a aaL] jooN aaNu

Mary-ACC see.PRF-REL person John be.PRES

'The person who saw Mary was John.'

This is very interesting since for Estella this difference is a typological or parametric difference between languages, whereas here we find that the same language shows that difference for two different but related constructions.

A crucial difference between Malayalam and Basque participials is that unlike in Basque, Malayalam participials/relative clauses are always non-finite. So Malayalam does not have finite relative clauses and participials like Basque does. Estella attributes their availability in Basque to them being CP phases. As has been pointed out before, the impossibility of having speech act or speaker oriented adverbs within the participial in Malayalam (cf. (110) in section 3.2) makes a CP phase analysis suspect. In fact if Jayaseelan (2014) (cf. section 3.1.3 above) and Amritavalli and Jayaseelan (2005) are on the right track about finiteness being in C in Malayalam, then the non-availability of finite relatives could correspond to not projecting C in the relative and participial structures. This will indeed be the direction we will be exploring here[33]. This is the attraction of the Intermediate spellout analysis for explaining Malayalam participials.

33 Bhatt (2014) shows that a co-occurence restriction is not necessarily proof for such a competition for one and the same position. There could be other, independent reasons for such restrictions, like subcategorization that only nominal elements can be coordinated by *-um* in Malayalam. The analysis I am going for would make a similar argument: if finiteness is in C and relativization does not involve projection of C at all, then one cannot expect to find finite relatives in the language!

There is another crucial difference between adjectives and other participials in Malayalam, which is indicative of the structural difference between the two constructions: whereas usually participials can have any aspect (128a,b), adjectives always show perfective[34] aspect morphology (129):

(128)(a) or-aaL var-unnu

One-person come-PROG

'A person (somebody) is coming'

(b) var-unn-a aaL

come-PROG-RELperson

'(The) person who is coming' (Lit. The coming person)

(129) melinj-a paSu

Become.lean.PERF-RELcow

'Lean cow'

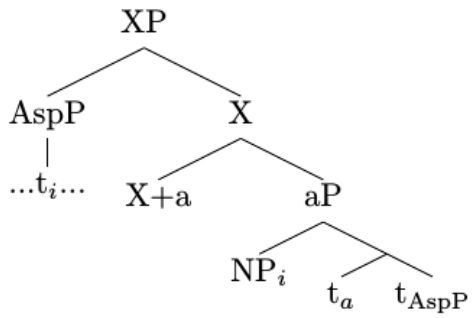
As we mentioned in passing in section 3.5.1, perfective aspect is much lower in the vP than other aspects. Thus adjectives are vP participials, whereas regular participials are bigger than vP though smaller than CP. We propose that regular participials are AspPs selected by the relativizer *-a*.

Logically our proposal then must be that after the structure is built till the AspP, the relativizer *-a* merges, taking AspP as its complement. *-a* would then probe down into the AspP for satisfying some feature checking requirement

34 Though I am not committed to the presence or absence of Tense projection in Malayalam or Dravidian, I do agree with Amritavalli and Jayaseelan (2005) that the morphemes traditional grammar has interpreted as Tense are actually aspect morphemes.

(let us say EPP). It locates the required NP goal, and either raises[35] the NP to its specifier and Agrees, or does an in situ Agree operation and as a consequence, phi-features turn up on *-a* as agreement morphology. After this, movement of the AspP to the Spec of a higher functional projection XP and head movement of *a* to the functional head X would be needed to ensure the word order.

(130)



Thus we claim that Malayalam adjectives and participials are actually not reduced relative clauses as has been claimed in the literature. Adjectives are participials that do not project beyond the vP layer; whereas regular participials are AspP structures, a little bigger than adjective participials but definitely smaller than CPs.

This unification of adjective and participial structures would also predict the existence of structural ambiguities in adjectives where a perfective participle and an adjective would look the same on the surface but have different meanings. This is borne out in Malayalam in adjectives like *cuvanna* 'red'. Thus (131a) below is ambiguous in meaning between an adjective that

35 An additional assumption that any such 'raising' analysis of participials would have to make is that the v here is defective and therefore cannot be a phase head. I think this is plausible if we read together Chomsky's (1998) conceptualization of T as defective in participles and the claims that Dravidian does not have a T at all.

signifies the property of 'redness' and a participle that signifies the process of "becoming red". This can be disambiguated by appropriate context as shown in (131b,c), where (131b) can only refer to an inherent property of redness and (131c) can only refer to a process of becoming red:

(131a) cuvann-a tuNi

Red.PRF-REL cloth

'Red cloth' or 'Cloth that has become red'

(131b) cuvann-a cembaratti

Red-REL hibiscus

'Red hibiscus'

(131c) coora viiN-u cuvann-a maNNu

Blood fall-ConjPcpl red.PRF-REL soil

'Soil that has become red by blood falling on it'

Thus (131b) is an adjective with only a vP layer, whereas (131c) is a participle, an AspP with a null Asp head.

However, this analysis does not shed light on our earlier problem of what exactly *-a* is. At this point there is nothing except stipulation that can tell us what the *-a* might be.

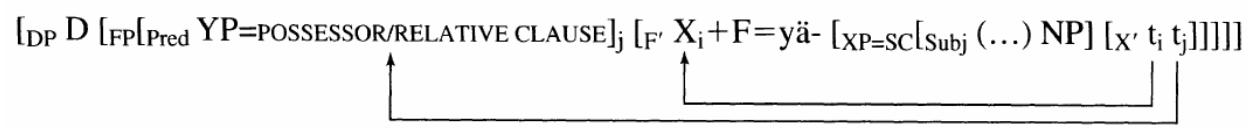
3.6 Predicate inversion

On the basis of a comparison with Estela's (2007) conceptualization of Intermediate Spellout of non-finite categories like participials, we have claimed in the previous sections that Malayalam adjectives and participials are not reduced relative clauses; instead they are vPs and AspPs respectively,

selected by the relativizer *-a*. However that analysis is not complete. AspP is not a phase, and presumably neither is vP. This means that our analysis is not a phase complement analysis. If vP is not a phase where intermediate spellout makes the external argument position (Spec vP) unavailable, then the predicate restrictions in the case of adjectival participles cannot be explained. Thus it seems that *-a* must merge even before v merges. Presumably the position of perfective aspect is above VP, thus adjectives are now smaller AspPs. We now need to investigate as to what *-a* might really be. We have considered in earlier sections the possibility of *-a* being analyzed as a C and as a D, and seen that both are unsatisfactory.

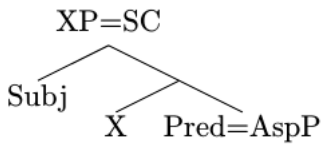
Den Dikken (2006) re-examines the Amharic and Arabic relative clauses as analyzed by Ouhalla (2004) (cf. Section 3.2.2), and proposes an alternative analysis of the relative marker as a Linker. A linker is lexicalized when the functional head of a small clause predication structure head-moves to a higher functional head. This causes the small clause phase to be extended upto the functional projection above, and makes the Specifier position of the higher functional head equidistant for A movement of the predicate. The predicate now moves up to the Spec of the higher functional head, inverting the structure. His structure (example (4) in his paper) is reproduced in (132) below:

(132)

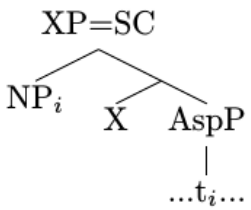


Adapting Den Dikken's idea of Predicate Inversion[36], I propose that the relativizer *-a* is also a Linker. After AspP is built, a functional head X is merged above the AspP, in order to create a predicational small clause structure (133a). The subject of the predication is to be merged in the Spec of the small clause. A DP/NP from inside the AspP (which is in the complement position of XP) raises to Spec XP due to the (strong) EPP features of the XP, and this gives a Subject - Predicate configuration of predication (133b). Now as per den Dikken this small clause is a phase. The X head raises to a higher functional head F, creating the linker that lexicalizes as *-a* and extending the phase to Spec FP. This enables the AspP complement of XP to move up further to Spec FP, completing the Predicate Inversion (133c). This derives the participial structure of Malayalam (xd):

