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UNIVERSITY OF CALIFORNIA

Los Angeles

NP-embedded Structures in Kannada and Konkani

A dissertation submitted in partial satisfaction of the requirements for the degree of Doctor of Philosophy in Linguistics

by

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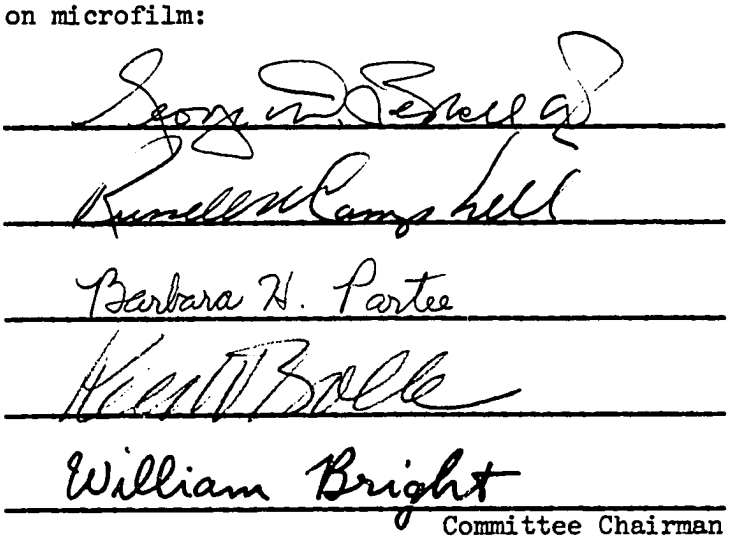

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To

My Mother

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ABSTRACT OF THE DISSERTATION

NP-embedded Structures

in Kannada and Konkani

by

Mangesh Vithal Nadkarni

Doctor of Philosophy in Linguistics

University of California, Los Angeles, 1970

Professor William Bright, Chairman

This dissertation attempts to present an explanatory account of restrictive relative clauses, of sentential complements on nouns, and of adjectives in Kannada, which has been regarded here as representative of the Dravidian languages of India. The analysis of relative and complement clauses developed largely on the basis of evidence from Kannada has then been extended to the extent possible to Konkani, an Indo-Aryan language, a particular dialect of which has been in very close contact with Kannada for the last 300 years and more. It has been shown that so far as the syntax of relativization and nominal complementation is concerned, this dialect of Konkani is in a stage of transition from a basically Indo-Aryan to a predominantly Dravidian syntax.

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Chapter 1

INTRODUCTION

The Indian subcontinent contains languages belonging to as many as five major stocks;[1] and yet, many linguists are of the view that in an important sense it is a unified linguistic area. Modern Indian languages, particularly those belonging to the Indo-Aryan and Dravidian families, exhibit a number of phonological, morphological and syntactic traits in common. Some of these appear to have originated in early Dravidian, some in early Sanskrit, and the origin of some others is unknown. Languages belonging to these two families have coexisted on the Indian subcontinent for the last 3,000 years and more, and during this period, certain features which originally belonged to only one of these families seem to have crossed genetic boundaries and disseminated into languages of the other family. This mutual assimilation of linguistic traits over such a long period of time has made modern Indo-Aryan and Dravidian languages seem much closer than say, Marathi does to early Sanskrit, or Kannada to early Dravidian. The term 'linguistic area' was first used to characterize this linguistic unity of the Indian subcontinent by Emeneau (1956), who defines it as "... an area which includes languages belonging to more than one family but showing traits in common which are found not to

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belong to the other members of (at least) one of the families" (p. 16, note 28). Some linguists are inclined to draw more radical conclusions from these facts. Thus Andronov (1964) sees in the typological similarity between modern Indo-Aryan and Dravidian languages the formation of an entirely new linguistic family in its incipient stage.[2]

It must be pointed out, however, that not all linguists agree with the hypothesis that India is a unified linguistic area. Jules Bloch, who had as wide an acquaintance with the languages of the region as any, and who was among the first to note certain parallelisms between modern Indo-Aryan and Dravidian languages, vigorously maintained that "... profound as the local influences may have been, they have not driven the Aryan of India actually to separate itself from the Aryan of Iran or to become greatly differentiated from other Indo-european languages" (Bloch, 1965:331). Bloch admits that Indo-Aryan languages have to some extent been influenced by Dravidian, but he insists that despite this influence, the former are still not basically different from other Indo-European languages.[3] Beames (1872-79) took an extreme view on this issue and denied the existence of any Dravidian influence on Indo-Aryan, a view with which few will agree today. Beames attributes the deviation of modern Indo-Aryan languages from early Sanskrit to such factors as natural growth and natural decay, and even to the climate of India.

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The view that Indo-Aryan languages have undergone a radical change under the impact of Dravidian languages is more than 100 years old. We learn from Caldwell, whom Kuiper (1967) regards as among the first to state implicitly the existence of an Indic language area, that there were students of Indian languages as far back as the 1840's who held that "the North-Indian vernaculars had been derived from Sanskrit, not so much by the natural process of corruption and disintegration, as through the overmastering, remoulding power of the non-Sanskritic element contained in them", and that "this non-Sanskritic element was identical with the Dravidian speech" (Caldwell, 1956:53).[4] Caldwell, while disapproving of the manner in which this hypothesis has been stated, agrees with its substance. Grierson (1927) notes a few instances of Dravidian influence on Indo-Aryan languages.[5] A more detailed survey of the common traits between Indo-Aryan and Dravidian languages is to be found in Suniti Kumar Chatterji's (1926) monumental work on Bengali. An excellent study entirely devoted to this theme is Alfred Master's Some Parallelisms in Indo-Aryan and Dravidian in which the author takes up two Indo-Aryan languages, Gujarati and Marathi, and a Dravidian language, Kannada, for detailed investigation. He begins with a brief historical sketch of the early contacts between the speakers of these languages, and then goes on to examine the correspondences between these languages at each level of their grammar. His

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concluding remarks deserve to be quoted in full:

> But in spite of various layers and ornaments that Gujarati and Marathi have assumed, they have never lost to any great extent their syntactical form. This is a form gradually assumed by Sanskrit in the process of time and a form which Dravidian has always possessed and which is an expression of the genius of the language. All or the main part of the materials of Gujarati and Marathi are Aryan, but they are made up in Dravidian fashion and the form of a language indicates the original speech of those who speak it more clearly than a few isolated phonemas (emphasis added, MVN) (pp. 65-66).

Master clearly indicates here that the morphological and lexical material of the two Indo-Aryan languages, Gujarati and Marathi, is Indo-Aryan but their syntax is Dravidian. He attributes this to the substratum influence of Dravidian on Gujarati and Marathi.

By and large, most students of modern Indian languages seem to subscribe to this hypothesis. Thus Bright (forthcoming) observes that "the Indian subcontinent is clearly a single linguistic area" and he even hopes that "it may eventually be possible to write certain rules of pan-Indian grammar, with individual languages then differentiated from one another by rules of lower priority".

I do not wish to enter here into a detailed discussion of the historical factors which were instrumental in bringing about this remarkable homogeneity among languages belonging to different genetic stocks. This matter has been discussed at considerable length by Chatterji in his Indo-Aryan and Hindi. A brief summary should suffice here.

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Emeneau (1956) refuses to speculate in detail on the causes of this phenomenon (and, I think, rightly, since there are considerable gaps in our knowledge of the primary area of contact between languages of these two families), and ascribes it to "much bilingualism and gradual abandonment of Dravidian speech in favor of Indo-Aryan over a long period and a great area--a process for which we have only the most meager of evidence in detail". Andronov (1964) too subscribes to the view that Dravidian languages served as a substratum underlying the Indo-Aryan languages. "Their mutual influence on each other, most probably, took shape of bilingualism of a great portion of the mingling peoples". Recently, Southworth (1968) has suggested a much more specific hypothesis: "that the modern Indo-Aryan languages, and particularly Marathi, can be considered creolized languages, based on pidgins which developed in the period of contact between original Aryans and the speakers of indigenous languages (Dravidian and/or Munda)". Southworth's hypothesis, while not implausible, is not testable either, because it is impossible to distinguish the linguistic consequences of 'bilingualism of a great portion of the mingling peoples' and 'gradual abandonment of Dravidian speech in favor of Indo-Aryan over a long period and a great area' from those that would follow from pidginization.[6]

It is generally believed that when the first Aryan bands arrived on the Indian subcontinent, it was already

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inhabited by races speaking Dravidian and Munda languages, the former predominantly in the north-west, west and probably also the south, and the latter mainly in the Gangetic plains. It has also been hypothesized that the ancient Indus valley civilization[7] was Dravidian speaking, and there have been some attempts to prove that the Indus script represents a Dravidian language.[8] To say the least, most of these are controversial issues, including the data of the arrival of the first Aryan bands on the subcontinent.[9] But it is reasonably clear that from their very early days in India, the Aryans came into very intimate contact with Dravidians then residing in the Punjab-Sindh belt, which also happens to be the site of the Indus valley civilization. It has been shown by scholars that the oldest of Indo-Aryan texts, the Rigveda, shows at least three non-Indo-European and specifically Dravidian traits, one phonological and two syntactical. Kuiper (1967) points out that there are approximately 90 words of foreign or doubtful origin which contain a retroflex consonant in the Rigveda, and it is well known that retroflex consonants have been an integral part of Dravidian structure since early Dravidian.[10] There are also two non-Indo-European syntactic traits in the Rigveda which can be traced to Dravidian influence, namely, the use of the absolute form or 'gerund' and the peculiar use of iti after direct speech (Kuiper, 1967).

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The 'bilingualism of a great portion of the mingling peoples' that Andronov speaks of, must have arisen as the Aryans began to move eastward and southward from the Punjab-Sindh region. At first the confrontation of these races must have been warlike, but very soon peaceful integration must have begun. Hindu religion and Hindu culture seem to be the products of this integration of Aryans, Dravidians and speakers of Munda languages. During this period large masses of Dravidians and Munda speakers must have been absorbed into the Aryan social structure. There is reason to believe that the invading Aryans were a numerical minority as compared to the Dravidian and Munda language speakers. But today the speakers of various Indo-Aryan languages on the subcontinent outnumber Dravidian speakers by more than three to one, and Munda speakers by many times over. This suggests that, since the prehistoric times, a vast number of Dravidian and Munda speakers gave up their original languages and accepted Indo-Aryan languages. This explains the Dravidian and Munda substratum influence on Indo-Aryan languages.

I have already referred to the definite traces of Dravidian influence in Vedic Sanskrit. The Aryan speech must by this time have begun to expand in a two-fold manner. There was the classical Sanskrit of literature and higher intellectual life, and then there was Prakrit which was disintegrating away from the former into distinct spoken

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dialects under the impact of the indigenous languages of the time, and these Sanskrit based dialects were being accepted by a growing number of originally non-Aryan speaking peoples. As these dialects began to advance into the heart of the country, they began to change and change rapidly. It was at this stage that the various Middle Indic languages must have developed. The various ways in which the Middle Indic languages deviated from Sanskrit and moved closer to Dravidian in their phonological and morphological structure have been often discussed in the literature (see Bloch, 1965; Chatterji, 1926, 1960). What is generally referred to as the 'phonological decay' observable in these languages consists of the change from pitch accent to stress accent, simplification of syllabic structure, spirant pronunciation of intervocalic stops, assimilation of consonants in clusters, increase of cerebrals at the expense of dentals, and so on. Similar changes occurred in morphology. The dual disappeared from the system, case inflections began to be replaced by postpositions; the elaborate moods, tenses and other paraphernalia of the older forms of Sanskrit verb system were lost and the entire morphological structure came to be simplified a great deal. How much of this is to be ascribed to the substratum influence and how much to internal changes is difficult to determine. The net result of these changes, however, was that the several Middle Indic languages moved much closer to Dravidian as they deviated from early Sanskrit.

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As the Aryan speech was being rapidly Indianised in the Indo-Aryan region, classical Sanskrit and Aryan material culture[11] reached the southernmost parts of India and even beyond to Ceylon. Classical Sanskrit as the sacred language of Hindu religion must have been intensively studied in the South long before the Christian era. Lexical borrowing from Sanskrit must have begun early. But contact with Aryan culture was by no means limited just to the higher classes or to the intelligentsia in the South. "By about the 4th century B.C., the whole Peninsula displays a remarkable homogeneity of material culture" (Subbarao, 1958; quoted in Southworth, 1968).

It is not necessary to trace here the development of Middle Indic languages through the Apabhramsa to their modern stage. The development generally followed the same pattern described above. Such then are the factors which are generally believed to have brought about the remarkable typological similarity which we find today between Indo-Aryan and Dravidian languages.

These typological similarities have been repeatedly listed and discussed by various scholars (cf., in particular, Chatterji 1926, 1960; Emeneau 1956; Andronov 1964; Bloch 1965; Southworth 1968). I shall not discuss here the phonological and morphological similarities but merely refer the reader to the sources just cited. I shall, however, mention

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briefly some of the syntactic correspondences, since these are directly relevant to the research reported in the present work.

We may begin by noting an observation that Chatterji made years ago, since it neatly summarizes much that has been said about this matter.

> It is in syntax that Indian Dravidiandom and Aryandom are one (emphasis added, MVN). A sentence in a Dravidian language like Tamil or Kannada becomes ordinarily good Bengali or Hindi by substituting Bengali or Hindi equivalents for the Dravidian words and forms, without modifying the word order, but the same thing is not possible in rendering a Persian or English sentence into a NIA (New Indo-Aryan, MVN) language.
>
> (Chatterji 1926: 176-77)

It is not clear what sorts of claims are intended by the first sentence in this quote, but if by 'syntax' we understand some broad features of surface syntax of the kind discussed by Greenberg (1963)[12], then one could cite impressive evidence in support of Chatterji's observation. As for the second sentence in this quote, any one who has translated a single sentence into half a dozen Indian languages[13] will agree with Chatterji's contention. But we should also remember the cautionary remarks of Bloch quoted earlier in this chapter; Bloch was not convinced that modern Indo-Aryan languages are basically different from other Indo-European languages. Unfortunately, so far a systematic comparative study of the syntax of Dravidian and Indo-Aryan languages has not been made. The only exception to this seems to be

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Master's excellent study mentioned earlier. Even Master was severely limited in his investigation for want of an adequate syntactic framework which goes beyond the surface similarities and differences between languages to the deeper aspects of their syntax.

I shall now mention a few syntactic traits which all modern Indian languages of both the families seem to share. Let us begin with word order. The surface word order in almost all Indian languages normally is Subject-Object-Verb. Other constituents in a sentence, such as the indirect object, adverbial phrases of time, manner, place and so on, generally precede the verb. Such factors as focus and presupposition, phonological complexity of a given constituent, etc. determine the order of major constituents in a sentence. Almost all Indian languages contain in their grammar a rule which can scramble the major constituents in a sentence, except perhaps the verb, rather freely, provided that each such constituent is clearly marked for its relationship with the verb. No such constituent may be scrambled out of the clause in which it is derived either upwards or downwards.

In all Indian languages, the adjective precedes the noun, the genitive precedes the governing noun, and the adverbial modifier precedes the adjective. The possible constituents of a noun phrase are a demonstrative, numeral, adjective, a relative clause and a complement clause, and they normally occur in that order. Almost all Indian

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languages use postpositions or suffixes to the exclusion of pre-positions to mark the surface syntactic relationship of noun phrases to the verb in a sentence. Most of these post-positions appear to have originated from independent lexical items like nouns, verbs and adverbs.

Indian languages seem to have a very large part of their lexical-semantic structure in common largely owing to the fact that speakers of these languages share the same social, religious and cultural traditions. This has considerable effect on the syntax of these languages. Semantically equivalent verbs across languages often have the same selectional restrictions. As a result most verbs in an Indo-Aryan language such as Punjabi govern the same cases as the semantically equivalent verbs in a Dravidian language such as Malayalam or Telugu. All these features together have made modern Indian languages 'syntactically transparent' to one another. This is what Chatterji refers to when he points out that we may take any Kannada sentence and replace it morpheme by morpheme by an equivalent Bengali or Hindi morpheme, and get an acceptable Bengali or Hindi sentence. Such a sentence will not always be elegant or very idiomatic but it will generally be grammatical and acceptable.

More or less the same kind of homogeneity exists between these languages with regard to the more complex syntactic processes. Thus generally, subordinate clauses precede the main clause; relative clauses precede the noun they

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modify, and adverbial clauses of condition, purpose, etc. precede the verb of the main clause. The favorite devices employed for verbal subsordination in these languages are nonfinite forms of the verb such as the verbal participle.

The passive is used much less in these languages than in English, and is generally expressed by various periphrastic devices, the principal one of them being neuter verbs. Interrogation does not involve inversion of word order in any of these languages. WH-questions are formed by replacing the constituent questioned by the appropriate question word, and a rising intonation on a declarative sentence turns it into a Yes/No question. The order of elements in the comparative degree constructions in all the languages is the same, namely, standard of comparison, marker of comparison and then the adjective. They all have an elaborate system of modal verbs. These modal verbs occur also as regular verbs in these languages.

This is by no means an exhaustive list of the syntactic traits common to all these languages. I have merely mentioned these traits here without elaborating on them because they have received ample discussion by previous writers on the subject.[14] Normally in such discussions, the emphasis is on determining the origin of these traits, and in most cases, the origin seems to be Dravidian. Thus the use of postpositions to the exclusion of pre-positions, the preponderance of nonfinite forms of the verb as devices

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linking subordinate clauses, in particular the use of the 'gerund', the various periphrastic ways of forming the passive, etc. are generally considered to be of Dravidian origin. The borrowing of syntactic features has not been entirely one-sided. Andronov (1964) has pointed out that Dravidian languages have acquired complex sentences, that is, sentences with more than one finite verb, under the impact of Indo-Aryan.

There is no doubt that mutual assimilation of various syntactic traits have brought the languages of the two families very close to one another; they are much closer than were early Sanskrit and early Dravidian. But are they close enough to make it possible, as some scholars have suggested, to write a common core grammar to cover all modern Indian languages? Attempts in this direction are worth making if only to discover whether there is any real empirical basis for assuming that modern Indian languages have a common core grammar. For, at present, it is not clear what such a statement means. Does it mean that all modern Indian languages have the same set of phrase structure rules and the same major transformations? If we can show that this is so, that itself would be an interesting discovery, because there are some differences between Dravidian and Indo-European languages in these matters, and after all, Indo-Aryan languages are genetically related to Indo-European through Sanskrit and Indo-Iranian.

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A close examination of modern Indo-Aryan language reveals that some of the characteristic Indo-European traits still persist in these languages. One such trait that readily comes to mind is movement or reordering transformations. Most Indo-European languages contain transformations that move certain constituents in a sentence to the right around the verb or some such constituent. Dravidian languages, on the other hand, do not seem to have such transformations in their grammar.[15] Now most Indo-Aryan languages do contain a few such transformations.[16] To cite another example, in Dravidian languages, subordinate and embedded clauses can almost never follow the verb of the principal clause. This is not strictly true of Indo-Aryan languages, although they frequently follow the general Dravidian practice in this matter.

Whatever the implications of these facts to the deeper aspects of the syntax of Indo-Aryan languages,[17] it is clear that there are some differences even at the surface level between Indo-Aryan and Dravidian languages. What we need is comparative studies which examine these languages from this point of view.

A comparative study of languages of these two families is also valuable for other reasons. Here, as perhaps in few other languages of the world, we have an opportunity to see how deep syntactic influences from one language to another or from one language family to another can go. Can such

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influences penetrate so deep as to change the phrase structure rules of a language, or do such rules never change? Can languages acquire new transformational processes owing to such an influence? When new transformational rules are added to a language, what happens to the already existing ones? Do the latter gradually disappear after a time in some cases, or does the language retain both the old and the new and merely increase its syntactic range? When both are retained, how are the older transformations ordered with respect to the new ones? Many such questions can be raised, and we can learn a great deal about the nature of linguistic competence from answers to these questions. As Kiparsky (1968) has observed: "What we really need is a window on the form of linguistic competence that is not obscured by factors like performance about which next to nothing is known. In linguistic change we have precisely such a window."

To be able to answer the whole range of questions about linguistic change and about a possible core grammar for modern Indian languages, we need good descriptions of the syntax of early Sanskrit, early Dravidian and of at least a couple of languages of the two principal families. It is doubtful that we will ever be able to obtain a good description of early Dravidian of the period before it came into contact with Sanskrit, because the earliest records of Dravidian go only as far back as the early Christian

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centuries, and chronologically the earliest of such works, Tolkāppiyam, already bears the impact of Sanskrit.[18] In any case, it is almost impossible to obtain a detailed syntactic description of a language from a limited corpus. Similar problems beset any attempt to write a good syntactic description of early Sanskrit. But it should be possible to establish certain general or surface features of these languages from the material available.[19] It may also be possible to make certain deductions about the earlier forms of these languages from synchronic descriptions of modern Indian languages of both the families. In any case, we need adequate synchronic studies of a few languages of each family. The task involved is a formidable one and will need co-ordinated efforts of many linguists, but its value is obvious.

The present work was primarily motivated by considerations such as these, although it does not attempt to deal directly with any of the larger questions raised above. In a dissertation such as this, one can take up for investigation only a narrowly defined area. This work presents a synchronic description of an important area in the syntax of two modern Indian languages, Kannada and Konkani. Kannada is one of the principal Dravidian languages, and Konkani is an Indo-Aryan language. The dialect of Konkani described here has been in extremely close contact with Kannada for the last 300 years or more. The studies presented in this work pertain to three closely related topics in

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the syntax of Kannada. The three topics are relative structures, adjectives, and complement clauses on nouns, all of which are generally assumed in transformational studies to have their underlying source in sentences embedded in noun phrases. For reasons to be explained directly, I have limited the analysis of adjectives only to Kannada. In the other two cases, I have tried to apply to Konkani, to the extent it is possible, the analysis developed largely on the basis of evidence from Kannada. In doing this I am making no firm claims about the phrase structure rules in Konkani. But it will be seen that the underlying structures and phrase structure rules postulated for Kannada are generally also adequate for Konkani. Several detailed studies of languages of both the families will be needed before we can undertake a serious comparative study of the base component of these languages.

I must emphasize here that the primary focus in these studies is on the syntax of NP-embedded sentences in Kannada, and Kannada may be regarded here as a representative of Dravidian languages in general. I have not been able to examine other Dravidian languages in detail yet, but the main issues discussed in these studies belong to a fairly deep level of syntax, and it seems reasonable to assume, in the absence of evidence to the contrary, that at this level all Dravidian languages are essentially alike, although it is conceivable that they differ in certain minor details.

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I have at various points in this work focused attention on those aspects of Kannada syntax in which it seems to have been influenced by Indo-Aryan languages. This is particularly true of the study on adjectives, in which I have tried to show that it is impossible to arrive at an explanatorily adequate description of the syntax of Kannada if we fail to take into consideration the dual status of this language, as a Dravidian language and as a language that belongs to the Indic linguistic area.

In general, these studies seek to establish some of the basic features of the syntax of NP-embedded sentences in Kannada and in Dravidian languages in general. Some fairly general issues of theoretical significance have also been raised. For example, in Chapter 3, I have presented a proof that stacking[20] of relative clauses is necessary in a grammar of Kannada. In the same chapter, I have also examined with reference to the evidence from Kannada some of the constraints on certain types of transformations which Ross (1967a) has proposed as language universals.

Adjectives constitute a major problem in the analysis of Kannada, and for that matter in any Dravidian language. For some time now, scholars have been debating the question whether adjectives in these languages exist as a distinct lexical and grammatical category. This question has been rather incidental to my inquiry here although I have said a few things on this issue which may be found useful by

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students who investigate this question in detail. I feel that there are certain important aspects of the syntax of adjectives in these languages about which we do not yet know enough. I have tried to focus attention on some of these basic facts. The analysis I have suggested here has too many loose ends which cannot be tied together until we have adequate analyses of related areas of the syntax of the language. For this reason, I have desisted from extending my incomplete analysis of adjectives of Kannada to Konkani.

In the case of relativization and complementation, such an attempt has been made. I have shown that much of the basic analysis developed on the basis of evidence from Kannada also applies to Konkani. This may partly be due to the fact that both these languages belong to the Indic linguistic area. But the correspondence between these two languages is not complete; Konkani still retains certain features which are unique to Indo-Aryan and not to be found in any Dravidian language. What is more significant is the fact that Konkani has also given up a number of crucial Indo-Aryan features which are still found in languages such as Hindi, Gujarati and Marathi, in favor of purely Dravidian features. In discussing these questions, I have indirectly sought to establish some of the important aspects in which modern Indo-Aryan languages differ from Dravidian languages with respect to their syntax of sentences embedded in the noun phrase. I have not attempted to provide in this work

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firm analyses of any of the Indo-Aryan languages except Konkani.

Now a word must be said about the two languages I have chosen here for investigation. My first reason for choosing Kannada and Konkani is that they happen to be the languages of their respective families that I know best, having had to learn both of them simultaneously as a child. My second reason has to do with the general theme of this work; Kannada is one of the principal Dravidian languages that is spoken in an area geographically closest to the Indo-Aryan area, and the dialect of Konkani described here represents the speech of a community which has been residing in a predominantly Kannada-speaking region for the last 300 years or more. Thus in certain respects, the contact between these two languages has been of the same type as that between Aryan and Dravidian languages in the early phases of their contact.

Kannada, also called Kanarese, is predominantly spoken in the state of Mysore, and has an impressive literary tradition which dates back to the latter half of the first millenium A.D. The language has been returned as their mother tongue by 17,415,827 people according to the 1961 census report; another 3,550,642 have returned it as their secondary language. Kannada has a number of communal, social and geographical dialects, but the dialect described here is the more uniform, formal or literary dialect. There

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have so far been very few studies of the syntax of Kannada within the transformational framework. The only such study available is Ramanujan (1963), which is based largely on the theoretical position of Syntactic Structures. The language, however, has an extensive native grammatical tradition, but unfortunately, none of the works in this tradition was available to me while working on this dissertation. Kittel's Grammar of the Kannada Language is chiefly based on this tradition, and contains many valuable insights. Another traditional grammar which I found useful is Spencer's Kanarese Grammar. More recent studies[21] of Kannada have largely concentrated on the phonology and morphology of the language.

Konkani is an Indo-Aryan language spoken along the west coast of Maharastra, in Goa and parts of Mysore state. There are also a few pockets of Konkani speakers on the western coast in Kerala. Since it is one of the less known languages of the Indo-Aryan family, the reader may find the following quotation from Katre (1966) useful in understanding its historical antecedents:

> Taking into account all the main features of Koṅkaṇī we may now definitely assign it to the South-Western group (having Marāṭhī and Gujarati as its nearest of kin) with a tinge of the Central group (Hindi, especially in the dative postposition -ka). The differentiations noted in the formation of the direct sing. of masc. nouns in their extended form and the divergent postpositions for the dative clearly mark off Koṅkaṇī as a separate language from Marāṭhī, preserving in many respects an earlier stage of development. Its position as a separate language (and not a mere dialect) is thereby proved, but phonological

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considerations show that both belong to a common parent Prakrit.

(pp. 173-74)

Thus Konkani is very closely related to Marathi and Gujarati. The dialect of Konkani described here is the speech of Saraswat Brahmins in the coastal districts of North and South Kanara. In both these districts the principal language is Kannada, and Saraswat Brahmins constitute a small but socially prominent minority. There are various other dialects of Konkani differentiable along geographical, social and communal axes. Thus in Goa, there are many dialects of Konkani such as Christian Konkani, Saraswat Konkani, Gowda Saraswat Konkani, Konkani of Sonars, of Gavids and so on. Similar dialect differences obtain in both the Kanaras and elsewhere. The one important fact to be noted about Konkani is that it has not received any standardization since it has rarely, if ever, been used as a literary language.[22]

The Saraswat Brahmins are believed to have migrated to the two Kanara districts from Goa under the threat of conversion by the zealous missionaries of Goa. Katre (1966) has stated that there is reason to believe that the Konkani speaking Brahmin communities had already settled in North and South Kanara by the 17th century. Thus the direct contact between Konkani and Kannada began more than 300 years ago. Since Kannada has been the predominant language of the area, a vast majority of Konkani speakers in this area

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during the last 300 years have been also fluent speakers of Kannada. Kannada has been the language of early schooling, of business, and of administration at the lower levels in this area. Therefore except within their homes and their small community, Konkani speakers in this region had to use Kannada extensively. Until recently, they used to be effectively literate only in Kannada; they used to keep their accounts in Kannada, and used Kannada for writing letters even to members of their own community.[23] Even women had to be fluent speakers of Kannada, since that was the language spoken by the household employees, by the vegetable vendor, the farm hands, and even by the local grocer. This extensive and intensive bilingualism of Saraswat Brahmins may account for the profound influence of Kannada on their dialect of Konkani. In fact, we are considering here a typical bilingual situation. One of the aims of this dissertation is to examine the effects of this bilingualism in the small area of syntax examined here.[24]

There are other dialects of Konkani, especially those spoken in Goa, which have not come under this direct and strong influence of Kannada. I shall briefly compare the evidence from Saraswat Konkani of Goa with that of Saraswat Konkani of the Kanaras[25] to determine if there are clear Dravidian traces in the latter which are not found in the former. Throughout this work, Saraswat Konkani of the

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Kanaras will be referred to as 'Konkani', and the dialect of Saraswats of Goa will be referred to as 'Goan Konkani'.

The theoretical framework underlying this work is the transformational model of syntax outlined by Chomsky in Aspects. During the last two or three years several linguists, including Chomsky, have suggested new departures from this model. Where necessary, I have made use of some of the modifications suggested by Chomsky in his 'Deep Structure, Surface Structure, and Semantic Interpretation'. Mostly, I have sought to present this analysis under what Chomsky calls the 'standard theory', i.e. the model presented in Aspects.

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Footnotes

[1]The five major stocks are Munda (Austro-Asiatic), Dravidian, Indo-Aryan, Tibeto-Burman, and the little known family of which Burushaski is probably the only member. Speakers of Dravidian and Indo-Aryan languages account for more than 95% of the present population of India, and most of the major literary languages of the subcontinent belong to these two principal families. For a brief introductory survey of the languages of this area, see Bright (forthcoming), which also has a useful bibliography.

[2]Andronov (1964) believes that "the so-called 'genetic' relationship of languages within one family" is not 'primordeal and perpetual'. "It is historic in its nature--it is formed gradually and gradually it can weaken and disappear. In this sense the development of the typological similarity of the modern Indo-Aryan and Dravidian languages can be regarded as a prerequisite or an initial stage in the formation of a new linguistic family. If the direction of their development does not change in future, the now observed tendency to develop the formal similarity may gain strength and result in the formation of new relationship ties and of a new language family, which will be neither Indo-European, nor Dravidian" (pp. 125-26).

[3]See also Bloch (1930) in which he expresses his strong reservations about the view that many of the features of modern Indo-Aryan languages have to be attributed to the Dravidian substratum influence.

[4]Caldwell's Comparative Grammar of the Dravidian Languages, from which this quote is taken, was originally published in 1856.

[5]Grierson (1927) also notes instances of the influence of Munda, Indo-Chinese and other families on Indo-Aryan.

[6]Southworth (1968) is a very good account of the correspondences between modern Indo-Aryan and Dravidian languages, but there is very little in it by way of new evidence which would justify in detail his hypothesis of pidginization and creolization. I feel that there is very little that his stronger hypothesis of pidginization explains that cannot also be accounted for by the weaker hypothesis of 'much bilingualism and gradual abandonment of Dravidian speech in favor of Indo-Aryan over a long period and a great area' which Emeneau has suggested. Particularly since there is such meager historical evidence in detail, it seems to me that a weaker hypothesis is preferable to a stronger one when both are equal in their explanatory power.

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[7]The Indus valley civilization, which is dated as spanning approximately 500 years, is believed to have flourished in the third millenium B.C.

[8]The most recent such attempt is Asko Parpola et al. (1969).

[9]According to many western scholars, the first bands of Aryans must have arrived in the Punjab region around 1200 B.C. For a recent critique of this view, see Sethna (1969).

[10]The question of the origin of retroflex consonants in Indo-Aryan languages has been discussed by many scholars. For an excellent resumé of these discussions, see Kuiper (1967).

[11]Aryans are also credited with having introduced horses and horsemanship in India as well as advanced metallurgy. Cf. Southworth 1968.

[12]Greenberg (1963) gives a list of about twenty-five syntactic universals. His study is based entirely on the surface properties of thirty languages belonging to a wide variety of families. Among them are three Indian languages, Hindi, Kannada and Burushaski. It is significant that each and every syntactic universal that Greenberg postulates puts the Indo-Aryan language Hindi, and the Dravidian language Kannada into the same typological group.

[13]This may easily be verified by comparing the translation of the first four sentences of the 'Parable of the Prodigal Son' from the New Testament into various Indian languages given in Grierson (1927).

[14]Cf. in particular Bloch (1965), Emeneau (1956), Master (1929, 1932 and Southworth (1968).

[15]Cf. Ch. 2 for further discussion.

[16]A student of Indian languages who is familiar with English is struck by the virtual nonexistence of movement rules of any kind in these languages. But a more careful study will reveal that most Indo-Aryan languages do contain a small number of movement rules. It is possible in Hindi, Gujarati, and Marathi, for example, to extrapose relative and complement clauses. For details, see Ch. 2 and Ch. 5.