(133) (a)

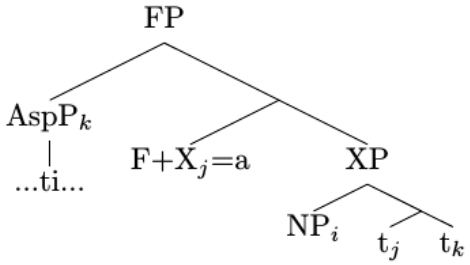


(133) (b)



36 Note that Kayne (1994: 101) proposes that all APs can be generated as complements of Io and raised to Spec CP under a reduced relative clause analysis: "All such APs will originate in predicate position and prepose to their subject NP by moving to Spec, CP." In section 8.6 he also considers French de as D/P, which den Dikken (2006) analyzes as a linker.

(133) (c)



For the Amharic finite relative clauses, Den Dikken (2006) proposes raising of the finite V into C within Spec FP, which is not available in Malayalam because there is no CP involved. Thus Malayalam participials can only be non-finite. Similarly for definiteness and agreement on the determiner etc. he has movement of F to D etc, which are also not available for Malayalam.

Thus this account explains what *-a* is, how *-a* enables predication, and also predicts correctly the lack of finiteness and definiteness etc. in Malayalam participles and adjectives.

3.7 Conclusion

In this chapter we have examined the existing analyses of adjectives as reduced relative clauses and explored alternatives to it. We showed that the analyses that treat the relativizer *-a* as a C element does not seem plausible as there are indications that there might not even be a C layer in these structures.

Then we looked at alternative analyses that treated *-a* as a D element and reached a potential analysis, but rejected it because of lack of evidence for definiteness effects and the need to stipulate remnant movement to get the correct word order.

Next we turned to the analyses proposed for participles because Dravidian adjectives, participles and relative clauses look the same. We reached the conclusion that since there is no C involved, these constructions are all actually participials, adjectives just being smaller in size than regular participials.

Finally we found that adopting a Predicate Inversion analysis explains what *-a* is, how it functions as well as gets the word order right: *-a* is a linker that lexicalizes a functional head to which the head of a predicational small clause structure has merged, extending the small clause phase in the process and making the specifier of the higher functional head available for the predicate to move to.

Recall that in chapter 2 we had listed several characteristics of the relativizer *-a*. Is our analysis of *-a* as a linker in a predicate inversion structure capable of explaining all of them? Its occurence in all the structures mentioned (adjectives, participials, relative clauses, clausal complements of N, clefts) is because of its role as a linker and because the relativized structures are participles of different sizes. What looks like its need for a nominal to follow it actually follows from the requirements of the small clause structure of predication. We can safely assume that this is in turn driven by the checking/EPP requirements of the functional small clause head. Since merge of *-a* seems to pre-empt the merge of the C layer, finiteness can never be achieved by these relativized constructions.

Regarding coordination, it is a complex interaction of independent principles that end up looking like a prohibition on the coordination of structures relativized/participialized by *-a* (cf. fn 33, see also Bhatt (2014) for a detailed description of the principles that govern coordination and how they interact with other phenomena).

Now that we have figured out what *-a* is and what its syntax is, the next step is to try to explain the morphological typology we saw in Chapter 2 for the different Dravidian languages, and to address the variation found within Dravidian. These are the tasks we will take up in the next chapter.

IV

Addressing Variation

In this chapter we try to account for the rich morphological forms we found in the different Dravidian languages (cf. Chapter 2), and explore the roots of the variation found between these languages. Recall that each language has at least one unique form not shared with the other languages, and on the other end of the spectrum there are strategies that look universal to Dravidian. In between these two extremes there are also some forms that seem to be available to a bunch of the languages but not the others.

In this chapter we will try to find an explanation for the variation we find within Dravidian, both in terms of the various structures available for the purpose of adjectival modification as well as for differences in the interpretation of the same form when it is shared by a group of languages.

In the following section(s) we will explore a possible analysis for the forms available in Malayalam, based on the semantics of adjectival modification. In the sections following it we will attempt an explanation of the syntactic variation found within Dravidian that we mentioned above.

4.1 Morphological typology of attributive modification strategies in Dravidian revisited

First of all let us look at the different forms Dravidian makes available for attributive modification of nouns.

Sl No	Form of adj	Eg.	Lgs that have the form
1	Bare adjectival root	[Kannada:] haLe-gannaDa old-Kannada 'Old Kannada'	Malayalam, Tamil, Kannada, Telugu
2	Root + *-tu*	[Malayalam/Tamil] vala-tə kai Right-3sn hand 'Right hand'	Malayalam, Tamil
3	Root + *-ttu*	[Tulu] posa-ttu illu Old-TTU house 'Old house'	Tulu
4	Root + *-an*	[Malayalam] paZa-njan riiti-kaL Old-3sm way-PL 'Old/outdated practices'	Malayalam, Tamil (only as nominal in pred position)
5	"True adj" Root + REL	[Telugu] pedd-a paatram	Malayalam, Tamil, Kannada, Tulu, Telugu

		Big-REL utensil ‘Big utensil’	
6	Root + AGR	[Gondi] cokoT-na peeDi Good-3SN girl ‘Good girl’	Gondi
7	Participial adj Root + PRF + REL	[Tamil] vatt-i-na aaru Dry.up-PRF-REL river ‘Dried river’	Malayalam, Tamil, Kannada, Tulu, Telugu, (Gondi)
8	Bare N	[Telugu] ceDu alavaaDu Badness habit ‘Bad habit’	Malayalam, Tamil, Kannada, Tulu, Telugu, (Gondi)
9	Bare deverbal N	[Tulu] lungeelə nadi Dried river ‘Dried river’	Tulu
10	N + Copula	[Gondi] Daŋŋal aatt-oor kaaNDi Tallness be-3SM boy ‘Tall boy’	Malayalam, Tamil, Kannada, Tulu, Telugu, Gondi
11	N + Genitive	[Tulu] eLattə-da kaayi	Kannada, Tulu, Telugu, Gondi

		Tender-GEN fruit 'Tender fruit'	
12	N + Locative	[Tamil] pakka-ttə viiDu Side-LOC house 'Nearby house'	Tamil
13	Locative + REL	[Malayalam] taaZ-att-e nira Bottom-LOC?-REL row 'Bottom/lower row'	Malayalam
14	Adv + Copula	[Telugu] kotta-gaa unn-a illu New-ADVL.PRT be-REL house 'New house'	Telugu
15	Other derived form	[Gondi] kaar-yaal (voor) kaNDi Black-? (that) boy 'Black boy'	Gondi

Table 8: Attributive Modification in Dravidian

We find that the most productive strategies available to all the languages studied here are:

(i) participials of verbs (sl. no. 7).

(ii) participialization of a copula that takes a noun as its complement (sl. no. 10)

(iii) direct modification of a noun by another bare noun (cf. sl. no. 8 above)

Out of these, we have explored in detail the structure and working of the participial in sections 3.5 and 3.6. Presumably the Copular construction also works on similar lines, with the copula undergoing the same process of participialization as any other verb. The direct modification strategy of a bare noun modifying another noun is also available to all the Dravidian languages, and needs analysis.

The rest of the strategies are listed below in decreasing order of popularity:

i) root+relativizer ("true adjectives": 5 languages)

ii) the 'bare root' strategy (4 languages)

iii) the 'N + Genitive' strategy (4 languages).

iv) The 'root + agr' in its different avatars are shared on an average by two languages each

v) exactly one language each has Bare deverbal Nouns, N+Locative and Locative+relativizer strategies.

Our next step is to try and arrive at the syntactic structures of these forms.

4.2 Morphology, Syntax and Semantics

In an attempt to explain the proliferation of strategies for adjectival modification, we examine a syntactico-semantic account of adjectives proposed by Cornilescu (2009) and further explored in Cornilescu and Nikolae (2016) for Romanian.

Cornilescu (2009) argues in detail that the syntactic type, ontology and semantic combinatorial criteria of adjectival modification determines its syntactic structure. In this section and the next, we investigate whether the

semantics of the adjectives can throw any light on the richness of the morphological strategies available for attributive modification in the Dravidian languages.

4.2.1 Cornilescu (2009)[37]

Three criteria are used to classify adjectives, the syntactic criterion of whether the A combines with an NP or DP, a (carlsonian) ontological criterion of whether the adjective is object level or kind level in interpretation, and a semantic combinatorial criterion that decides whether the adjective combines with the nominal by Theta identification or Functional application. The system of denotation types of adjectives that emerges from the above derives the syntax of the adjectives.

Thus under the syntactic criterion we can distinguish between NP-adjectives and DP-adjectives. NP-adjectives typically merge as adjuncts of the NP, whereas DP-adjectives may either "merge as small clause predicates that combine with DP subjects" or "be projected as DP modifiers inside the DP".

The semantic combinatorial criterion decides whether adjectives combine with the NP/DP by Functional Application (cf. Heim & Kratzer 1998) or Predicate Modification (also called Theta Identification) (cf. Higginbotham 1985). Functional application composes two elements, one of whose denotation type can serve as the argument for the function denoted by the other (eg. It applies to elements of types <e,t> and <e> to yield an element of

37 The initial assumptions she makes are as follows: there is a correspondence between the structure of CP and DP: both contain other phases inside them. Within the DP phase there is an nP phase or n*, whose head is Num/Q (cf. Svenonius 2004). Phases also have peripheries that check P-features. Before being sent to PF they are linearized by Recursive Linearization *a la* Kremers (2004). Individual languages choose between the ordering principles of linearization (much like parameters): Principle H requires the linearization of heads first, whereas Principle S requires all selected elements to linearize first. A separate Adjunct parameter decides whether adjuncts linearize before heads or vice-versa.

type <t>). Thus the two elements combining are not of the same level. On the other hand Theta Identification composes two elements of the same denotation type by set intersection or conjunction (eg. Two elements of type <e,t> combine to yield another element of type <e,t>).

Under the ontological criteria, DPs are canonically object-level individuals <e>, and may also be kinds <k>. NPs "may denote a kind <k>, an object level predicate <e,t>, or a kind level predicate <k,t>." The As are sensitive to the denotation of the NPs they modify, because of the nature of semantic composition criteria mentioned above. Thus there are object-level As (type <e,t>) that denote properties of objects and kind-level As (type <k,t>) that denote properties of kinds. As may have more than one denotation too, which shows up as ambiguities like that in the famous example *beautiful dancer*. In addition, a third type is proposed, replacing the traditional denotation for intentional (non-intersective) As: <<k,t>,<k,t>>, i.e., properties of properties of kinds.

What the theory predicts based on the interaction of all the above criteria is summarized below:

There are three types of adjectives, object level with denotation <e,t>, intersective kind level with denotion <k,t> and non-intersective kind level with denotation <<k,t>,<k,t>>. Their properties are as shown in the table below:

Object level As	Intersective kind level As	Non-intersective kind level As
<e,t>	<k,t>	<<k,t>,<k,t>>
Qualifying As: descriptive/physical property As (eg. drowsy);	Relative (denominal or based on nominal concepts) (eg. National, rural, solar,	Intentional (eg. Alleged, former, future, ?young)

evaluative As (eg. rare, exceptional) single property of noun eg. Heavy, hot, tall, dark Gradable	agricultural, territorial) (set of properties) Ungradable (can include Qualifying As)	
Can directly apply to entities like Proper Nouns.	Cannot directly apply to <e> (eg. Proper noun)	Cannot directly apply to <e> (eg. Proper noun)
	Lacks scope (no stacking), only intersective reading	Stacked readings
May be Predicative	Relative: May be used predicatively if subject phrase supplies suitable kind reading	No predication
Restrictive (denote a subset of the set denoted by the NP) eg. heavy box	Restrictive Eg. rural policeman	—
DP As: s-select object- or kind-denoting DP as subject; merge as small clause complement predicate; combine by functional application NP As: attributive; merge as NP-adjuncts in nominal domain; combine by theta	DP As: s-select object- or kind-denoting DP as subject; merge as small clause complement predicate; combine by functional application NP As: attributive; merge as NP-adjuncts in nominal domain; combine by theta	NP As that combine with NP by functional application. Theta identification not available. NP must be selected argument of A: S-select and c-select NPs.

identification; intersective or restrictive	identification; intersective or restrictive	
No c-selection of argument	No c-selection of argument	C-selection : head complement configuration Or Spec of functional head that selects NP argument

Cornilescu adopts Laenzlinger's (2005) ideas of d*-periphery (following the analogy of DP with CP; also cf. fn. x). Laenzlinger postulates a "...Split D area, between a lower $D_{determination}$ which checks agreement, and a higher D_{deixis}, responsible for referential interpretation. The functional projections that check P-features are supposed to be contained between the inner and the outer D." (cf. Cornilescu 2009:43) The P-features of the d* have the properties [+Modality] and [+Quantification] as central to them. Adjectives can merge here if they can "contextually incorporate suitable P-features", making them able to express subjective evaluation. D* periphery adjectives express properties of objects and are of type <e,e>: i.e, they are DP adjectives that merge as selected Specifiers. Semantic composition is done through functional application, and such As are non-restrictive. They are DP internal predicative As.

As for the n*-periphery, it is "the space between the NumP and the lexical NP, containing FPs that check P features." The As that occupy this position are kind level modifiers with <<k,t>,<k,t>> denotations. Thus "modifiers that classify the referent (I.e., kind-modifiers) are closer to the head than modifiers that describe the object in context." Similarly generic sentences, which require kind readings, use intentional As, and these occupy the n*

periphery. Non-restrictive and non-identifying As including emotive As also occur in the n* periphery. Cornilescu (2009) also notes that cardinals cannot be forced into kind interpretation, so they act as a boundary between n* periphery and d* periphery.

In VO languages, the prenominal position can be occupied by participles only if it checks a suitable P feature. They are either n* or d* periphery constituents. The necessary property of such participles is that they should be quantificational - true of statives, resultatives and quantified eventives, or eventives modified by manner adverbs.

In Romanian, restrictive modifiers merge as adjuncts, and non-restrictive modifiers that c-select the argument NP merge as specifiers of functional heads. The highest As in the n* domain are intentional As. Being prenominal coerces the kind-level interpretation on As (in Romanian) and they behave like intentional modifiers w.r.t. scope, i.e., they stack. Being at the n* periphery makes As quantificational (gradable) and modal. (This could probably be taken as comparable to Cinque's (1993b) source of adjectives: "in addition to reduced relatives, APs can be generated in specifiers of functional positions between D and N," as quoted by Kayne (1994)).

In the next section, we try to apply this theory to Malayalam adjectives.

4.2.2 Morphology reflects Semantics and Syntax: the case of Malayalam adjectives

We begin with a caveat that we will focus on Malayalam again for the time being, because of the constraint of the level of native speaker intuition and judgment required for semantic analysis.