[17]See also Ross (1967c) for a possible interpretation of evidence from gapping in Hindi.

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[18]Cf. Sastri (1934: 104-5).

[19]For an attempt at a transformational analysis of some aspects of Sanskrit, see Staal (1967), and for a tagmemic analysis of an early Tamil text, see Zvelebil (1964).

[20]Relative clauses are said to be 'stacked' if there are two or more clauses such that the first clause modifies the head noun, and the second modifies the head noun as already modified by the first clause, the third modifies the head noun as already modified by the first clause which is already modified by the second clause, and so on.

[21]Cf. Bright (1958), Hiremath (1961), Nayak (1967) and Upadhyaya (1968).

[22]Some Konkani speakers believe that there was a flourishing Konkani literature in Goa which was destroyed by the Portuguese inquisition, which commenced by a ruling of 30th June 1541 and continued for nearly two centuries. But Katre (1966) finds very little evidence which would support this belief and is inclined to believe that "Konkani at no time enjoyed the status of being a medium of serious literature or a court language" (p. 174).

[23]This situation has changed in many important ways during the last forty years. Saraswat Brahmins were among the first to take to English education in this region, and a growing majority of them has been using English for quite some time now in their correspondence, for keeping accounts, and so on. Besides, during the last thirty to forty years, Konkani speakers have been migrating to Bombay, which is the capital of the Marathi speaking state of Maharastra, and one of the most cosmopolitan cities in India. At the present time, the largest concentration of Saraswat Brahmins is to be found in Bombay, and there are very few of them left in the two Kanara districts. It is too early to say what effect this renewed contact with the Indo-Aryan Marathi has produced on Konkani.

[24]Emeneau (1962a, 1962b) has discussed the effects of bilingualism on Brahui, a Dravidian language spoken in a remote northwestern corner of the Indian subcontinent, where this language is in close contact with Balochi.

[25]Katre (1966) is the standard work on the historical development of Konkani. For a structuralist description of the dialect of Konkani examined in this work, see Ghatage (1963).

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Chapter 2

RELATIVIZATION IN KANNADA AND KONKANI

In this chapter and the next, I will present an analysis of certain aspects of relativization in Kannada and Konkani. The focus of attention, however, will be for the most part on Kannada, more specifically, on an interesting problem the syntax of relativization in this language presents. Relativization in Kannada, superficially at least, belies the often made but rather vague observation that languages tend to be economical. If relativization is the syntactic process by which a sentence is embedded as a modifier of a noun phrase, then there exist in Kannada not one but two processes which perform this single function. These two processes are completely unrelated and yet must be assumed to operate on a common underlying structure because the resulting surface structures are paraphrases of each other. One of these processes, as will be shown below, is in some sense 'natural' to the language, is much more frequently used than the other, and has few unnatural constraints on it. The alternative process is rather infrequently used, operates under some rather peculiar constraints, and yet it is not entirely superfluous, since it can operate in certain situations in which the other cannot. The respective domains of these two processes of relativization will be the main theme of the next chapter.

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In this chapter, I will develop a basic analysis of relative structures primarily on the basis of evidence from Kannada, and this analysis will then be extended to Konkani to the extent that it is possible. In section 1, which deals with surface structures of relative constructions in Kannada and Konkani, it will be seen how close the two languages are in this respect. Underlying structures and transformations required to derive these surface structures will be the topic of section 2. In section 3, attention will be drawn to those aspects of the syntax of relativization in Konkani in which it differs from Kannada, and also to those in which it differs from other Indo-Aryan languages but not from Kannada. In the same section, I will try to show that, so far as its syntax of relativization is concerned, Konkani is probably in a stage of transition from a basically Indo-Aryan to a predominantly Dravidian syntax.

The scope of the study of relativization in this dissertation is limited mainly to restrictive relative structures.[1]

Section 1

It was mentioned earlier that there are two unrelated processes of relativization in Kannada. In fact, a similar phenomenon obtains in all modern Indian languages, but I will be concerned here mainly with its implications in Kannada and Konkani. Superficially at least, it does not look far different from a similar phenomenon in English.

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(1) The old man who is reading a newspaper is a doctor.

(2) The old man reading a newspaper is a doctor.

(3D) yāva mudukanu pēpar ōdutta iddānō ā mudukanu ḍākṭaranu iddāne.

'which old man newspaper is reading the/that old man doctor is'

(4D) pēpar ōdutta idda mudukanu ḍākṭaranu iddāne.

'newspaper reading old man doctor is'

(3N) khanco mhāntāro pēpar vāccət āssa kī to mhāntāro ḍākṭaru āssa.

'which old man newspaper is reading the/that old man doctor is'

(4N) pēpar vāccət aśśillo mhāntāro ḍākṭaru āssa.

'newspaper reading old man doctor is'

(Sentences marked D are examples from Kannada; Konkani sentences are marked N. This practice has been followed throughout this chapter.)

The English sentences (1) and (2) contain relative structures; so do their Kannada equivalents (3D) and (4D), and their Konkani equivalents (3N) and (4N). Like (1), (3D) and (3N) contain a Non-participial relative clause, and like (2), (4D) and (4N) contain a Participial relative structure. Although Non-participial and Participial relative structures occur in all these three languages, the situation in Kannada and Konkani is different in some respects from that in

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English. But before we take up this issue, it is necessary to examine the sentences from the two Indian languages more closely.

Note first of all the significant fact that although Kannada and Konkani belong to two different families, the relative structures in these languages have identical surface structures. The tree diagram on page 33 will serve to represent approximately the surface structure of (3D) and (3N), both of which contain a Non-participial relative clause. The special features of the Non-participial relative structure worth noticing are the following:

(i) the relative clause is introduced by a relative formative used adjectivally, yāva in Kannada, and khanco in Konkani;

(ii) a special morpheme ō is attached to the verb of the relative clause in Kannada; kī is introduced after the verb of the relative clause in Konkani;

(iii) in both the languages, the noun to which the relative clause is attached is preceded by what occurs elsewhere in these languages as a Demonstrative meaning 'that'--ā in Kannada, and to in Konkani.

It must be pointed out that both in (3D) and (3N), the noun to which the relative clause is attached and the Determiner preceding it can optionally be replaced by a pronoun of the appropriate gender and number. Thus in (3D),

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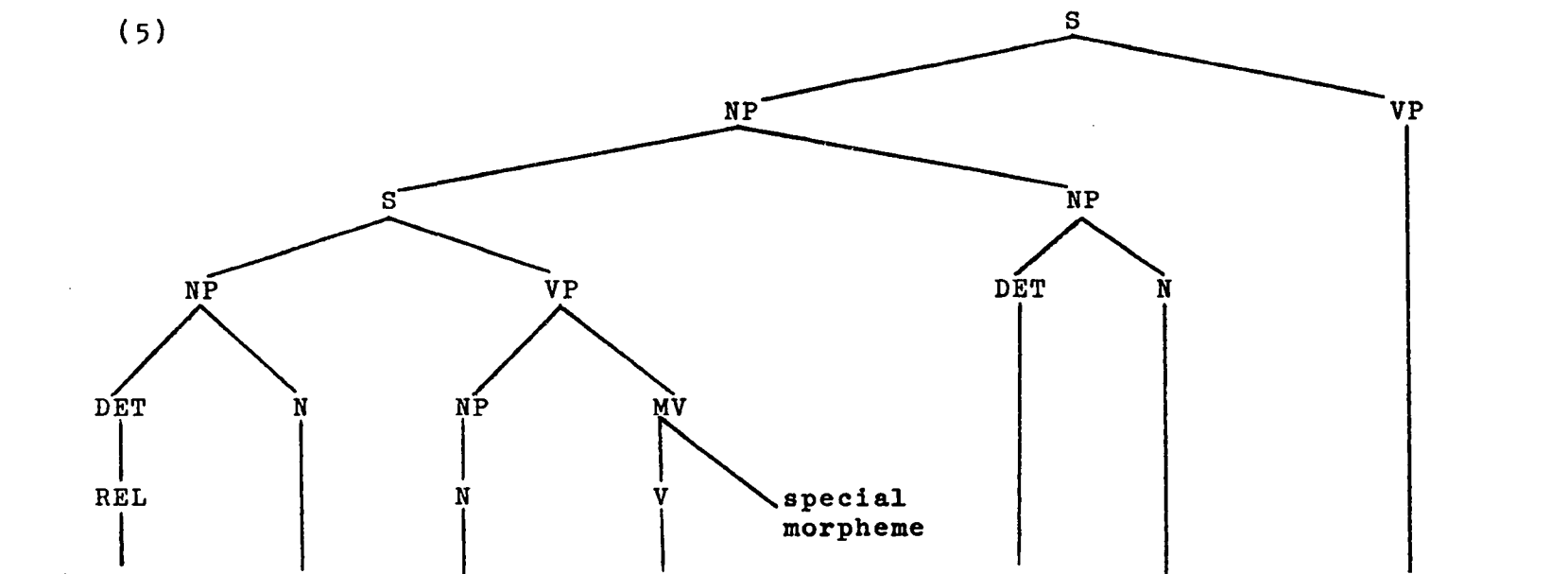
(5)



(3D) yāva mudukanu pēpar ōduttiddāne ō ā mudukanu ḍākṭaranu iddāne

(3N) khanco mhāntāro pēpar vāccət āssa kī to mhāntāro ḍākṭaru āssa

'which' 'old man' 'news-paper' 'is reading' 'the/ that' 'old man' 'is a doctor'

ā mudukanu 'the/that old man' may be replaced by avanu 'he'. Similarly, in (3N), to mhāntāro 'the/that old man' may be replaced by to 'he'. In fact, pronominalization of the head noun is very common in these situations. Observe that in (5) the node dominating ā of (3D) and to of (3N) is labelled 'Determiner' and not 'Demonstrative'. ā and to occur in Kannada and Konkani respectively also as the distal Demonstrative 'that', but in these sentences, they are used more as markers of 'definiteness', rather like the definite article 'the' in English, than as Demonstratives proper. This explains why we cannot replace in these relative clauses ā and to by the corresponding proximal Demonstratives ī and ho 'this' respectively.

Indo-Aryan languages such as Hindi, Marathi and Konkani have a set of relative pronouns which is distinct from the set of interrogative pronouns in these languages. But Dravidian languages employ their interrogative pronouns also as relative pronouns. Thus yāva in yāva mudukanu 'which old man' of (3D) is an interrogative pronoun used as a relative formative. Konkani perhaps is the only Indo-Aryan language which employs its interrogative pronouns also as relative pronouns. Thus khanco in khanco mhāntāro 'which old man' is an interrogative pronoun used as a relative formative. It is also possible, however, to use the regular Konkani relative pronoun jo (jo mhāntāro instead of khanco mhāntāro) in (3N).

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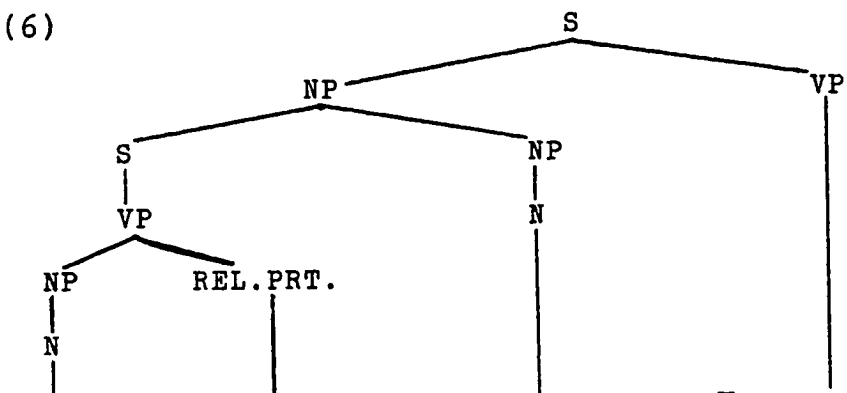
The enclitic ō which is attached to the verb of the relative clause in (3D) and the formative kī which is inserted after the verb of the relative clause in (3N) have been described here merely as 'special morphemes'. No account of these elements is available in the literature. More about them will be said in section 3.

Consider now the Participial relative structure in (4D) and in (4N). Once again, a single tree diagram may be used to represent the surface structure of these sentences.

(6)



(4D)	pēpar	ōdutta idda	mudukanu	dāktaranu iddāne
(4N)	pēpar	vāccət āśśillo	mhāntāro	dāktaru āssa
	'news-paper'	'reading'	'old man'	'is a doctor'

The distinguishing features of the Participial relative are the following:

(i) the identical noun 'old man' is deleted from the relative structure; it occurs only in the matrix S,

(ii) the finite verb of the relative structure is replaced by the corresponding relative participle of the verb.

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The relative participle being adjectival in nature, it follows in Konkani the pattern of adjectives in most Indo-Aryan languages in agreeing with the following noun in gender and number. So if the head noun in (4N) were mhāntāri 'old woman', the relative participle would also have to be marked for feminine gender, vāccət aśśilli ('reading' + feminine). No such adjective-noun concord obtains in Dravidian languages. Except for this, (4D) and (4N) have identical surface structures.

In modern Dravidian languages, the Non-participial relative (Non-part. rel.) is used much less frequently than the Participial relative (Part. rel.). The former receives scant attention in most grammars of Kannada.[2] But however infrequently used, the Non-part. rel. is found in most modern Dravidian languages.

The preference of Dravidian languages for the participial construction is typical of this family. Dravidian languages are rich in non-finite forms of the verb, and they play a crucial role in the syntax of these languages. The syntax of complex sentences in Dravidian is in a large measure the syntax of its non-finite forms. Kannada, for example, has as many as six types of non-finite forms and these cover a wide semantic and syntactic range. The verbal stem māḍu 'to do', for example, has the following major categories of non-finite forms:

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Relative participle (past)

māḍida 'which has been done'

Verbal participle (past)

māḍi 'having done'

Participial noun

māḍidavanu 'one who did it'

Verbal noun

māḍuvadu 'doing' as in 'the doing of it'

Conditional

māḍidare 'if done'

Infinitive

māḍalu/māḍalikke 'to do'

Many of these categories can incorporate tense, aspect, mood and so on. For example, there are present, past and progressive relative participles, present and past verbal participles and so on. Similarly, there are negative participial nouns, negative relative participles, negative conditionals, negative verbal participles, etc.

Since the relative participle plays such an important role in relativization in Kannada, it is necessary to look briefly at its syntactic potential. Caldwell (1956) describes the relative participle in Dravidian languages 'as a verb as well as an adjective (i.e. a participle participating in the nature of both parts of speech)'. It is very much like an adjective in that it is always followed by a

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noun which it qualifies. It is verb-like in that it is capable of governing a preceding noun or even a whole phrase.

(7D) citravannu tegeda kalāvida 'the artist who drew
'picture drawn artist' the picture'

(8D) giraṇiyalli munjāne ārarinda sanje ārara varege duḍiyuva kūlikāra
'in the factory-from six in the morning-to six in the evening working labourer'

In (7D), the relative participle tegeda 'drawn' qualifies kalāvidanu 'artist', and it governs citravannu 'picture'. In (8D), the relative participle duḍiyuva 'working' governs the entire phrase preceding it.

(9D) patra bareyuva huḍuga (9) 'the boy writing a letter'

(10D) huḍuga bareyuva patra (10) 'the letter being written by the boy'

Notice that English uses the active participle in (9) and the passive participle in (10), but Kannada uses the same participle bareyuva 'writing' in both situations.[3]

As indicated earlier, the relative participle can incorporate most auxiliary elements such as tense, aspect, mood, etc. that go with the verb.

(11D) rāmanu māḍuva kelasa 'the work which Ram does'
rāmanu māḍada kelasa 'the work which is not done by Ram'

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rāmanu maḍabāradāda kelasa 'the work which Ram should not do'

rāmanu māḍabahudāda kelasa 'the work which may be done by Ram'

The underlined relative participles incorporate in them tense, mood and aspect as indicated by the English translation. It is this versatility of the relative participle which makes Part. rel. such a dominant mode of relativization in all Dravidian languages.

Now the only relationship between the Part. and the Non-part. rel. structures in Kannada and Konkani seems to be that they come from the same underlying structure. There does not seem to be any direct transformational relation between (3D) and (4D), or between (3N) and (4N). Such a direct relationship is generally assumed to exist between the Participial modifier and the corresponding relative clause in English. Thus, the old man reading a newspaper in (2) is derived by deleting 'who is' from 'the old man who is reading a newspaper' in (1). In this 'relative reduction', the participial feature is regarded as part of the progressive formative (be + ing) in the relative clause. But this does not always work since there are cases such as the wrestler weighing 300 lbs., or the box containing jewels which can only come from the wrestler who weighs 300 lbs. and the box which contains jewels and not from the corresponding relative clauses containing the progressive formative, since the

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latter are not possible (*the wrestler who is weighing 300 lbs., *the box which is containing jewels). Thus in these cases, the participial modifiers are derived from the corresponding relative clauses by deleting who/which and by changing TENSE to -ing so long as TENSE is the only AUX. There may be other complications in the derivation of participial modifiers in English, but it seems reasonable to assume that relative clauses are the immediate source from which they are derived. Now it seems doubtful that an adequate transformational rule can be formulated for deriving the Part. rel. from the corresponding Non-part. rel. in Kannada. Further it seems that it would be much simpler to derive both kinds of relative structures independently from the deep structure than to derive the Non-part. rel. first, and then from it the Part. rel.

In Kannada, there are some Non-part. rels. for which corresponding Part. rels. exist, and so any transformation which we might formulate to derive the latter from the former will have to be optional. But then there are Part. rels. for which corresponding Non-part. rels. are not possible, and there are also Non-part. rels. for which corresponding Part. rels. are not possible. Therefore, the transformation which would derive Part. rels. from Non-part. rels. will have to be optional in some situations, obligatory in some others, and will have to block in a third set of situations. Although this in itself is not something unheard of,

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considering the various kinds of constraints peculiar to each of these relative processes,[4] I doubt whether such a transformation can be adequately stated at all.

Suppose we decide to derive (4D) from (3D) and not directly from the underlying structure. Then this transformation will have to delete the relative adjective yāva, the special morpheme ō, and also the definitivizer ā. Then as a second step, we will have to delete the identical noun from the embedded relative clause and to insert the feature 'relative participle' into the verb of this clause. By making the three changes mentioned as the first step, we are in fact reconstructing from (3D) its underlying structure, and it is into this underlying structure that we will be introducing the changes mentioned as the second step. Thus we are in fact deriving both (3D) and (4D) directly from the underlying structure itself. Therefore, I am going to assume here that in Kannada, the Part. rel. is not derived from the Non-part. rel. but directly from the underlying structure.

Historically speaking, there is good reason to believe that the participial construction was the only mode of relativization known to Dravidian languages, and that the Non-part. rel. was not native to these languages. Caldwell (1956) observes, "It is a remarkable peculiarity of the Dravidian languages, that they have no relative pronoun whatever, and that the place of the relative pronoun is supplied by a part of the verb which is called the relative

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participle ..." (p. 520). Non-part. relativization, for which the relative pronoun is so important, must have come into these languages from Indo-Aryan languages, in which it has historically been the favorite mode of relativization. P. S. Subrahmanya Sastri (1934) points out that the earliest Tamil grammars such as Tolkāppiyam (early centuries A.D.) make no mention of the relative pronoun at all. He further observes:

> But in Maṇimēkalai (late Caṅkam period, around 450 A.D., MVN) and some of the later works the interrogative pronouns began to be used in certain instances as relative pronouns. This, it seems to me, is due to the adaptation of Sanskrit sentence form in Tamil (emphasis added, MVN). For instance, sentences like 'yātonru yātonru mūrttam atu anittam' (whichever is mūrta is anitya) ('that which is manifest is transient' MVN) are found in plenty in Maṇimēkalai. This sentence is exactly the translation of the Sanskrit sentence 'yat yat mūrtam, tat tat anityam'.
>
> (p. 139)

Thus it appears that the Non-part. rel. began to be used in Tamil around the 5th century A.D. In his Grammar of the Oldest Kanarese Inscriptions, A. N. Narasimhia (1941) comes to the conclusion that "There is no relative pronoun in old Kanarese." He also adds: "But about the 10th century the use of the interrogative pronoun with the demonstrative pronoun as Skt. yat, tat is found" (p. 179).

Thus it seems that the Non-part. rel. came into Dravidian languages from Sanskrit and from other Indo-Aryan languages. Sanskrit also made use of the Part. Rel., but probably to a limited extent. Modern Indo-Aryan languages,

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however, use the Part. rel. fairly frequently. Konkani, in particular, falls entirely in line with Dravidian languages in this respect and uses the Part. Rel. as the principal mode of relativization. On the whole, it seems reasonable to conclude that linguistic acculturation has made the two types of relative structures the common property of all modern Indian languages.

It must be pointed out that the Non-part. rel. is in a certain sense an 'unnatural' construction for Dravidian languages. A fairly general tendency in these languages is to use only one finite verb per sentence. This is always the verb of the principal clause, and the verbs of all the embedded clauses appear in their non-finite forms. Secondly, these languages use in their native constructions the relative participle as the linking element to embed a sentence into a noun phrase, whether it be a relative structure or a sentential complement on nouns. The Non-part. rel. is an exception to both these general features, since it employs a finite verb in the embedded clause, and it uses the relative pronoun as the linking device.[5]

Generally speaking, the Non-part. rel. seems to be superfluous in Kannada because the native Part. rel. is capable of performing the same functions, and of doing so more economically. Consider all the additional syntactic devices needed for this construction,--the relative pronoun, the special morpheme o̲, and the definitivizer a̲. Compared

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with this, the Part. rel. is simplicity itself. No wonder therefore that the borrowed structure is used so infrequently that it has remained rather 'marginal' in the language. But then nothing in a language is entirely superfluous, and even this marginal structure has certain uses in the language. What these are will be examined in the next chapter.

Section 2

In this section, I will present an analysis of the two types of relative structures in Kannada in terms of the underlying structures and transformations required to derive them. The same analysis will then be applied to relative structures in Konkani. In a language such as Kannada, there is a severe limit to the amount of purely syntactic evidence that can be brought to bear upon any analysis one is proposing because as yet, we know so little about large areas of the syntax of this language. In fact, in the present state of our knowledge of the syntax of Indian languages, it seems a bit unwarranted to make any firm claims about deeper aspects of their grammar. But research loses much of its point if it does not lead to the formulation of certain hypotheses however tentative. If these hypotheses are stated explicitly with whatever evidence one can muster in their support, they can easily be improved upon or proved wrong in the light of further research. The following analysis is presented with this consideration in mind.

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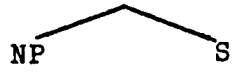
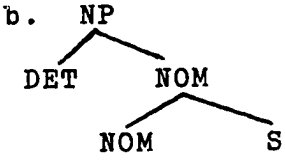
I have assumed here, as has been done in most transformational studies on relativization made within the framework of the standard theory, that restrictive relative clauses originate in the underlying structure as sentences embedded in the Noun Phrase. In most recent studies of English, relative clauses are analysed as sentences embedded to the right of the head noun as shown in (12).[6]

(12) a.



(12) b.



Now one of the hypotheses I wish to develop in this dissertation is that in Dravidian languages, sentences embedded in the NP occur in the underlying structure to the left of the head noun. This applies not only to the deep structure sentences from which relative structures are derived but also to those from which sentential complements on nouns are derived. It does not seem improbable that just as there are features which are true of all languages, there are also features which are true of all the members of a family of languages. The deep structure position of sentences embedded in the NP seems to be one such feature. If English is representative of Indo-European languages in this respect, it seems likely that in these languages sentences embedded in the NP occur to the right of the head noun in the underlying structure. At present this may be a mere speculation on my part. But it seems to me to be true that in Dravidian

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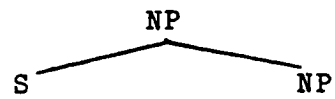
languages, relative clauses and sentential complements on nouns originate from sentences embedded to the left of the head noun. Some arguments in support of this 'left embedding' hypothesis will be given below.

I have assumed here that restrictive relative clauses in Kannada come from sentences embedded in NP as shown in (13).

(13)



The most obvious reason for maintaining this 'left embedding' hypothesis is that in Kannada relative clauses, participial as well as non-participial, can occur only to the left of the head noun in the surface structure. They never occur to the right of the head noun, nor can they ever be extraposed out of the NP as is possible in English and Hindi in certain cases.

(14) Just then a man came in who had a gun in his hand.

(15) Hindi: kal śām̄ko ek ādmi mujhe milne āyā
jisko maine kabhī nahī dekhā thā.
'Last evening, a man came to see me whom
I had never seen before.'

The underlined relative clauses in (14) and (15) are moved out of the NP in which they originate to the right end of the sentence. Kannada does not allow extraposition of any clause.

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(16D) nānu iduvarege nōḍadē idda obba manuṣyanu

' I so far not seen a man

ninne nannannu kāṇalu bandanu.

yesterday me to see came'

(17D)*obba manuṣyanu nānu iduvarege nōḍadē idda

' a man I so far not seen

ninne nannannu kāṇalu bandanu.

yesterday me to see came'

(18D)*obba manuṣyanu ninne nannannu kāṇalu bandanu

' a man yesterday me to see came

nānu iduvarege nōḍadē idda.

I so far not seen'

'Yesterday a man whom I had never seen before came to see me.'

Each of these three sentences contains the Part. rel. nānu iḍu varege nōḍadē idda 'whom I had never seen before', which qualifies the head noun manuṣyanu 'man'. But notice that only (16D), in which the relative clause occurs to the left of the head noun, is grammatical. (17D), in which the Part. rel. occurs to the right of the head noun, and (18D), in which it is extraposed, are both ungrammatical. The same holds true of Non-part. rels. in this language.

(19D) yāva huḍuganu ninne rāṣṭragītavannu hāḍidanō

'which boy yesterday national anthem sang

ā huḍuganu kuruḍanu (iddāne).

the boy blind is'

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(20D) *ā huḍuganu yāva huḍuganu ninne rāṣṭragītavannu
'the boy which boy yesterday national anthem
hāḍidanō kuruḍanu (iddāne).
sang blind is'

(21D) *ā huḍuganu kuruḍanu iddāne yāva huḍuganu ninne
'the boy blind is which boy yesterday
rāṣṭragītavannu hāḍidanō.
national anthem sang'
'The boy who sang the national anthem yesterday
is blind.'

Notice again that only (19D), in which the Non-part. rel. occurs to the left of the head noun is permitted. (20D) and (21D) are not possible for the same reason for which (17D) and (18D) are not possible. Thus surface evidence is entirely in favor of the 'left embedding' hypothesis. Of course, surface evidence is never entirely conclusive in matters pertaining to the underlying structure, but I know of no evidence in Kannada which suggests that relative clauses come from sentences embedded to the right of the head noun.

In a very important paper entitled 'Gapping and the order of constituents', Ross (1967c) has advanced some very insightful hypotheses about certain basic syntactic traits of certain types of languages. He states that languages which allow only backward gapping as in (22D) also happen to be languages which have subject-object-verb as the basic

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word order. He further states that these languages cannot contain in their grammar any transformation which moves a constituent rightward over a variable. He cites Japanese as a language having all these three properties. I wish to suggest that Kannada and Dravidian languages in general also share these three syntactic properties. Kannada allows only backward gapping as in (22D) but not forward gapping as in (23D).

(22D) gōpālanu roṭṭiyannū, rāmanu haṇṇannū, sītēyu
'Gopal bread, Ram fruit, Sita
miṭhāyiyannū tindaru.
sweets ate'
'Gopal ate bread, Ram fruit and Sita sweets.'

(23D) *gōpālanu roṭṭiyannū tindaru, rāmanu haṇṇannū,
'Gopal bread ate, Ram fruit,
sītēyu miṭhāyiyannū.
Sita sweets'

Secondly, the basic word order in Kannada is subject-object-verb. Even in the surface, Kannada but very rarely allows any element in a sentence to follow the verb.[7] There is a scrambling rule in the language which permutes the major constituents in a sentence so long as they are not permuted out of the clause in which they originate, either upward or downward. But the one major constituent which the scrambling rule cannot permute is the verb which almost always occurs in the sentence final position.

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(24D) rāmanu gōvindanige plēṭinalli āiskrīmannu

1 2 3 4

'Ram to Govind in a plate ice cream

koṭṭanu.

5

gave'

'Ram gave ice cream to Govind in a plate.'

The numbered elements in (24D) except 5, which is the verb of the sentence, may be freely scrambled in any way any number of times, and the result will always be a grammatical and perfectly acceptable sentence. But the verb cannot be displaced from its sentence final position.

The scrambling rule which moves the major constituents of a sentence linearly in either direction is not a transformational rule since one of its properties is that it can apply to its own output indefinitely, which is not possible with transformational rules. Therefore, Chomsky (1965) and Ross (1967a) among others have suggested that it belongs not in the transformational component but in the stylistic component of the grammar of a language.

The scrambling rule in Kannada does not therefore constitute an exception to the general feature of SOV languages that they do not contain in their grammar any (transformational) rule which moves an element rightward over a variable. Even if the scrambling rule were a transformation, it would still not be an exception since no variable is required in this rule.

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As Ross (1967c) formulates it, a rule which moves an element rightward over a variable has the following schematic form:

(25) ... A ... B

1 2 ⟹

0 2 + 1

Now it is practically impossible to show conclusively that Kannada does not contain a rule of the form of (25) until the syntax of the language is exhaustively described. But so far, I have not come across any syntactic phenomenon in Kannada which cannot be adequately described without making use of a transformational rule of the form of (25). In fact, I do not know of any transformational rule in the language that involves permuting an element over a variable either to the right or to the left. Most syntactic phenomena such as passivization,[8] interrogation,[9] relativization, etc. which involve such permutation in English can be adequately described in this language by means of transformations which involve deletion and substitution of elements, or deletion and substitution of features. It would take too long to support this tentative observation by detailed documentation. Besides, in the present state of our knowledge of Kannada, it is premature to make any such general claim, which in fact amounts to saying that Kannada does not require any reordering transformation.

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For our present purpose, it is enough to assume that just like Japanese, which is also an SOV language and which allows only backward gapping, Kannada too does not have in its grammar any rule of the form of (25). It seems to me that we can add to Ross's hypotheses about SOV languages the following:

(26) In SOV languages, the relative clause always precedes the head noun it qualifies.

This appears to be true of Japanese at least in the surface structure. This is certainly true of Kannada as we saw earlier in this section.

Let us now return to (3D), which contains a Non-part. rel., and (4D), which contains a Part. rel.

(3D) yāva mudukanu pēpar ōdutta iddānō ā mudukanu ḍāktaranu iddāne.

(4D) pēpar ōdutta idda mudukanu ḍāktaranu iddāne.

'The old man (who is) reading a newspaper is a doctor.'

The underlying components from which (3D) and (4D) originate are the following:

(27D) S_1 : (ā) mudukanu ḍāktaranu iddāne. (matrix)

'The old man is a doctor.'

S_2 : (ā) mudukanu pēpar ōdutta iddāne. (constituent)

'The old man is reading a newspaper.'

I will first present an analysis of (4D) which I think is the simplest, and then examine the alternatives. I suggest

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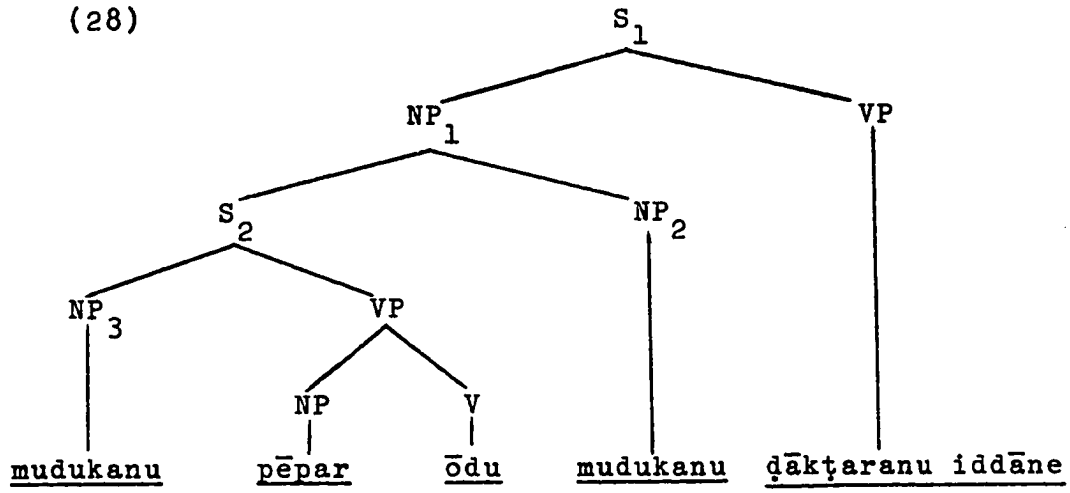
that S_1 and S_2 of (27D) are related in the underlying structure as shown in the following tree diagram:

(28)



'old man' 'newspaper' 'read' 'old man' 'is a doctor'

In labelled brackets, (29D) is then the deep structure of (3D) and (4D).

(29D) $(_S\ (_{NP}\ (_S$ mudukanu pēpar ōdu $)_S$ mudukanu $)_{NP}$ ḍāk̩aranu iddāne $)_S$

We may derive (4D) by applying to (29D) the Participial relative transformation (30).