With this caveat/disclaimer, we turn to the examination of the Malayalam As formed according to the different strategies shown in Chapter 2, with a view to determining whether or not Cornilescu's (2009) semantic typology holds good for Malayalam. However, what we are essentially going to do is to reverse the application of the theory: Looking at the (derived) properties of the adjectivals, we try to arrive at the ontology, semantics and therefore the syntax of these adjectivals.

The main properties we look at are as follows:

(x) (a) Can the adjectival be used predicatively?

(b) Can it be used directly with type <e> entities like proper nouns?

(c) Does it show scope effects (ordering restrictions) when used along with other adjectives?

In addition, other properties like restrictive and intersectional interpretation, denominal origins, nature of modification etc. will also be considered wherever possible. The answers to these should give us a clue as to what type of adjective it is, from which we will arrive at the semantics and syntax of the adjectival.

1. Bare Root + N

These "adjectives" take the form of only the adjectival root, directly modifying the NP. In Malayalam this process is not very productive: they generally can be used to modify only a very restricted set of nouns (except maybe in the case of roots *ceRu-* 'small' and *val-* 'big'), and a lot of the resulting "compounds" have an idiomatic meaning. Consider these examples:

(134) paZan-gatha

Old story

'Fable/legend/ an outdated story'

(135) putu-mukham

New-face

'A person who is new to the place etc'

(136) nan-muttu-kaL

Good-pearl-PL

'Precious pearls'

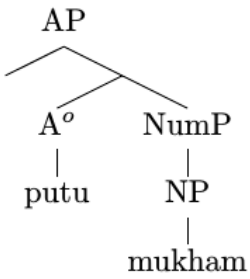
(137) van-maram

Big-tree

'A big/huge tree'

Adopting the analysis of Cornilescu (2009) and Cornilescu and Nikolae (2016), I propose, based on the behaviour of these adjectives (detailed below) that these adjectives are Intensional, and map properties to properties. The structure they propose for Int(ensional)-As is of an adjective head that selects a projection of the NP (x). This structure is in turn adapted from Bernstein (1993).

(138)



According to Cornilescu and Nikolae (2016), Int-As are of the denotation type <<k,t>,<k,t>>, and since there are no NPs or DPs that are also of the same type, the combinatorial option of Theta Identification is ruled out, and Int-As necessarily combine by Functional application with the nominals they modify. Also, they cannot be predicative (139), indicating that their denotation cannot be <e,t> or <k,t>[38]:

(139) *maram val- aaNə

tree big be.PRES

Intended: 'The tree is big.'

They are NP As and not DP As, indicated by the impossibility of demonstratives, quantifiers etc. occuring between the A and the nominal:

(140) *ceRu aa paZam

Small that banana

Intended: 'that small banana'

These facts rule out a small clause predication structure. This in turn leads to the only other option left: the NPs are (c- or s-)selected arguments of a head A°. Following Bernstein (1993), in case of C-selection the adjective is a head that selects a projection of the NP. In case of s-selection, the adjective occurs in the Specifier of a functional head that selects the appropriate NP complement. In Malayalam the roots are bound morphemes that form compounds with the NPs they modify, and these compounds tend to have idiomatic meanings. This hints towards a head-complement structure rather than a Spec-of-functional-head structure.

Another property of Int-As that fall out from this analysis is that when adjectives stack, Int-As being heads that select the NP remain closest to the

38 Only an <e,t> or <k,t> function can take an <e> or <k> as argument and yield <t>, which a clause always is.

NP and does not allow any other adjectival to occur between them (141a-b), unless they are also Int-As (141c).

(141) (a)ceRiya veN-meegha-ngaL

Small white-cloud-PL

'small white clouds'

(141)(b)*veN ceRiya meegha-ngaL

white small cloud-PL

'small white clouds'

(141)(c) ceRu-veN-meegham

Small-white-cloud

'small white cloud'

To sum up, based on the properties of the adjective, viz, the ability to be used predicatively and scope effects in the form of stacking and ordering restrictions, the theory predicts that the adjective is of type <<k,t>,<k,t>> (i.e., intensional). Therefore they must combine with an NP/DP of type <k,t> by functional application, and syntactically they must be generated as a head that selects the NP as its complement.

2. Root + agr

These are adjectivals which show agreement morphology in attributive position. All other adjectivals show agreement morphology only in the predicative position, or at least when there is no noun following it.These adjectivals may also stand alone and be interpreted as nominals.

These are of two types based on the differences in their behaviour:

A) Root + *-an* :

These are the adjectivals that take the form of root + default Masc agreement marker, even when the nominals modified by them are neuter nouns. Occasionally there is an actual masculine or feminine nominal and the agreement marker on the adjective matches with the gender of the noun. These adjectivals can usually be used predicatively, since the agreement marker seems to nominalize the adjectival.

(142) paZanj-an riiti-kaL / saari-kaL

Old-M way-PL / saree-PL

'Old/outdated customs / (very) Old sarees'

(143) putt-an uNarvə / uDuppu-kaL

New-M enthusiasm / dress-PL

'?Fresh enthusiasm / new dresses'

(144) iiR-an maNNə / tuNi

Wet-M soil / cloth

'Wet soil/ wet cloth'

(145) vaTakk-an paaTTə

North-M song

'Song of the north' (refers to the genre of folk songs from North Kerala)

(146) cuvapp-an abhivaadyam (?)

Red-M salute

'Red salute'

B) Root + *-tu* :

These adjectivals, on the other hand, show up with a neuter agreement marker. However, in contrast to the above category of adjectivals, these generally cannot be used predicatively. This category seems to be very rare[39].

(147) vala-tə pakSam

Right-N side

'the Right wing'

(148) predicative position:

?/* adhikaarattil irikkunna pakSam valatu aaNu, oormma veeNam

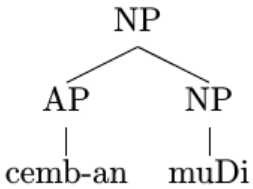
Power-LOC sit-PROG side/wing right is, memory want-DEB

'?Remember, the wing in power is the Right.'

Intended: 'Remember, the RIGHT wing is in power now.'

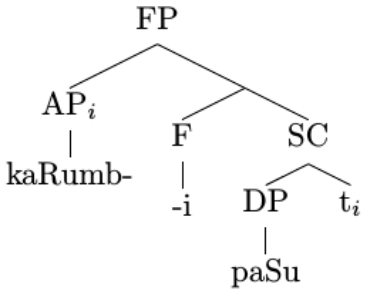
The class A adjectives can again be divided into kind-level <k,t> and object-level <e,t> adjectives, even though they have some very similar properties. The structures for each of them are given in (149) and (150), and the explanations follow.

(149) Kind-level



39 I am ignoring the analysis of the root+-tu forms here because the data is too little to make any generalizations about them. Also, there are at least two adjectives with the same form but occur only in predicative position. These also I ignore for now, since there is not any more information about their derivations or their relationships to each other etc.

(150) Object-level



They are NP adjectives. The examples below clearly show that a demonstrative cannot occur between the adjective and noun, indicating the unavailability of a DP:

(151) *cemb-an aa muDi

red-M that hair

Intended: 'that red hair'

(152) *kaRumb-i aa paSu

black-F that cow

Intended: ‘that black cow’

Based on the tests in Cornilescu and Nikolae (2016), the major difference between them lie in being able to modify <e> categories, the best test for which is predicating over proper nouns. This is not allowed by the first (default masc agreement) type (153), whereas it is allowable for the second type (154):

(153) *raaman {?paZanj-an/ putt-an/ cuvapp-an} aaNə

Raman old-M/ new-M/ red-M be.PRES

‘Raman is old/new/red.’

(154) siita kaRumb-i aaNə

Sita black-F be.PRES

'Sita is dark.'

The <k,t> adjectives are allowed with generic or kind-level predicates, whereas <e,t> ones are not:

(155) naaD-an paaTTu ellaaR-kk-um iSTam aaNə

country-M song everyone-DAT-CONJ liking be.PRES

'Everyone likes folk songs.'

(156) */? kaRumb-i paSu-kkaL keraLatt-il saadhaaraNam aaNə

black-F cow-PL Kerala-LOC common be.PRES

Intended: 'Black cows are common in Kerala.'

Both these classes are restrictive, i.e., they are subsets of the denotation of the NP: *paZanj-an saari* 'old-M saree' is a saree and *kaRumb-i paSu* 'black-F cow' is a cow.

But the first answers to "what kind of", whereas the second answers to "how" questions:

(157a) nina-kku eetu taram skeyilu veeNam?

2S-DAT which type scale want?

'What kind of scale (ruler) do you want?'

(157b)eni-kku niiL-an skeyil aaNu veeND-a-tə

1S-DAT long-M scale be.PRES want-REL-3SN

Literally: 'It is a long scale that I want.'

(158a) kuTTi engane uNDə ?

Child how be.PRES

'How is the child?'

(158b) avaL kuRumb-i aaNə

3SF naughty-F be.PRES

'She is naughty.'

Another test that Cornilescu and Nikolae (2016) suggest shows that (only) the first type can be used contrastively. However we don't have suitable data to show for the second type.

(159) paZa-njan alla, putt-an aaSaya-ngaL munnooTTə vara-Nam

Old-M Neg new-M idea-PL forward come-DEB

'Not OLD, but NEW ideas should come forth.'

Thus the first type are NP As that combine semantically with the NP by theta identification, and merge as NP-adjuncts (see (149) above).

The marked difference in the availability of agreement in the second type of root+Agr adjectives suggests that there could alternatively be a functional head involved, which hosts agreement. Thus in consonance with Cornilescu's (2009) suggestions, we propose that the second type (the object-level adjectives) may instead be DP As that merge in the complement position of a small clause, with the DP being modified occupying the Specifier position of the small clause (150). The semantic combinatorial mechanism here is functional application. After this, a functional head F may be merged to the small clause, and the Adjective (root) in the compound moves up to Spec FP, triggering the appearance of agreement morphology on F.

3. Root + a

These are what have been referred to as "true adjectives" in the literature (a term I have no objections to).

(160) paZa-ya viiDə

Old-REL house

'Old house'

(161) puti-ya kuDa

New-REL umbrella

'New umbrella'

(162) nall-a kuTTi

Good-REL child

'Good boy/girl'

(163) ceRi-ya paatRam

Small-REL utensil

'Small utensil'

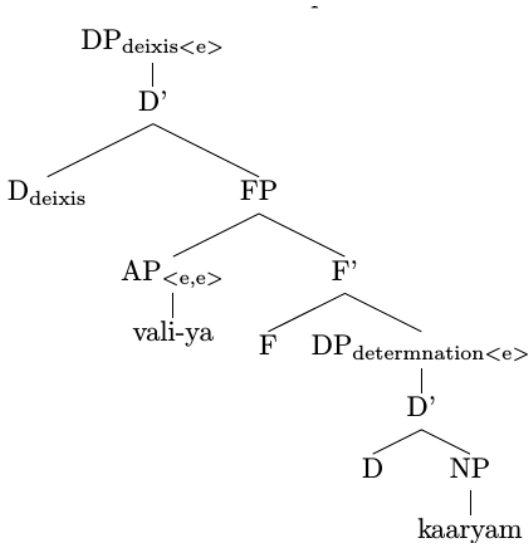
(164) vali-ya kaaryam

Big-REL matter

'Big thing'

As mentioned before, these take the form of root+relativizer. Given below in (165) is Cornilescu's (2009) structure of the DP, originally proposed by Laenzlinger (2005) (see explanation in section 4.2.1 above).

(165)



The nominals modified by these adjectives are presumably DPs, evidenced by the possibility of allowing more elements to occur between the adjective and the noun (see (166-167) below). The theory predicts object-level adjectives to be DP adjectives, and they express properties of the object as perceived by the speaker.

(166) aa nall-a raNDə kuTTikaL

Those good-REL two children

'Those two good children'

(167) ? puti-ya ii muunnə viiDu-kaL

New-REL these three house-PL

'These three new houses'

Not all speakers agree on the possibility of having the word order Adj<Dem<Num<N[40]. However, I think it improves considerably if one adds a universal quantifier *-um* to the phrase, meaning "all three of the new houses"

40 Jayaseelan (p.c.)

putiya ii muunnu viiDu-kaL-um 'new these three house-PL-Q'. Another option mentioned by Cinque (2005) is having focus within this sequence so that there is a Spec Foc position to host the Dem in this case. I do not commit to any particular view; I think these are interpretations of an analysis of DP having phases within it, like in Laenzlinger (2005)[41]. These phases make available peripheral positions for checking P features.

Though these adjectives typically occur in the position indicated, she mentions the possibility of movement of the adjective to Spec DP. This can explain the availability of the structure in (167) above to at least some speakers. In addition, Cornilescu also notes that such adjectives occupy a position outside (ie, to the left of) cardinals, which is also borne out.

4. Participials

These are participles of unaccusative verbs, as discussed in section 3.5:

(168) paZak-i-ya paal

Become.old-PRF-REL milk

'Stale milk'

(169) ciinj-a muTTa

Rot.PRF-REL egg

'Rotten egg'

(170) nananj-a tuNi

Become.wet.PRF-REL cloth

'Wet cloth'

41 Similar accounts for Focus and Topic positions within the DP have been proposed by many. For instance, cf. Bhattacharya (2009), Syed (2015) etc. for Focus within the Bangla DP. Thus if anything it only strengthens my conjecture that the nominal being modified is a DP, not an NP.

(171) niiND-a kaalam

Become.long.PRF-REL time

'Long time'

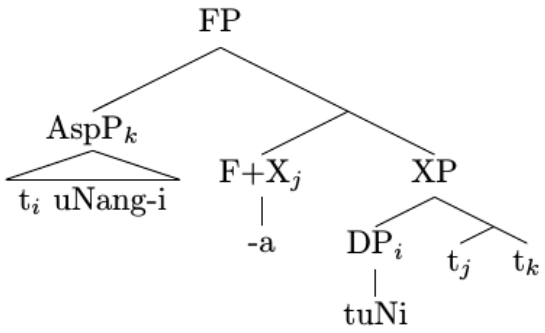
(172) cuvann-a puu

Become.red.PRF-REL flower

'Red flower'

The internal structure of this type of adjective is as given in section 3.6, which is reproduced here as (173):

(173)



Being participials, these adjectivals modify DPs since these are usually the (internal) arguments of the participialized verb. Cornilescu (2009) assumes a small clause predication structure, which we have independently proposed for participials (cf. Section 3.6).

Other features of d* peripheral adjectives are that "they characterize the referent object as perceived by the speaker in context." As Cornilescu (2009) and Cornilescu and Nikolae (2016) observe, object-level adjectives precede kind-level adjectives with <<k,t>,<k,t>> denotations. This is what makes structures like the following possible:

(174) niiND-a ceRu-katha

become.long-REL small-story

‘long short story’

As may be noticed, this account treats the Root+REL adjectives and the participial adjectives almost in the same manner, as object-level adjectives. However, there are some scope effects visible when they co-occur:

(175a) puti-ya niiND-a kayaRə

New-REL become.long-REL rope

‘A new, long rope’

(175b) ?* niiND-a puti-ya kayaRə

Become.long-REL new-REL rope

‘A long, new rope’

5. Bare N

These are nouns that modify other nouns by merely being placed in attributive position. The most notable of these are colour terms.