(30) Participial relative transformation (Part. rel. tr.)

W $(_{NP}\ (_S$ X NP Y Verb $)_S$ NP $)_{NP}$ Z

1 2 3 4 [5] 6 7 ⟹

1 2 Ø 4 [+rel.prt.] 6 7

conditions: 3 = 6

6 ≠ [+ proper]

The Part. rel. tr. introduces two changes in the string that meets its structural description; it deletes the identical

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noun from the constituent sentence, and adds the feature [+ relative participle] to the verb of the constituent sentence. The conditions on this transformation require that 3 and 6 be identical, and that 6 is not a proper noun, since proper nouns do not take a restrictive relative clause.

Now apply the Part. rel. tr. to (29D).

(29D)

($_S$	mudukanu	pēpar	ōdu	)	mudukanu	ḍākṭaranu	iddāne
1	2	3	4	5	6	7	⟹
1	2	ø	4	5 +rel.prt.	6	7	
ø	ø	ø	pēpar	ōdu +rel.prt.	mudukanu	ḍākṭaranu	iddāne

(4D) pēpar ōdutta idda mudukanu ḍākṭaranu iddāne.

Before moving on to the derivation of (3D), let us consider the alternatives to the analysis of (4D) just presented. Let us assume that the structure represented by the tree diagram (28) is in fact the underlying structure of (4D). If so, we do not need a reordering transformation to derive (4D). In the surface structure of (4D), <u>mudukanu</u> occurs only once, but in its underlying structure <u>mudukanu</u> 'old man' occurs twice, as NP_2 and NP_3. One of these has therefore to be deleted. If we delete NP_3, then there is no other element we can permute in this underlying structure, because <u>mudukanu</u> (NP_2) already occurs in (28) exactly in the place in which we want it in the surface structure. The only alternative to this is to delete NP_2 and then move NP_3

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over to the right in the place of the deleted NP_2. For one thing this complication is unnecessary and is avoided in my analysis. Even if we chose to ignore this consideration, this alternative would require a rule of the form of (25), which we assumed does not exist in this language. For notice that when NP_3 (the term 3 in (30)) moves over to the right in the place of the deleted NP_2 (the term 6 in (30)), it moves around a variable (the term 4 or Y in (30)) and also the verb. The term 4 or Y in (30) is a variable since it can be either a direct object, an indirect object, one of the several kinds of adverbial phrases, or all of these, or it can be null. Thus, given an underlying structure like that represented by (28), there is no argument which favors a reordering transformation to derive (4D). The Part. rel. tr. (30) can only be considered either as a deletion transformation or as a 'feature changing' transformation.

Let us assume for the sake of argument that relative clauses in Kannada originate from sentences embedded to the right of the head noun in the underlying structure, and that (4D) is derived from the structure represented by the tree diagram (31).

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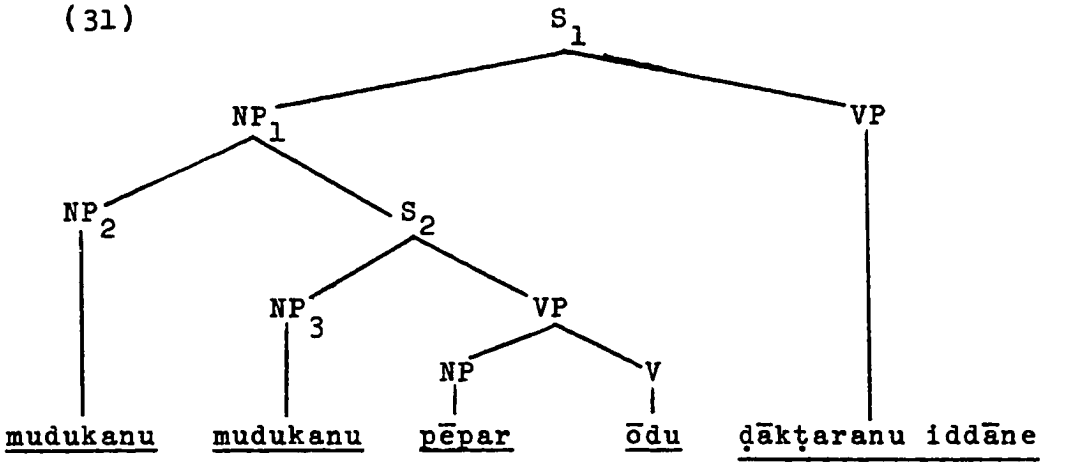
(31)



'old man' 'old man''newspaper' 'read' 'is a doctor'

Now to get (4D) from this underlying structure, we would need a transformation that does the following:

(i) delete NP_3,

(ii) insert the feature [+ rel. prt.] into the verb of the constituent sentence, and

(iii) move NP_2 over S_2 to the right.

Notice that step (iii) of this transformation does not make it a rule of the form of (25), since no variable is involved in this rule. But this transformation would be more complex than the Part. rel. tr. (30), since the former contains the additional step (iii). At present I do not see any justification for this additional complexity.

Given an underlying structure such as the one represented by (31), there is, however, another alternative which gives the intended surface structure (4D). We may formulate a transformation which includes the two steps involved in (30) plus the additional step by which S_2 is moved leftward over NP_2. This transformation too would for that reason be

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more complex than (30), and there does not seem to be any justification for the additional complexity. Therefore, I conclude that (28) and not (31) is the most appropriate underlying structure for (4D).

Since, as indicated earlier, the Part. rel. and the corresponding Non-part. rel. in Kannada come from the same underlying structure, we have to assume that the structure represented by (28) is also the underlying structure of (3D). The transformation which derives (3D) from (28) is the Non-part. rel. transformation (32).

(32) Non-participial relative transformation (Non-part. rel. tr.)

W ($_{NP}$ ($_{S}$	X	NP	Y	Verb)		NP	Z
1	2	3	4	5		6	7
1	2	$Y\bar{A}V$+3	4	5+$\bar{o}$		$\bar{a}$+6	7

conditions: 3 = 6

6 ≠ + [proper]

This transformation inserts three elements into the string that meets its structural description. It introduces $\underline{Y\bar{A}V}$ (the appropriate form of the relative pronoun), immediately to the left of the identical noun in the constituent sentence. It also introduces the 'definitivizer' $\underline{\bar{a}}$ immediately to the left of the identical noun in the matrix sentence. Finally, it attaches the enclitic $\underline{\bar{o}}$ to the verb of the constituent sentence. The conditions on this transformation are the same as on the Part. rel. tr. (30).

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It is not clear whether one needs to consider the several changes introduced by (32) as one transformation or whether there are at least two distinct transformations involved here. As will be seen in section 3, the Non-part. rel. in Kannada is rather closely related in form to the interrogative structures in the language. In any case, the Non-part. rel. in this language has certain very peculiar properties. Here it is enough to note that whatever be the precise form of this transformation, it involves principally addition of elements rather than deletion or reordering. Now we may apply the Non-part. rel. tr. to (29D), which gives the underlying structure represented by (28) in labelled brackets.

(29D)

$(_S$ mudukanu pēpar ōdu $)_S$ mudukanu ḍāktaranu iddāne

1 2 3 4 5 6 7 ⟹

1 2 YĀV+3 4 5+ō ā+6 7

Ø Ø yāva mudukanu pēpar ōdu+ō ā+mudukanu ḍāktaranu iddāne

(3D) yāva mudukanu pēpar ōduttiddānō ā mudukanu ḍāktaranu iddāne.

Observe that in this case the verb of the relative clause occurs in its finite form with the enclitic ō attached to it. Given a sentence such as (3D), it is normal to replace the second occurrence of the identical noun together with the definitivizer (ā mudukanu 'the/that old man') by the appropriate pronoun as in (33D).

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(33D) yāva mudukanu pēpar ōduttiddanō <u>avanu</u> ḍākṭaranu iddāne.

'which old man newspaper is reading <u>he</u> a doctor is'

In summary then, the surface position in which relative clauses occur in Kannada, and the simplest transformation required to get them into that position are the two considerations which together suggest that relative clauses in this language originate from sentences embedded to the left of the head noun in the underlying structure. One additional factor in favor of this proposal is that it does not require a movement transformation of any kind whatsoever. It will be seen in Chapter 5 that similar considerations support the position that nominal complements in this language also originate from sentences embedded to the left of the head noun in the underlying structure. We may conclude here that the phrase structure rule in the grammar of Kannada which generates relative clauses is the following:

(34) NP $\longrightarrow$ S NP

In section 1, we saw that Non-part. and Part. relative structures in Kannada and Konkani are almost identical in their surface structures. This was demonstrated by representing the derived structure of (3D) and (3N) by the same tree diagram (5). The derived structure of (4D) and (4N) was represented by the tree diagram (6). Here I wish to show that the Konkani sentences (3N) and (4N) can be derived

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from exactly the same underlying structure, except for lexical insertion, from which the corresponding Kannada sentences are derived, namely, from (28), and by applying the same transformations, namely, (30) and (32). I repeat the two Konkani sentences here for convenience of reference.

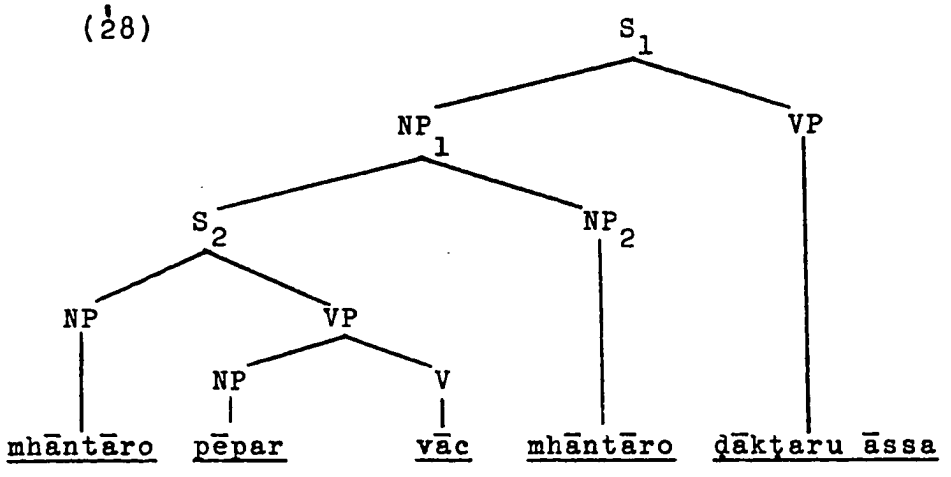
(3N) khanco mhāntāro pēpar vāccət āssa kī to mhāntāro ḍākṭaru āssa.

(4N) pēpar vāccət āśśillo mhāntāro ḍākṭaru āssa.

'The old man (who is) reading a newspaper is a doctor.'

The underlying structure of both these sentences may be represented as follows:

(28')



'old man' 'newspaper' 'read' 'old man' 'is a doctor'

Observe that (28) and (28') differ merely in lexical items. In labelled brackets this underlying structure may be represented as follows:

(29N) $(_S\ (_{NP}\ (_S$ mhāntāro pēpar vāc $)_S$ mhāntāro $)_{NP}$ ḍākṭaru āssa $)_S$

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We can derive (3N) by applying to (29N) the Non-part. rel. tr. (32), which was employed for deriving the corresponding Kannada sentence (3D).

(29N)

$(_S\ (_{NP}\ (_S$ mhāntāro pēpar vāc $)_S$ mhāntāro$)_{NP}$ ḍākṭaru āssa$)_S$

1 2 3 4 5 6 7

$\Rightarrow$

1 2 REL.+3 4 5+ki to+ 6 7

Ø Ø khanco mhāntāro pēpar vāccət āśśa kī to mhāntāro ḍākṭaru āssa.

(3N) khanco mhāntāro pēpar vāccət āssa kī to mhāntāro ḍākṭaru āssa.

The Non-part. rel. tr. introduces the WH-formative to the left of the identical noun in the constituent S (YĀV in Kannada, and KHANC- in Konkani), a special morpheme after the verb of the constituent S (ō in Kannada, and kī in Konkani), and a definitivizer to the left of the identical noun in the matrix S (ā in Kannada, and to in Konkani). The conditions on this transformation in both the languages seem to be identical. As in Kannada, it is normal to replace the identical noun in the matrix S together with the preceding definitivizer by the appropriate pronoun in sentences such as (3N).

(33N) khanco mhāntāro pēpar vāccət āssa kī to ḍākṭaru āssa.

'which old man is reading a newspaper, he is a doctor'

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We can now derive (4N) by applying to (29N) the Part. rel. tr. (30), which was employed to derive the corresponding Kannada sentence (4D).

(29N)

$(_S\ (_{NP}\ (_S$ mhāntāro pēpar vāc $)_S$ mhāntāro$)_{NP}$ ḍākṭaru āssa$)_S$

1 2 3 4 5 6 7

⟹

1 2 Ø 4 5 6 7
+rel.prt.

Ø Ø Ø pēpar vāccət āśśillo mhāntāro ḍākṭaru āssa.

(4N) pēpar vāccət āśśillo mhāntāro ḍākṭaru āssa.

It is indeed very significant that Kannada and Konkani which belong to different families contain relative structures which are not only identical in their surface form but which also can be derived from the same underlying configuration and by using the same set of transformations.

Section 3

In the foregoing sections, I tried to account for Non-part. and Part. relative structures in Kannada and Konkani in terms of a single analysis. This analysis, developed largely on the basis of evidence from Kannada, consists of the phrase structure rule (34) and two transformational rules--the Non-part. rel. tr. (32) and the Part. rel. tr. (30).

I must, however, point out that it would be wrong to conclude from this that Kannada and Konkani have completely

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identical grammars of relativization. The situation in Konkani is much more complex than the partial picture I presented earlier suggests. Konkani is an Indo-Aryan language and still has certain features which are characteristically Indo-Aryan and non-Dravidian. What these features are will be clear shortly. The remarkable closeness between Kannada and Konkani in their syntax of relativization is not entirely surprising when we consider the extremely close contact these two languages have had for the last 300 years or more. Besides, many of the features they have in common are also shared by other modern Indian languages of both the families. What is really striking about Konkani, and the reason why it is included in this study is that the language seems to have as it were two parts to its syntax of relativization, a Dravidian part and an Indo-Aryan part. Furthermore, it seems that the Dravidian part is gaining in prominence in the language as the native Indo-Aryan part is falling into gradual disuse. As a result, certain types of relative structures exhibiting purely Indo-Aryan features are coming under various kinds of constraints in Konkani while they are free from such constraints in other Indo-Aryan languages such as Hindi, Gujarati, Marathi and so on. Some of these constraints cannot yet be adequately characterized in grammatical terms, but if the present trend continues, they may come to be considered grammatical constraints after a time. In the meanwhile, the demonstrably

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Dravidian part of its syntax is being more and more firmly established in the language. Exactly the same situation exists with respect to the syntax of nominal complementation in this language (cf. Chapter 5). Thus what we see in Konkani is a language in a state of transition, a language which is coming to rely more and more on that part of its grammar which it shares with Dravidian languages, and less and less on its native Indo-Aryan grammar. Whether this trend is to be seen in the language as a whole is not clear at the present time; we need adequate studies of a substantial part of the syntax of this language before we can answer this question. Here I will be concerned with this phenomenon as it is seen in the syntax of the Non-Part. rel. in Konkani.

In the rest of this section, I will try to substantiate these observations by comparing Konkani with Kannada on the one hand, and with such Indo-Aryan languages as Hindi, Gujarati and Marathi on the other. It was pointed out in Chapter 1 that there are some dialects of Konkani, particularly those spoken in Goa, which have not come under the same kind of direct influence of Kannada as the dialect of Konkani described here has. I will show that Goan Konkani does not have the so-called Dravidian part to its syntax of relativization, and that it still has basically an Indo-Aryan syntax. This would argue that the differences between Goan Konkani and the dialect of Konkani described here must

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be ascribed primarily to the close contact the latter has had with Kannada.

Let us begin by taking a closer look at the structure of the Non-part. rel. clause in Kannada and Konkani as exemplified in (3D) and (3N) respectively. It was pointed out earlier that there is reason to believe that the Non-part. mode of relativization came into Dravidian from Indo-Aryan. Now the most interesting thing about the structure of the Non-part. rel. clause in the Konkani sentence (3N) is that it can be shown to be a borrowing of a borrowing. That is, in many ways it looks like a structure borrowed into Konkani from Kannada, and not like one directly inherited by Konkani from its Indo-Aryan past. Konkani has another version of the Non-part. rel. clause which represents its native structure. In modern Konkani, this native version of the Non-part. rel. clause has become subsidiary, and the borrowed, essentially Dravidian version of it has become prominent.

The following sentences will show what I mean by Indo-Aryan and Dravidian versions of the Non-part. rel. clause.