(176) cuuDu veLLam

Heat water

'Hot water'

(177) kuLiR kaattu

Coolness breeze

'Cool breeze'

(178) kaRuppu tuNi

Black$_N$ cloth

'Black cloth'

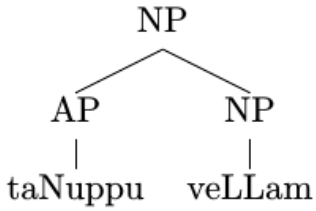
(179) cuvappu puu

Red$_N$ flower

'Red flower'

The structure proposed for these adjectivals is as in (180):

(180)



These are what have been noted as one of the special characteristics of Dravidian, where nouns can just be placed alongside another noun to make the first one modify the second one like an adjective. It seems highly implausible that the second noun may be a DP: for instance no numeral, quantifier or demonstrative can occur between the two. Therefore these are NP adjectivals, attributive modifiers that adjoin to NP.

True to qualifying adjectives, they mostly express physical and evaluative (speaker-oriented) properties like colour, temperature etc. The most noticeable property is that being nominals they can be used in predicative position:

(181) caaya cuuDə aaNə

tea heat be.PRES

'The tea is hot.'

Thus they are either <e,t> or <k,t> NPs, which modify other NPs of the same type. The semantic combination of such adjunct adjectives is thus by Theta identification. The fact that they cannot predicate over proper nouns (182) shows that they cannot be <e,t> type.

(182) *Raaman kaRuppə / taNuppə aaNə

Raman $black_N$ / $cold_N$ be.PRES

‘*Raman is black/cold.’

Similarly being allowed in generic contexts shows that they are kind-level:

(183) cuuDə caaya ellaaR-kk-um iSTam aaNə

heat tea everyone-DAT-CONJ liking be.PRES

‘Everyone likes hot tea.’

6. N + copula

In these adjectivals, a noun together with a copula is used to modify other DPs. Notice that the Copula is participialized in order to be able to modify the DP.

(184) paZakkam uLL-a keTTiDam

Oldness be_{have}-REL building

'Building that is quite old'

(184) putuma uLL-a aaSayam

Newness be_{have}-REL concept

'New/ innovative concept'

(185) cuudə uLL-a kaappi

Heat be_{have}-REL coffee

'Hot/ warm coffee'

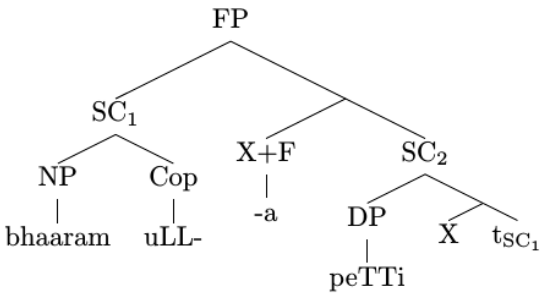
(186) bhaaram uLL-a peTTi

Weight be_{have}-REL box

'Heavy box'

The copula selects a noun as its complement, in a small clause structure. In addition the copula is participialized in order to form an adjectival that can modify a DP. Thus the same structure as that of participial adjectives should be expected for these adjectivals, the only difference being the internal small clause structure with the copula and the noun. This internal structure is represented in the tree below:

(187)



Thus this structure is otherwise similar to the participial structure.

7. Loc relative

This is a structure uniquely available to Malayalam, as mentioned in chapter 2. The morphology itself is quite confusing in this case and therefore we would only be giving a tentative conclusion about its structure here, and it is something that needs future work.

For this reason, first we need to spell out our understanding of and assumptions about the morphological form of this adjectival. Consider examples (188-192):

(188) vala-tt-e viiDə

Right-LOC?-REL house

'(The) house on the right'

(189) mukaL-il(-att)-e taTTə

Top-LOC-LOC?-REL shelf

'(The) top shelf'

(190) taaZ-att-e nila

Bottom-LOC?-REL floor/storey

'(The) bottom floor (of a building)'

(191) pinn-att-e kaaryam

Back-LOC?-REL matter

'(A) later thing'

(192) vaTakk-e atiRtti/ vaTakk-att-e bangLaavə

North-REL border/ north-LOC?-REL bungalow

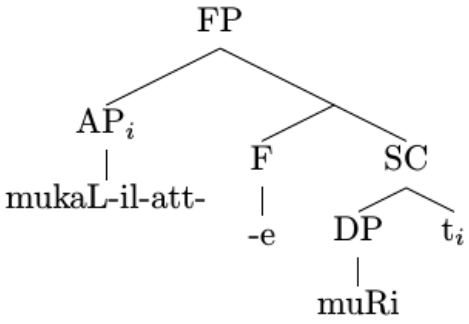
'(The) Northern border' / '(the) bungalow in the north'

These can be described by a general schema "Root + LOC + REL". The element *-att-* glossed as LOC(ative)? here is actually a mystery element. The usual Locative case marker of Malayalam is *-il,* which may or may not turn up in this structure. What is strange is that whether or not *-il* is present in the structure, the other element *-att-* is. This element does not seem to be used in

any other context.[42] Intuitively, the meaning it contributes is an anchoring of the nominal in time or space (also see sec 2.2.1).

Now coming back to our task, the internal structure we propose for this type of adjectival based on Cornilescu (2009) and Cornilescu and Nikolae (2016) is the following:

(193)



These adjectivals seem to modify DPs, as they can allow quantifiers, numerals and demonstratives to occur between themselves and the nominal they modify:

(194) mukaL-il-att-e oru muRi

Top-LOC-LOC-REL one room

'In a room above/on (the) top'

42 Even though it looks similar to another Locative where the actual marker is a weak vowel /ə/ and the /tt/ turns up to prevent hiatus: *Vaikka-(tt)ə* 'in/at Vaikkom (a place)'. However in the context we are considering this locative does not seem to be present. Unless it is deleted when the /e/ is added, in which case there is a doubling of locatives exactly as in (189) with the deleted /ə/ taking the place of the *-il* locative. This is not supported by speaker intuition, though. Nor do we find instances without the *-e* where these nouns can take the Locative marker /ə/. In (192) where the *-att-* seemed optional, the difference between the version with and that without it seems to be some sort of Specificity effect. However, this needs more work before any comment can be made.

They cannot be used predicatively unless nominalized (195), and other than in certain limited contexts, cannot be applied directly to proper nouns (196).

(195) en-te muRi mukaL-il-att-e-*(tu) aaNə

1S-GEN room top-LOC-LOC?-REL-3SN be.PRES

'My room is the top one/ the one on the top.'

(196) * (ivar-il) Raman vala-tt-e aaNə

3P-LOC Raman right-LOC-REL be.PRES

'Among them, Raman is (the one) (on) the right.'

Thus it seems to be neither <k,t> or <e,t>. It cannot be <<k,t>,<k,t>> because such adjectives modify NPs and not DPs. Hence they are <e,e> adjectives, just as the root+Relativizer adjectives are. An interesting consequence falls out from this: both the types of Relativizers also have the same semantics (and therefore the same syntax.

Thus we have seen the different options available for Malayalam. Before we move on to the other languages, let us look at the inteim questions

4.3 Interim conclusions

We have shown that the different morphological shapes of adjectivals in Malayalam (or Dravidian in general), correspond basically to differences in semantics, which may be reflected in different syntactic structures.