(35) Hindi:

a. jo būṛhā akhabār paṛh rahā hai, vo ḍāktar hai.

b.*kaun būṛhā akhbār paṛh rahā hai, vo ḍāktar hai.

(36) Gujarati:

a. je garḍo (māṇas) pepar vā̃cī rahyō che,
te ḍāktar che.

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b.*kayo garḍo (māṇas) pepar vā̃cī rahyo che, te ḍākṭar che.

(37) Marathi:

a. jo mhātārā pepar vācət āhe, to ḍākṭar āhe.

b.*koṇtā mhātārā pepar vācət āhe, to ḍākṭar āhe.

(38) Goan Konkani:

a. jo mhātāro pepar vācət āssā, to ḍākṭar (āssā).

b.*khainco mhātāro pepar vācət āssā, to ḍākṭar (āssā).

(39) Konkani:

a. jo mhāntāro pēpar vaccət āssa (kī), to ḍākṭaru āssa.

b. khanco mhāntāro pēpar vaccət āssa kī, to ḍākṭaru āssa.

(40) Kannada:

a. -

b. yāva mudukanu pēpar ōdutta iddānō, avanu ḍākṭaranu iddāne.

'which old man is reading newspaper, he is a doctor.'

In one sense, all these sentences have a similar structure; each sentence begins with a Non-part. rel. clause, and the head noun in the principal clause is pronominalized. The Kannada sentence (40.b) matches almost morpheme by morpheme with the (a) and (b) sentences in all the Indo-Aryan languages. In spite of this close similarity, there are some

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differences between the structure of the Non-part. rel. in the Indo-Aryan languages and that in Kannada.

The (a) sentences here exemplify what may be called the typical Indo-Aryan form of the Non-part. rel. clause, and the (b) sentences represent what may be called the Dravidian structure of the Non-part. rel. clause. Observe that in none of the Indo-Aryan languages here except Konkani is (b) a possible sentence. The (a) sentence is not possible in the only Dravidian language here, Kannada. The relative clause in (b) differs from that in (a) in two respects. The formative used as a relative adjective in all the (a) sentences here is jo, which is a regular relative pronoun in these languages. The (b) sentences use in its place what occurs in these languages as an interrogative pronoun. kaun in Hindi, kayo in Gujarati, koṇtā in Marathi, khainco in Goan Konkani, khanco in Konkani, and yāva in Kannada are all interrogative pronouns used here as relative formatives. Indo-Aryan languages normally do not use their interrogative pronouns as relative pronouns; that is why except in Konkani the (b) sentence is not possible in any Indo-Aryan language. Dravidian languages had no relative pronouns and had no use for them until the Non-part. rel. structure was borrowed into these languages. But when the Non-part. rel. clause came into these languages, they began to employ their interrogative pronouns also as relative pronouns. That is why only (b) is possible in Kannada and not (a). Konkani is the only

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Indo-Aryan language which can use its interrogative pronouns also as relative pronouns after the Dravidian pattern. Observe that this is not possible even in Goan Konkani. Thus the only language in which (a) and (b) are both possible is Konkani.

There is even a more compelling reason to regard the Konkani sentence (39.b) as an essentially Dravidian structure. The Kannada sentence (40.b) has the enclitic ō attached to the verb of the relative clause. Among Indo-Aryan languages, only Konkani has something which corresponds to this in (39.b)--vāccət āssa kī. This element kī or anything like it does not occur in any of the Indo-Aryan languages. Now ki/ke occurs in all Indo-Aryan languages as a complementizer (see Chapter 5). But Konkani is the only Indo-Aryan language in which kī occurs also in relative clauses. Therefore, it is difficult to regard it as an Indo-Aryan feature of relative clauses. But on the surface at least, there does not seem to be any similarity between the enclitic ō in Kannada and the element kī in Konkani except that they both occur immediately after the verb in Non-part. rel. clauses.

Earlier in this chapter, I merely described the enclitic ō in Kannada as a 'special morpheme'. So far no adequate account of this enclitic is available in the literature, but I think such an account can be given. The enclitic ō has one other use in Kannada: it is used in Yes/No questions.

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(41D) a. rāmanu śāleyinda bandanu. 'Ram came from school.'

b. rāmanu śāleyinda bandanō? 'Did Ram come from school?'

(42D) a. ninage hasive āgide. 'You are hungry.'

b. ninage hasive āgideyō? 'Are you hungry?'

(43D) a. avanu surakṣitavu āgi iddāne. 'He is safe.'

b. avanu surakṣitavu āgi iddānō? 'Is he safe?'

Notice the enclitic ō after the verb of each Yes/No question above: bandanu + ō in (41D.b), āgide + ō ? in (42D.b), and iddāne + ō in (43D.b). A declarative sentence can be turned into a Yes/No question in Kannada by adding the enclitic ō to the verb of the former and by using a rising intonation on the verb.

It appears that when under the impact of Indo-Aryan languages, Kannada developed the Non-part. rel. clause, it turned to its interrogative structures to form an equivalent construction. A Non-part. rel. clause in Kannada begins with an interrogative pronoun and ends with the enclitic o. That is, it looks rather like a construction which begins like a WH-question and ends like a Yes/No question. Consider for example the relative clause in (40.b).

(40) b. (YĀVA) mudukanu pēpar ōdutta iddān (ō) ...

'which old man paper reading is ...'

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If we leave out the question word YĀVA from this clause, it becomes a Yes/No question meaning 'Is the old man reading a newspaper?', and if we leave out the enclitic ō, it becomes a WH-question meaning 'Which old man is reading a newspaper?' Thus it appears that Kannada forged its Non-part. rel. clause from its interrogative structures. Why Kannada turned to interrogative structures is difficult to explain although it is not unlikely that there is some underlying psychological relation between interrogation and relativization since there are many languages in which the syntax of these two processes has a certain degree of similarity.

The important point here is that the relative structure in the Konkani sentence (39.b) can be characterized exactly in the same way. For notice that kī occurs in Yes/No questions in Konkani exactly like the enclitic ō in Kannada.

(44N) a. rāmu skūlāthā̃vnu āylo. 'Ram came from school.'

b. rāmu skūlāthā̃vnu āylo kī? 'Did Ram come from school?'

(45N) a. tukkā bhūka lāgalyā. 'You are hungry.'

b. tukkā bhūka lāgalyā kī? 'Are you hungry?'

(46N) a. to surakṣita āssa. 'He is safe.'

b. to surakṣita āssa kī? 'Is he safe?'

Thus the relative clause in the Konkani sentence (39.b) also begins like a WH-question and ends like a Yes/No question.

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(39) b. (khanco) mhāntāro pepar vāccət āssa (kī) ...

'which old man paper reading is ...'

If we leave out the question word khanco from this clause, it becomes a Yes/No question, and if we leave out kī, it becomes a WH-question exactly like the relative clause in the Kannada sentence (40.b).

Because of this complete correspondence between the relative clause in the Konkani sentence (39.b) and that in the Kannada sentence (40.b), and since in no other Indo-Aryan language including Goan Konkani does the relative clause begin like a WH-question and end like a Yes/No question, we may conclude that the relative clause in the Konkani sentence (39.b) represents a Dravidian structure. Konkani has also the Indo-Aryan version of the Non-part. rel. cl. in (39.a); the relative clause in this sentence does not begin with an interrogative pronoun used as a relative pronoun but with a regular relative pronoun in the language. But the deepening Dravidian influence can be seen even in (39.a); kī is being increasingly used even in this sentence. Thus the most remarkable fact about Konkani is that although it had an adequate relative structure of the kind exemplified in (39.a), it developed a parallel structure of the type exemplified in (39.b) under the impact of Kannada, and that it is the latter that has gained prominence in the language.[10]

There is evidence which suggests that Konkani may be in the process of losing its native form of the Non-part.

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rel. structure. Notice that kī has already begun to appear increasingly in these clauses as in (39.a). Furthermore, Konkani has practically lost the various forms of the relative pronoun jo except the nominative and is already using in their place the corresponding forms of the interrogative pronoun. This is not just a question of using one lexical item instead of the other; it has interesting syntactic consequences. The accusative/Dative, Genitive and Locative forms of the Indo-Aryan relative pronoun jo occur in Hindi, Marathi, Gujarati, Goan Konkani and so on but only rarely in Konkani.

(47) Accusative/Dative

a. Goan Konkani: hãve jyākkā āpayllẽ to āylo nā.

b. Konkani: hãve {*jyākka / konāk} āpayllẽ kī to yēni.

'I whom called he didn't come'

'He whom I called didn't come.'

(48) Genitive

a. Goan Konkani: jyāce kām pahile soptā tāne viśrānti ghẽvci.

b. Konkani: {*jyāgale / koṇāgale} kām pailẽ jāttā kī tānne ārām korcẽ.

'whose work first finishes he may rest'

'He who finishes first may rest.'

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(49) Locative

a. Goan Konkani: jyācānt śakti āssa to hẽ kām karu śaktalo.

b. Konkani: { *jyācāntu / koṇāntu } śakti āssa kī to hẽ kām karu śaktā.

'in whom is strength, he can do this task.'

'He who has strength in him can do this task.'

Notice that the Accusative/Dative, Genitive and Locative forms of the Indo-Aryan relative pronoun occur in Goan Konkani. The accusative/Dative form jyākka, the Genitive form jyāgale and the Locative form jyacāntu are lost in modern Konkani, which uses instead the equivalent forms of the interrogative pronoun in their place: koṇāk(a), koṇāgalẽ, and koṇāntu. Only the Nominative form jo of the Indo-Aryan relative pronoun is possible in modern Konkani. This has interesting consequences in other parts of the grammar of the language.

As indicated earlier, relative clauses in modern Indo-Aryan languages can be extraposed; Dravidian languages do not allow extraposition of relative clauses or for that matter of any other type of clause. Now Konkani retains this Indo-Aryan feature and in this respect, it still differs from Kannada.

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(50) Rel. clause extraposed:

a. Hindi: maine ek bandar dekhā jo sāykal calā rahā thā.
head noun rel. cl.

b. Gujarati: mẽ ek vāndro joyo je sāykal calāvto hato.
head noun rel. cl.

c. Marathi: mī ek mākaḍ baghitlə je sāykal cālvət hota.
head noun rel. cl.

d. Konkani: hāvẽ ek mānkaḍu paḷaylo jo sāykal callaytālo.
head noun rel. cl.

e. Konkani: *hāvẽ ek mānkaḍu paḷaylo
head noun
khanco sāykal callaytālo kī.
rel. cl.

f. Kannada: *nānu ondu mangavannu nōḍide
head noun
yāvadu sāykal naḍesuttittō.
rel. cl.

'I a monkey saw which a bicycle was riding'

'I saw a monkey which was riding a bicycle.'

It is clear that in each of these sentences, the relative clause is extraposed to the end of the sentence. The Konkani sentence (50.d) contains the Indo-Aryan version of the relative clause since it uses jo as the relative pronoun. (50.e), on the other hand, contains the Dravidian version of the relative clause; notice that the interrogative pronoun khanco is used in this sentence as a relative formative, along with the Dravidian feature kī. Observe that, even in

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Konkani, extraposition of the relative clause is possible only when the Indo-Aryan version of the relative clause is used, as in (50.d), and not when the Dravidian version of the relative clause is used as in (50.e).

Although Konkani allows extraposition of relative clauses, its potential for extraposition has been greatly reduced for two reasons. Firstly, it uses the Dravidian version of the relative clause most of the time and in these cases extraposition is not permitted. Secondly, as pointed out earlier, Konkani has lost the Accusative/Dative, Genitive and Locative forms of the Indo-Aryan relative pronoun jo and therefore extraposition is not possible in all those cases in which the identical noun in the relative clause has any other case except the Nominative. If, for example, the identical noun in the relative clause is in the Accusative/Dative case, it can only be replaced by the appropriate form of the interrogative pronoun koṇ-, and this makes the relative clause a Dravidian type structure. As we have just seen, the Dravidian version of the relative clause cannot be extraposed in Konkani. Goan Konkani retains all the forms of the Indo-Aryan relative pronoun jo and therefore extraposition in this dialect is freely possible.

(51)

a. Gujarati: mẽ e chokrīne bolāvī che jene tamāre maḷvũ che.
head noun rel. cl.

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b. Goan Konkani: hāvẽ tyā callyek āpaylā jikka tukka meḷce āssā.
head noun rel. cl.

c. Konkani: *hãvẽ tyā callyēk āpalyã̄ jikkā tukkā meḷcẽ āssa.
head noun rel. cl.

'I have invited that girl whom you to see want'

'I have invited the girl whom you want to see.'

(52)

a. Gujarati: mārī pāse ek kutro che jenī pūchdī sīddhī che.
head noun rel. cl.

b. Goan Konkani: māzyā kaḍyen ek suṇe āssā jyāci śepti saraḷ āssā.
head noun rel. cl.

c. Konkani: *mallāggi ek suṇe āssa jyāgalẽ bāla niṭhə āssa.
head noun rel. cl.

'with me a dog is whose tail is straight'

'I have a dog which has a straight tail.'

In summary then, we may say that Konkani still retains the Indo-Aryan version of the relative clause, and like other Indo-Aryan languages, it can still extrapose relative clauses in certain situations. But it has also developed a Dravidian version of the Non-part. rel. clause, and it is this version that is predominant in the language. Konkani has lost most of the forms of the Indo-Aryan relative pronoun jo, and this has added to the constraints on extraposition of relative clauses in this language. Thus with respect to the Non-part. rel. clause in Konkani, we see that the Indo-Aryan part of

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its syntax is gradually giving way to what may justifiably be called the Dravidian part of its syntax.

It is not possible to extend a similar treatment to the Part. rel. clauses in these languages without greatly expanding the scope of this chapter. For one thing, the differences between Indo-Aryan and Dravidian languages with respect to their syntax of the Part. rel. are not at all very clear cut. The structure of the Part. rel. itself is identical in all modern Indian languages, and the Part. rel. tr. (30) probably is common to all these languages. But then there are other kinds of differences even within Indo-Aryan languages that have mainly to do with the syntactic properties of certain classes of verbs. For example, a sentence such as the following in Hindi can be turned only into an 'object modifying' but not into a 'subject modifying' Part. rel. structure.[11]

(53) dhobīne kapaṛe dhoye.

'washerman clothes washed'

'The washerman washed the clothes.'

The verb dhoye 'washed' in this sentence happens to be non-stative, and it is in the simple past tense. (53) can be turned into a Part. rel. and embedded into an NP only if the head noun of this NP is identical with the object of (53) as in (54) and not if it is identical with the subject of (53) as in (55). The Part. rel. in (54) is 'object modifying' and in (55), it is 'subject modifying'.

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(54) dhobīke dhoye hue kapaṛe kho gaye.

1 2 3

'the washerman-washed clothes are lost'

1 2 3

'The clothes washed by the washerman are lost.'

(55)*kapaṛe dhoya hua dhobī bīmār hai.

1 2 3

'the clothes-washed washerman is ill'

1 2 3

'The washerman who washed the clothes is ill.'

Notice that (55) is not a possible sentence in Hindi. There is no such constraint on non-stative verbs in the simple past tense in the Dravidian Kannada, nor does such a constraint hold in Konkani or Marathi, although it does obtain in another Indo-Aryan language, namely, Gujarati. This may be seen from the following:

(56) Object modifying Part. rel. clauses:

a. Kannada: baṭṭegaḷannu ogeda agasanu śīk iddāne.

1 2 3

b. Konkani: vastarə̃ umbaḷḷo dhōbi śīk āssa.

1 2 3

c. Marathi: kapaṛe dhutlelā dhobi ājāri āhe.

1 2 3

d. Gujarati: *kapṛā dhoyelo dhobi māndo che.

1 2 3

'the clothes-washed washerman is ill'

'The washerman who washed the clothes is ill.'

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There may be similar other constraints on Participial relativization in some Indo-Aryan languages which do not apply to Kannada. But I am not aware of any such constraints in Konkani. In fact, there is hardly any Part. relative in Kannada for which there is no corresponding Part. relative in Konkani. Thus it appears to me that Konkani and Kannada are extremely close with respect to their syntax of Part. rels., although very probably, a very large part of it is shared by all or most Indo-Aryan languages as well.

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Footnotes

[1]The distinction between restrictive and non-restrictive or appositive relative structures, generally recognized for English, has so far not been recognized in grammars of Indian languages. In English, this distinction is detectable from a study of distributional properties and intonational possibilities, but no such distinction is discernible in surface structures in Indian languages. The semantic facts, however, are the same in both the cases. In Kannada, for example, a sentence such as the following can have two meanings depending on whether the relative structure it contains is interpreted restrictively or appositively.

dēśābhimānigaḷu āda bhāratīya taruṇaru dēśada

unnatigāgi śramisuttiddāre.

(i) restrictive meaning: 'The young men of India who are patriotic are striving for the uplift of their country.'
(ii) appositive meaning: 'The young men of India, who are patriotic, are striving for the uplift of their country.'
Even if we did not know about English, these facts about Kannada would be the same. Certainly, these facts have to be accounted for at some level of the grammar of Kannada, and it is far from obvious just at what level and how.

[2]See, for example, Spencer (1950). Spencer devotes one full chapter to Part. rels. and only a paragraph to Non-part. rels.

[3]For a good discussion of the morphology of participial forms in modern Indo-Aryan languages, see Bloch (1965:258-285).

[4]For a detailed discussion of these constraints, see Ch. 3. Most of the constraints on the Part. rel. tr. seem to be universal, but those on the Non-part. rel. tr. are language particular.

[5]For further discussion, see Ch. 5.

[6]The analysis represented by (12.a) has been assumed by Ross (1967a), and for that represented by (12.b), see UESP (1967, 1969).

[7]Strictly interpreted, this statement holds true only of the literary dialect. In colloquial dialects, particularly in casual speech, brief utterances such as the

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following are often heard:

bāro	illi	:	hōgo	ace
1	2		1	2
'Come here'			'Go yonder'	
1	2		1	2

In both of these peremptory utterances, the verb occurs initially. Thus it would seem that in colloquial dialects, the scrambling rule also applies to the verb in certain rather restricted situations.

[8]As Caldwell (1956:463) and several others have observed, there is no regular passive in Dravidian, although quite a few other devices are available in these languages to express the passive signification. One such device that is closest to the passive rule in English gives a sentence such as (b) from the active sentence (a).

(a) rāmanu gōpālanannu nōḍidanu. 'Ram saw Gopal.'

' Ram Gopal saw'

+NOM. +ACC.

(b) rāmaninda gōpālanu nōḍalpaṭṭanu. 'Gopal was seen

' Ram Gopal was seen' by Ram.'

+INSTR. +NOM.

Observe that no reordering of elements is involved in this 'passive rule'. This rule does the following: it changes the case features on the subject and the object NP's of the active sentence as shown above; the finite verb of active voice is changed to its infinitive form and made the first part of a conjunct verb nōḍalu + paḍu.

[9]Wh-questions in Kannada are formed by replacing the questioned element in a declarative sentence by the appropriate question word as shown below:

rāmanu patravannu baredanu ⟹ rāmanu ēnannu baredanu?

' Ram letter wrote' 'Ram what wrote?'

'Ram wrote a letter.' 'What did Ram write?'

Nor does the formation of Yes/No questions involve either inversion or any other operation involving reordering of

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elements in this language. A declarative sentence in Kannada can be turned into a Yes/No question by adding the enclitic ō to the verb and by using a rising intonation on this verb. For examples, see section 3, page 69.

[10]It seems to me that the Dravidian version of the Non-part. rel. is used much more frequently in modern Konkani than the Indo-Aryan version. This statement is based largely on the evidence of my own speech. A statistical count of frequency is not possible in this language since there is hardly any written material in it. Ghatage (1963) in his Konkani of South Kanara gives in phonemic transcription five stories as they were narrated orally by a native speaker of Konkani, who spoke the same dialect of Konkani as the one described in the present work. About half a dozen Non-part. rel. clauses occur in these texts, and each one of them is in the Dravidian version of this clause.

[11]Cf. Kachru (1966:153-57).

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Chapter 3

CONSTRAINTS ON RELATIVE CLAUSE TYPES IN KANNADA

The scope of this chapter is limited to Kannada, and it deals with the various kinds of constraints on the two widely dissimilar processes of relativization in this language. In sections 1 and 2, it will be shown that there are certain constraints on the Non-part. mode of relativization which cannot be characterized in grammatical terms but which are largely instrumental in making the Non-part. rel. such a marginal structure in the language. It will be seen that none of these constraints applies to the Part. mode of relativization. Section 2 also deals with an issue of a more general significance; it will be shown in that section that in Kannada, when there are two more relative clauses modifying a single noun, they cannot always be derived from underlying conjunction and that in such cases, stacking of relative clauses becomes necessary. Section 3 deals with the constraints on the Part. mode of relativization, and an attempt is made to relate these constraints to similar ones which Ross (1967a) has proposed as language universals.

Section 1

Non-part. relatives quickly slip into the region of unacceptability as soon as the structure of the NP in which they are embedded is made complex. In Kannada, the head

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noun of an NP may be preceded by Demonstrative, Number, Noun + possessive, Adjective, and a relative structure. The first four of these constituents can occur freely with the Part. rel. but not with the Non-part. rel. In the latter case, we generally get sentences which are unacceptable in varying degrees.

(1) Demonstrative + Relative + Noun

a. ā kaḷeduhōda pustakavu ondu haḷē ṭrankinalli sikkitu.

b. ?ā yāva pustakavu kaḷeduhōgittō adu ondu haḷē ṭrankinalli sikkitu.

'That book which was lost was found in an old trunk.'

(2) Demonstrative + Number + Relative + Noun

a. ā mūru kaḷeduhōda pustakagaḷu ondu haḷē ṭrankinalli sikkavu.

b. ?ā mūru yāva pustakagaḷu kaḷeduhogiddavō avu ondu haḷē ṭrankinalli sikkavu.

'Those three books which were lost were found in an old trunk.'

(3) Demonstrative + Number + Possessive Noun + Relative + Noun

a. ā mūru gōpālana kaḷeduhōda pustakagaḷu ondu haḷē ṭrankinalli sikkavu.

b. ?ā mūru gōpālana yava pustakagaḷu kaḷeduhōgiddavō avu ondu haḷē ṭrankinalli sikkavu.

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'Those three books of Gopal's which were lost were found in an old trunk.'

(4) Demonstrative + Number + Possessive Noun + Relative + Adjective + Noun

a. ā mūru gōpālana kaḷeduhōda dappa pustakagaḷu ondu haḷē ṭrankinalli sikkavu.

b. *ā mūru gōpālana yāva dappa pustakagaḷu kaḷeduhōgiddavō avu ondu haḷē ṭrankinalli sikkavu.

'Those three fat books of Gopal's which were lost were found in an old trunk.'

Notice that in (1)-(4), all the (a) sentences, which contain a Part. relative, are grammatical and perfectly normal; but the (b) sentences, which contain a Non-part. relative, are all unacceptable. Most of these (b) sentences are probably grammatical, but in every case the corresponding (a) sentence is preferred. Here then is a constraint on the use of the Non-part. relative in Kannada.

I indicated in footnote 1 of Chapter 2 that the distinction between restrictive and appositive relative clauses is relevant at some level of the grammar of Kannada although it is far from obvious at what level. A sentence such as (5) is ambiguous between the appositive and restrictive interpretations of the underlined Part. rel.

(5) dēśābhimānigaḷu āda bhāratīya taruṇaru dēśada unnatigāgi śramisuttiddāre.

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(6) 'The young men of India, who are patriotic, are striving for the uplift of their country.'

(7) 'The young men of India who are patriotic are striving for the uplift of their country.'

The difference between the meanings (6) and (7) of (5) is clear. In the sense of (6), the Part. rel. dēśābhimānigaḷu āda 'who are patriotic' in (5) is appositive; it does not delimit the class of 'young men' in any way, it only gives additional information about this class. But in the sense of (7), the same Part. rel. in the same sentence delimits the class of 'young men'. Thus the ambiguity in (5) arises because the Part. rel. in the sentence is capable of bearing either appositional or restrictive relationship to the head noun.

Let us now examine the Non-part. rel. and see how it stands in this respect.

(8) yāva bhāratīya taruṇaru dēśābhimānigaḷu āgiddārō avaru dēśada unnatigāgi śramisuttiddāre.

'The young men of India who are patriotic are striving for the uplift of their country.'

(5) and (8) are identical except that the latter has a Non-part. rel. whereas the former contains a Part. rel. But unlike (5), (8) is not ambiguous; the relative structure in this sentence has only the restrictive meaning. (8) is not possible with the appositive meaning.

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(9) *<u>yāva nanna tandeyavaru 60 varṣadavaru iddārō</u>,
avaru inśūrans ējantaru iddāre.

'My father, who is 60, is an insurance agent.'

(9) is not a possible sentence in the language. The head noun qualified by the underlined relative clause in this sentence is <u>nanna tandeyavaru</u> 'my father', which cannot take a restrictive relative; it can only take an appositive relative. (9) is ungrammatical because in Kannada, Non-part. rels. can be used only restrictively; normally, they cannot be used appositively. This is a general constraint on Non-part. rels. in the language,[1] and it does not apply to Part. rels.

In the analysis of relative clauses presented in the preceding chapter, the Part. rel. tr. as well as the Non-part. rel. tr. can be iterated, since the occurrence of S under NP of the phrase structure rule NP → S⌒NP (cf. (34) of Ch. 2) entails the possibility of recursion. Just as a relative clause S_2 can be embedded in an NP of S_1, a second relative clause S_3 can be embedded in an NP of S_2, and a third relative clause S_4 in an NP of S_3, and so on. Iteration of the Participial and the Non-participial relative transformations has interesting consequences in Kannada. If we have three underlying sentences with a constant structure NP NP V, we can have sixteen different sets of identity relations between them which permit relativization. Three of these sixteen possibilities are listed below.[2]

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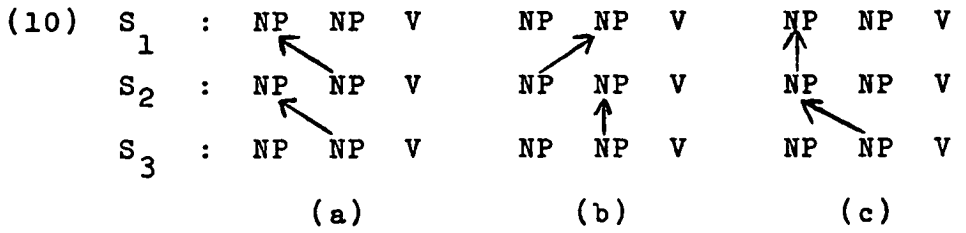
(10)



The arrows join the identical NP's and point to the NP in which the lower sentence is embedded. Now if we apply the Part. rel. tr. to S_3 and then to S_2, we get grammatical and fully acceptable sentences in all the sixteen cases. But if we do the same with the Non-part. rel. tr., we get grammatical and fully acceptable sentences in only two out of the sixteen cases;[3] in the remaining fourteen cases, the output is either unacceptable or ungrammatical. Generally, the Part. rel. tr. may apply any number of times in the derivation of a sentence; participial relatives may even be stacked. Non-participial relatives cannot be stacked. Generally, if a Non-participial relative clause has been attached to a noun, no other relative clause, whether Participial or Non-participial, may be attached to the same noun. Some of the constraints that restrict the use of the Non-part. rel. are purely performance constraints, and some others are grammatical. I will examine some of these typical constraints in detail here.

Let us first of all consider one of the two cases in which iteration of both the transformations gives grammatical and acceptable sentences.

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(11) S_1 : <u>sainikanu</u> huḍuganannu badukisidanu.

'The soldier saved the boy.'

S_2 : <u>nāvikanu</u> sainikanannu badukisidanu.

'The sailor saved the soldier.'

S_3 : pūjāriyu <u>nāvikanannu</u> badukisidanu.

'The priest saved the sailor.'

Notice that S_1 and S_2 share an identical noun (<u>sainikanu</u> 'soldier'), and S_2 and S_3 also share a common noun (<u>nāvikanu</u> 'sailor'). S_3 and S_2 can be relativized if they are related in the underlying structure as shown in (12), on page 90. It is clear from this diagram that S_3 and S_2 can be relativized and embedded into NP_3 and NP_1. Let us first apply the Part. rel. tr. in both these cases.

<u>Apply Part. rel. tr. to S_3 and embed it into NP_3</u>

(13) ($_{S_2}$ ($_{S_3}$ pūjāriyu nāvikanannu badukisidanu)$_{S_3}$ nāvikanu sainikanannu badukisidanu)$_{S_2}$ ⟹

(14) pūjāriyu badukisida nāvikanu sainikanannu badukisidanu = S_2

'The sailor whom the priest saved saved the soldier.'

<u>Apply Part. rel. tr. to S_2 and embed it into NP_1</u>

(15) ($_{S_1}$ ($_{S_2}$ pūjāriyu badukisida nāvikanu sainikanannu badukisidanu)$_{S_2}$ sainikanu huḍuganannu badukisidanu)$_{S_1}$ ⟹

(16) pūjāriyu badukisida nāvikanu badukisida sainikanu huḍuganannu badukisidanu.

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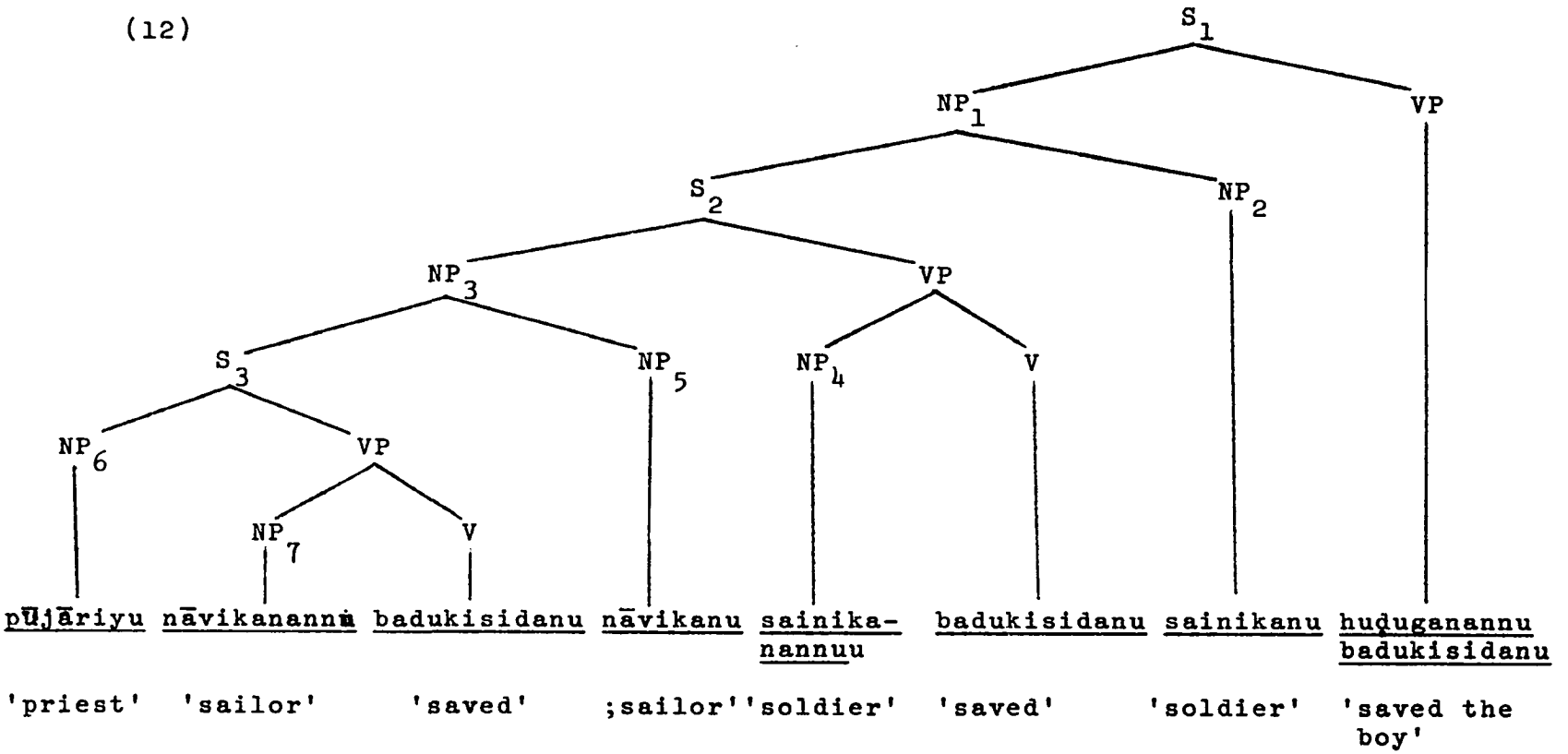
(12)



'The soldier whom the sailor whom the priest saved saved saved the boy.'

(16) is derived by applying the Part. rel. tr. twice and it is perfectly acceptable and also grammatical.

Now let us apply to S_3 and S_2 the Non-part. rel. tr. and embed them in NP_3 and NP_1 respectively.

Apply Non-part. rel. tr. to S_3 and embed it into NP_3

(13) ($_{S_2}$ ($_{S_3}$ pūjāriyu nāvikanannu badukisidanu)$_{S_3}$ nāvikanu sainikanannu badukisidanu)$_{S_2}$ ⟹

(17) pūjāriyu yāva nāvikanannu badukisidanō ā nāvikanu sainikanannu badukisidanu.