We have seen three basic structures for the adjectivals in Malayalam, the small clause predication structure, the adjunction structure and the head-complement structure. Only in the case of roots is C-selection allowed, and they select for their NP complements. Bare nominals modifying other NPs adjoin to those NPs, as do root+agr form with a default agreement

morphology. All other adjectivals use the small clause predication strategy. Only <e,e> adjectives differ from the above: they occupy a peripheral position in the d* phase. These, in Malayalam, are the "true" adjectives formed by adding the relativizer directly to the root and the participials.

The next section attempts to describe the variation we observed between the languages in Chapter 2.

4.3 Addressing Variation

In the previous sections we have seen the variety in the forms and structures that Malayalam allows in the domain of adjectives. With this as background, now we look at the other Dravidian languages. The following sections are going to be more descriptive than explanatory.

As mentioned in section 4.1, there is a spectrum of shared forms where some forms are shared between all the languages studied here, and there are others shared only between a few, and there are unique forms available to only one language each. The forms shared by all languages have already been explained in section 4.2.2, simply because they are available to Malayalam.

In this section, first we focus on the forms particular to each of the other languages, that are not available in Malayalam. Then we look at forms shared by bunches of languages. Finally we look at deviances if any in the shared forms, between the languages that share those forms. We will thus attempt to provide at least a description if not an explanation for the variation we have observed within the Dravidian language family.

4.3.1 Other Adjectival strategies

We have already discussed in section 4.2.2 the unique adjectival strategy that Malayalam has: the locative relative. The unique strategies used by the other languages are as follows:

4.3.1.1 Tamil

The unique strategy that Tamil has is the Noun + Locative that can modify another nominal:

(197) duura-ttə uravə

distance-LOC relation

'Distant relations'

4.3.1.2 Kannada

The data we were able to collect is regretably too limited to reveal any such unique modification strategy in Kannada. Therefore this will have to be kept aside for future work.

4.3.1.3 Tulu

Tulu has two such strategies that seem to be uniquely found in Tulu:

i) some adjectival roots optionally take a mysterious *-ttə* morpheme in the attributive position. This is however obligatorily present in the predicative position and functions as a nominalizer in this context. The other roots may take this only in predicative position. In our data set we have exactly two roots showing this: *paRa-ttə* 'old' and *posa-ttə* 'new'. The strange thing about this is that there is nothing that reveals what the morpheme is doing in the attributive position. This, however, looks similar to the Malayalam Root + Agr

(Class 2) adjectival, where the neuter agreement marker shows up on very few adjectivals in the attributive positions.

As with the Malayalam Root + *-tə* adjectival, we have to ignore this form to as we have only a negligible amount of data at hand at present pertaining to this form.

ii) There are a few words described as "deverbal nouns" by Bhat (1994xxxx). It is not at all clear, neither form the data presented there nor from his description what this is. An example of such a form in attributive position is:

(198) lungeelə miinə

dried fish

'dry fish'

Therefore, on the grounds of insufficient and/or negligible amount available of these forms, we ignore them for the time being.

4.3.1.4 Telugu

Telugu has a remarkable unique form where an adverbial or adverb particle seems to occur within an adjectival:

(199) tella-gaa unn-a gulaabi

white-ADVBL be-REL rose

'Red rose' [Literally, rose that is redly.]

Cf. Balusu (2016) for the structure.

4.3.1.5 Gondi

Gondi has two distinctly different forms:

i) Root + AGR where AGR is actual adjectival agreement with the modiifed nominal as found in other (non-Dravidian) languages like Hindi (see (199) below). In the case of all the other Dravidian languages, whether the language has verbal agreement or not, it does not show up on adjectives.

(199) (a)cokoT-noor kaaNDi

good-MS boy

'good boy'

(199)(b)cokoT-na peeDi

good-NS girl

'good girl'

ii) A second form where the adjectival root takes a suffix (in this case *-aal*) that seems to signify a set of features like [+MASC, +Agent] etc (x). Exactly what all this entails is unclear.

(200) kaar-yaal (voor) kaNDi

Black-? (that) boy

'Black boy'

This suffix is listed as deverbal noun in Subrahmanyam (1968), and these forms can stand alone as nominals as well. This is probably similar to the Malayalam root + *-an* adjectival that shows a default masculine agreement marker, but there is no clear indications as to its behaviour otherwise.

4.3.2 Shared strategies

Now we look at the modification strategies that are shared between some of the languages but not all.

One type of adjectival is shared by all languages but Gondi: the "true" adjectival or the Root + Relativizer form. This is also the form always discussed as the Dravidian adjective. We have already seen the structure and of this type of adjective above.

Another type of adjectival shared by only Kannada, Tulu, Telugu and Gondi, with the exception of Malayalam and Tamil, is the N + Genitive form. This unfortunately needs a deeper exploration in order to get to the native speaker judgments on semantics, and therefore we leave it to future research.

The bare root as an adjective is a strategy available only to Malayalam, Tamil, Kannada and Telugu. The structure has been discussed in detail above (see section 4.2.2). Lastly, the root+*tu* and root+*an* forms (also discussed in section 4.2.2) are only available in Malayalam and Tamil.

4.3.3 Variation in shared forms

In addition to the variation in forms and their availability in each language, the Dravidian languages also vary in the interpretation of the form in the given language. That is, the same morphological form shared between two languages may (or may not) encode different semantics, presumably through different syntax. This is this kind of variation that we want to indicate here. This is just a sample list, an extensive and in-depth comparative survey, preferably diachronic, would reveal a lot more of variation between the languages.

4.3.3.1 The root *putu* in Malayalam and Tamil

We have shown the structure of bare root adjectivals in section 4.2.2. However, there are some differences in the use the root *putu* 'new' in Malayalam and Tamil. For instance, in Malayalam it is a bound root, a head that can directly modify NPs by selecting a projection of the NP as its complement. It cannot be separated from the NP it modifies (see section 4.2.2) and moreover, this process is not very productive. Thus one will not find *putu-* modifying any and every NP, best evidenced by its inability to modify borrowed nouns (201). Generally this type of modification also has an idiomatic meaning more often than not. However in Tamil *putu* is almost a lexical adjective: it can modify NPs productively, even if they are borrowed NPs (202). It is also not a bound root anymore.

(201) Malayalam

putu-mukham / putu-maZa / putu-ppeNNə / *putu-kaNNaaDi / *putu-bægə

new-face / new-rain / new-girl / new-mirror / new-bag

'Fresher' / 'First rain of the season'/ 'bride' / 'new mirror' / 'new bag'

(202) Tamil

putu kuDa / poDavai / bægə

new umbrella / saree / bag

'new umbrella / saree / bag'

Thus the same bare root adjective has different semantic interpretation in both languages. In Tamil it is no more an intensional adjective like in Malayalam, it has probably become <e,e>[43] rather than <<k,t>,<k,t>>.

43 Eliminating <e,t> and <k,t> because its denotation has to be changed by nominalization in order to occur in predicative position.

4.3.3.2 *Ambiguity in Participials in Malayalam*

In section 3.5.2 we showed that the analysis of participial adjectives predicted the possibility of structural ambiguities between adjectival and participial interpretations of the same structure. This prediction is borne out in Malayalam, but not Tamil (nor, we presume, in the other Dravidian languages). The participial *sevant-a* 'that which has become red' in Tamil, for instance, does not give an 'inherent redness' meaning like Malayalam *cuvann-a* '(that which has become) red' can:

(203) Malayalam

(a) cuvann-a tuNi

Red.PRF-REL cloth

'Red cloth' or 'Cloth that has become red'

(b) cuvann-a cembaratti

Red-REL hibiscus

'Red hibiscus'

(204) Tamil

a. sevant-a maNNu[44]

Red.PRF-REL soil

Soil that has become red

b. sevappu mannu

Red_N soil

'Red soil'

44 However, some speakers think that in the literary variety of Tamil, the participial can be used to signify an inherent property of the noun like Malayalam does. Janani K. and Karthick Narayanan (p.c)

This can signify either that a lexicalization or grammaticalization process is going on Malayalam due to which it is gaining a lexical adjective of the participial form, or that spoken Modern Tamil is losing a form that was originally available to the language. We think the latter explanation holds more weight as we have seen that almost all the Dravidian languages studied here do use the participial as an adjective.

Thus the variation here is explained as an effect of grammaticalization processes at work in the language, bringing about diachronic change.

4.3.3 Gondi and Language Change

Finally we would like to place on record some observations about Gondi and what it shows about the process of language change in Dravidian. Gondi seems to reflect an older version of the other languages. The striking facts about Gondi are:

i) Gondi has a full agreement system including on (a lot of the) adjectives. However, whereas one class of adjectives show agreement in all case at all times, some adjectives only show number agreement according to Subrahmanyam (1968). For this class of adjectives, our (more recent) primary data does not have instances of the kind of agreement Subrahmanyam reports. Instead in one or two rare instances our data shows these very same adjectives with the (what we presume to be now-lost) class-I type of default agreement. One would infer that this is indicative of language change in action. Another class of adjectives don't show any agreement with the noun, strengthening one's hunch that Gondi is gradually but surely losing agreement on adjectives, a process that the other Dravidian languages under study already seem to have gone through. Thus in this respect we could

presume that earlier versions of the Dravidian languages used to have a rich system of adjectival and verbal agreement, which was lost in time, finally to end up in no-agreement languages like Malayalam.

ii) It is presumable that the loss of agreement must have prompted the languages to fulfil the need for a relativizer, which was gained by grammaticalizing a demonstrative/genetive according to historical linguists. Whether or not this changed the syntax of participialization remains yet to be investigated. One piqueing fact is the presence of an invariant morpheme *-e* on a few participles in Gondi, exactly in the position where one finds the relativizer in the other Dravidian languages. This morpheme has also gone wholly unreported by Subrahmanyam (1968), strenthening our surmise that this could be a reflection of language change in Dravidian. This, however, needs to be studied in detail and we leave it to future studies.

iii) For participialization, Gondi seems to have had merely the raising of the relativized noun, with agreement intact and no particular relativizer turning up. (Whether they continue to be finite needs to be examined further.) A second option for participialization is the use of the morpheme *-val* which makes it a "deverbal noun" according to Subrahmanyam (1968), which denotes both the action of the verb and the subject/object of the verb. Even though he reports agreement in the participials that use *-val*, it looks like that is in the process of or has already undergone change. Thus in the Gondi spoken today there seems to be no agreement on the *-val* form of the participle. This again strengthens our belief that Gondi reflects faithfully the process of language change that Dravidian has undergone.

iv) Gondi does not seem to show many different adjectival strategies like the other Dravidian languages surveyed. It does not take the bare root as a direct modifier of the noun. Nor does it have an "elsewhere" form of combining the root and relativizer. Participles and noun-copula constructions are the only shared strategies with the other Dravidian languages studied here. Even the availability or non-availability of noun-noun modification is unclear. These could be indicative that the proliferation of such varied strategies are to compensate the loss of something as basic as agreement on adjectives. However, these are just conjectures at present and will need extensive diachronic and synchronic studies to prove their truth.

Thus what appears as variation in Gondi is the reflection of language change in Dravidian itself.

4.4 Conclusions

Even though the same morphological form may be shared between two or more languages, it is not necessarily the case that the semantics it encodes is necessarily the same. Or rather, there are a lot of options provided by semantics, all of which are not instantiated in all languages. Similarly diachronic processes also change what semantics is available to a language and what is not. If we assume that the morphology a language has is limited by the size of its lexicon at any point of time, then syntax, as the intermediary between the those two levels, has to resort to combinatorial mismatches between the three representations while associating them with each other.

This is why and how variation is exhaustively determined by UG and the parameters (in the sense of Longobardi and Guardiano 2009). The availability of structures is constrained by UG and the parameter settings

VI

CONCLUSION

Though there has been a lot of work done on Dravidian syntax, for instance on questions and focus, tense, aspect and mood, negation, finiteness, relative clauses etc, a lot of it is still unclear and needs work. One reason for the vast differences of opinion and the lack of agreement on a lot of the areas is a lack of an extensive study of Dravidian morphology too. One such "controversial" area in which many scholars have come up with different analyses and theories but haven't been able to come to consensus is that of adjectives. The only thing that seems to be agreed upon (and that too in varying degrees) is that they are not a lexical category, and that they are mostly reduced relatives.

However, in this thesis we try to bring to fore a few facts about Dravidian adjectives: even though there might not be a single lexical category of adjectives in Dravidian, there are many different forms and strategies that the Dravidian languages adopt to modify nouns. These I have put under the umbrella term 'adjectivals', and tried to describe in as much detail as possible.

5.1 Major findings:

In chapter one we showed how variation studies has come up as an important part of crosslinguistic syntactic studies, and how that has prompted the

understanding that theoretical syntax is the key to forming a coherent idea of the phylogenetic relationships between the languages of the world. In this context, we examined various theories that try to give a unified syntactic account of the distribution of adjectives in the languages of the world, mainly the cartographic approaches of Comparative Syntax (cf. Cinque 1996, 2005, 2010) and the more general Principles and Parameters frameworks (cf. Longobardi 2001). We saw that they draw similar conclusions as to the existence of fixed sequences of positions (for functional or parametrized lexical categories) which determine the order and interpretation of adjectives crosslinguistically. We then showed that Dravidian adjectives may present a possible challenge to such theories.

In chapter two we showed that Dravidian scholars generally consider one particular form as the adjective in all the Dravidian languages, whereas there are different morphological forms that do the duty of adjectives in these languages. A morphological typology of nominal modifiers for each of the Dravidian languages under study was then presented, with each language having at least five to six different strategies available to derive adjectivals. It illustrated that the Dravidian languages vary across the spectrum in the sharing of these strategies as well. While almost every language has at least one unique strategy not shared with the others, there are also strategies shared by different bunches of languages excluding others. There are also three strategies available to all the Dravidian languages under consideration. Even though this is the case, one form is considered as the "elsewhere" form (the form mentioned above as the one considered as the true Dravidian adjective), which, ironically, is not even shared by all of the six languages studied here.

The "elsewhere" form of the Dravidian adjective is formed by the adjectival root taking a Relativizer morpheme. Because of the presence of this

relativizer, which also appears in relative clauses, this adjectival form has been analyzed as a reduced relative clause. Chapter three therefore examines the different reduced relative analyses proposed by different scholars for Dravidian and especially Malayalam adjectives. We showed that all these analyses failed in some way or the other when in came to characterizing the relativizer correctly. Then it was demonstrated that adjectives analyzed as reduced relative clauses are actually unaccusative participials, and this was the analysis that could explain and predict the behaviour of the relativizer correctly. It was shown that these adjectives modify nouns by resorting to a strategy of Predicate Inversion *a la* den Dikken (2006), and that the relativizer is a linker created in this process.

In chapter four we came back to the question of the variety of adjectival forms available to each language, and following a semantic account of adjective placement, syntax and interpretation proposed by Cornilescu (2009) and detailed in Cornilescu and Nikolae (2016), showed how their semantic interpretation reveals the syntax of these adjectives. This also showed that though the syntax or morphology is incapable of throwing light on the actual similarities and differences between the adjectivals, it is actually semantics that drives the whole thing. The rest of the chapter described this variation found within the Dravidian family and pointed to areas in which future research is required to make generalizations about what causes or determines variation.

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