'The sailor whom the priest saved saved the soldier.'

Apply Non-part. rel. tr. to S_2 and embed it into NP_1

(18) ($_{S_1}$ ($_{S_2}$ pūjāriyu yāva nāvikanannu badukisidanō ā nāvikanu sainikanannu badukisidanu)$_{S_2}$ sainikanu huḍuganannu badukisidanu)$_{S_1}$ ⟹

(19) pūjāriyu yāva nāvikanannu badukisidanō ā nāvikanu yāva sainikanannu badukisidanō ā sainikanu huḍuganannu badukisidanu.

'The soldier whom the sailor whom the priest saved saved saved the boy.'

Observe that (19) derived by iterating the Non-part. rel. tr. is also correct and perfectly acceptable. As indicated earlier, this is one of the two cases in which the iteration of the Non-part. rel. tr. gives good sentences. Two

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features of the underlying structure of (19) as indicated by the tree diagram (12) may be noted; the two relative clauses are attached to two different nouns, and both of these nouns happen to be the subject of the matrix sentence. S_3 is attached to nāvikanu 'sailor' (NP_5) which is the subject of S_2, and S_2 is attached to sainikanu 'soldier' (NP_2), which is the subject of S_1. Out of the sixteen cases mentioned above, there are only two in which both these conditions are satisfied, and it is only in these two cases that the iteration of the Non-part. rel. tr. gives good sentences.

Let us now examine a case in which the iteration of the Non-part. rel. tr. gives a very bad sentence.

(20) S_1 : gōpālanu nāyiyannu aṭṭidanu.
'Gopal chased the dog.'

S_2 : nāyiyu roṭṭiyannu kadditu.
'The dog stole the bread.'

S_3 : sītēyu roṭṭiyannu māḍidaḷu.
'Sita made the bread.'

The structure represented by (21) on page 93 shows that we can relativize S_3 and S_2 and embed them into NP_5 and NP_2 respectively. Let us first apply the Part. rel. tr. to both these embedded structures.

Apply Part. rel. tr. to S_3 and embed it into NP_5

(22) ($_{S_2}$ nāyiyu ($_{S_3}$ sītēyu roṭṭiyannu māḍidaḷu)$_{S_3}$ roṭṭiyannu kadditu)$_{S_2}$ ⟹

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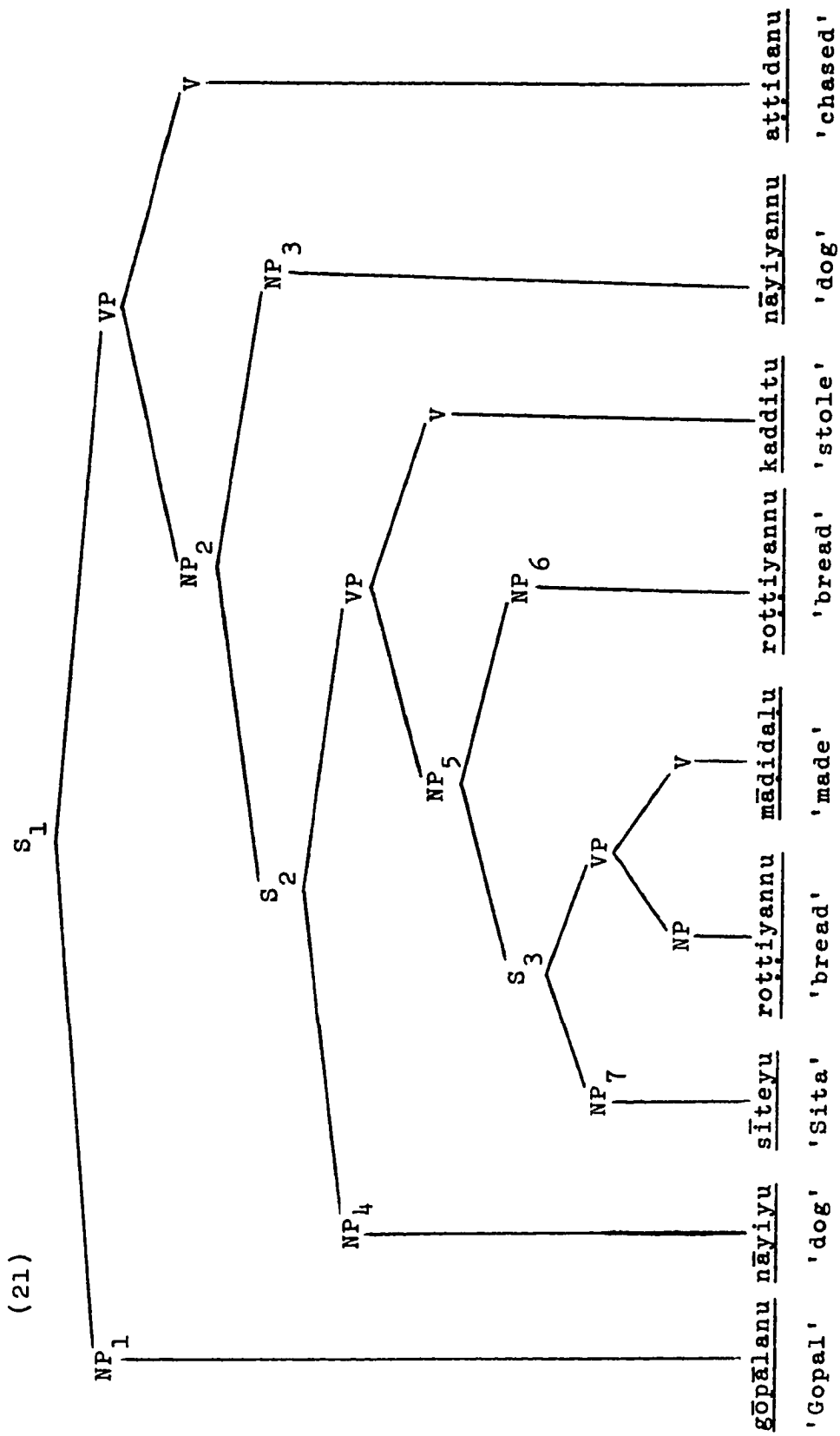
(21)



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(23) nāyiyu sīteyu māḍida roṭṭiyannu kadditu = S_2

'The dog stole the bread which Sita made.'

Apply Part. rel. tr. to S_2 and embed it into NP_2

(24) ($_{S_1}$ gōpālanu ($_{S_2}$ nāyiyu sīteyu māḍida roṭṭiyannu kadditu)$_{S_2}$ nāyiyannu aṭṭidanu ⟹

(25) gōpālanu sīteyu māḍida roṭṭiyannu kadda nāyiyannu aṭṭidanu.

'Gopal chased the dog that stole the bread which Sita made.'

(25) is a grammatical and acceptable sentence. We may now apply to S_3 and S_2 of (21) the Non-part. rel. tr.

Apply Non-part. rel. tr. to S_3 and embed it into NP_5

(22) ($_{S_2}$ nāyiyu ($_{S_3}$ sīteyu roṭṭiyannu māḍidaḷu)$_{S_3}$ roṭṭiyannu kadditu)$_{S_2}$ ⟹

(26) nāyiyu sīteyu yāva roṭṭiyannu māḍidaḷō ā roṭṭiyannu kadditu.

'The dog stole the bread which Sita made.'

Apply Non-part. rel. tr. to S_2 and embed it into NP_2

(27) ($_{S_1}$ gōpālanu ($_{S_2}$ nāyiyu sīteyu yāva roṭṭiyannu māḍidaḷō ā roṭṭiyannu kadditu)$_{S_2}$ nāyiyannu aṭṭidanu)$_{S_1}$ ⟹

(28)??gōpālanu yāva nāyiyu sīteyu yāva roṭṭiyannu māḍididaḷō ā roṭṭiyannu kadditō ā nāyiyannu aṭṭidanu.

'Gopal chased the dog which stole the bread which Sita made.'

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(28), which is derived by iterating the Non-part. rel. tr., is totally unacceptable. In fact, it is so bad that it is even difficult to interpret it. Yet there is no rule of the grammar of the language which the sentence violates. It is, however, possible to show that (28) is unacceptable on three counts. It is the cumulative effect of three violations of the conditions on derived structure that makes (28) such a bad sentence. To see this, it is necessary to examine the derived structure of (28) carefully.

(28) (S_1 gōpālanu (S_2 yāva nāyiyu (S_3
sub. X sub. Y

sīteyu yāva roṭṭiyannu
māḍidaḷō)S_3 ā roṭṭiyannu kadditō)S_2
Y

ā nāyiyannu aṭṭidanu)S_1
X

Notice first of all that (28) contains a self-embedded relative clause. M is self-embedded in N if M falls totally within N, with some non-null element to its left and also to its right within N, and if furthermore, M is a phrase of the same type as N. Chomsky (1965) has pointed out that self-embedding contributes very radically to the unacceptability of a sentence in English.[4] It seems, however, that this is a universal property of self-embedded structures, since it is true of Kannada as well. In (28), S_3 is a Non-part. rel. clause and it falls totally within S_2, which is also a Non-part. rel. clause. This then is the first count on which

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the sentence is unacceptable.

(28) also contains two violations of what may be called for want of a better name 'the Complex NP Precedence' condition, which obtains in all Indian languages. It was noted in the preceding chapter that there is a Scrambling rule in Kannada which freely permutes the major constituents of a sentence except the verb. But not all word orders resulting from this rule are equally acceptable. Certain word orders are preferred to certain others. One of the factors which plays a role in determining this has to do with the complexity or the phonological length of the constituents concerned. Kannada prefers word orders in which the longer or the more complex constituents precede the shorter or less complex constituents. This is what I have called the 'Complex NP Precedence' condition. A sentence which violates this condition does not become for that reason unacceptable but it only takes a lower rank in terms of acceptability. It is not easy to characterize the notion of 'complexity' or 'length' involved in this condition. The Non-part. relative clause is a cumbersome structure and any constituent in which it is embedded generally becomes complex and phonologically lengthy.

(29) gōpālanu <u>rāmanu yāva maneyannu kaṭṭidanō ā</u>
1 2
<u>maneyannu</u> koṇḍanu.
3

'Gopal bought the house which Ram built.'

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The constituent numbered 2 here is the object of the sentence, and it contains a Non-part. relative clause. It is much longer than the constituent numbered 1, which is the subject. Therefore, the preferred word order for this sentence is (30) in which the object precedes the subject.

(30) <u>rāmanu yāva maneyannu kaṭṭidanō ā maneyannu</u>
2

gōpālanu koṇḍanu.
1 3

One instance of the violation of the Complex NP Precedence condition in a sentence does not make it difficult to interpret the sentence. But two violations of this condition generally make a sentence difficult to interpret. And this is what we have in (28).

Examine the structure of S_1 in (28). The single word <u>gōpālanu</u> is the subject of S_1 and it has a very long and complex object which consists of the entire relative clause S_2 (which in turn contains another Non-part. relative clause S_3) and the element <u>ā nāyiyannu</u> (marked X). A similar violation of the Complex NP Precedence condition occurs in the relative clause S_2. The subject of S_2 is <u>yāva nāyiyu</u>, and its object is the entire Non-part. relative clause S_3 followed by <u>ā roṭṭiyannu</u> (marked Y). Thus we have in (28) two instances of long object constituents following short subject constituents. It is this combined with the occurrence of a self-embedded relative clause that makes (28) so difficult to interpret, and therefore totally unacceptable.

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What is significant about (28) is that all we need to render it perfectly acceptable is the Scrambling rule. This rule will permute the subjects of S_2 and S_1 immediately to the right of their respective objects as shown below.

(28) ($_{S_1}$ <u>gōpālanu</u> ($_{S_2}$ <u>yāva nāyiyu</u> ($_{S_3}$ sīteyu yāva
sub. X sub. Y

roṭṭiyannu māḍidaḷō)$_{S_3}$ ā roṭṭiyannu kadditō)$_{S_2}$
ā nāyiyannu aṭṭidanu)$_{S_1}$ ⟹

(31) ($_{S_1}$ ($_{S_2}$ ($_{S_3}$ sīteyu yāva roṭṭiyannu māḍidaḷō)$_{S_3}$
ā roṭṭiyannu <u>yāva nāyiyu</u> kadditō)$_{S_2}$ ā nāyiyannu
sub. Y

<u>gōpālanu</u> aṭṭidanu)$_{S_1}$.
sub. X

'Gopal chased the dog which stole the bread which Sita made.'

(31) is perfectly acceptable because it does not contain any instance of the violation of the Complex NP Precedence condition, and it does not contain a self-embedded structure either. Notice that in (31), S_3 is no more self-embedded. Now the rule which changes (28) into (31) is the Scrambling rule, which is independently required in the language. But in this case, the Scrambling rule functions almost like a readjustment rule. It makes adjustments in an unacceptable sentence which is grammatical so that it also becomes acceptable.

Observe that (25), which is derived by iterating the Part. rel. tr. from the same underlying structure from which

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(28) is derived, also contains an instance of violation of the Complex NP Precedence condition.

(25) ($_{S_1}$ gōpālanu ($_{S_2}$ ($_{S_3}$ sīteyu māḍida roṭṭiyannu)$_{S_3}$ kadda)$_{S_2}$ nāyiyannu aṭṭidanu)$_{S_1}$

gōpālanu is the subject of S_1, and the entire underlined constituent following it is the object. (25) can be improved by moving the subject of S_1 immediately to the right of its object. But, as indicated earlier, a single instance of violation of the Complex NP Precedence condition does not make a sentence difficult to interpret, particularly if the structure embedded in the longer constituent happens to be a Part. relative clause. Observe also that unlike (28), (25) does not contain a self-embedded relative clause. No element of S_2 occurs to the left of S_3 in this sentence. In fact, one of the peculiarities of the Part. rel. tr. is that it rarely leads to self-embedding.

Out of the sixteen sets of identity relations that are possible when we have three underlying sentences with a constant structure NP NP V, iteration of the Non-part. rel. tr. leads to self-embedding in eight sets.[5] Some of these also involve violation of the Complex NP Precedence condition. Therefore, Non-part. relativization is avoided in all these cases, and Part. relativization, which does not lead to these consequences, is employed instead.

I have now examined the consequences of applying each of two relative transformations twice to the underlying

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structure represented by (21). It is, however, also possible to apply both these transformations in the derivation of a single sentence from this underlying structure. That is, we may apply Part. rel. tr. to S_3 and then apply Non-part. rel. tr. to S_2, or we may reverse the order and apply Non-part. rel. tr. to S_3 and then Part. rel. tr. to S_2. We may note here that in either case, we get a grammatical and fully acceptable surface structure. (32) is derived by applying Part. rel. tr. to S_3 and Non-part. rel. tr. to S_2, and (33) is derived by reversing the order of these transformations.

(32) gōpālanu yāva nāyiyu sīteyu māḍida roṭṭiyannu kadditō ā nāyiyannu aṭṭidanu.

(33) gōpālanu sīteyu yāva roṭṭiyannu māḍidaḷō ā roṭṭiyannu kadda nāyiyannu aṭṭidanu.

'Gopal chased the dog that stole the bread which Sita made.'

It is possible to improve both these sentences by moving the subject gōpālanu immediately to the left of the verb aṭṭidanu 'chased', since they both violate the Complex NP Precedence condition. The generalization that may be drawn from these examples is that in the derivation of a sentence which contains more than one relative clause, the two relative transformations may be applied in any order so long as the two relative clauses are not attached to the same noun.

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Section 2

The relative clauses in the underlying structure represented by (21) are embedded in two distinct NP's, and the nouns to which they are attached are not identical either. The same is true of the relative clauses in the underlying structure represented by (12). Consider now the following underlying sentences:

(34) S_1 : gil̤iyu (i) ślōkagal̤annu hēl̤uttade.
'The parrot recites slokas.'

S_2 : gil̤iyu (i) inglīś mātāḍuttade.
'The parrot speaks English.'

S_3 : rāmanu gil̤iyannu (i) konḍanu.
'Ram bought the parrot.'

Notice that gil̤i (i) 'parrot' is the identical noun that occurs in all these three sentences. There are, however, two ways in which these sentences may be related in the underlying structure. In (35), on page 102, S_2 and S_3 are stacked, and in (36), on page 102, they are conjointly embedded in S_1. The relative clauses in (35) are stacked, i.e. S_2 modifies the head noun gil̤iyu 'parrot' of NP_2, and S_3 modifies this head noun as already modified by S_2. There is in (35) a hierarchical relationship between the two relative clauses; S_3 is the higher ranking clause which is assumed to be modifying the potential domain of the head noun as already modified by the lower ranking clause S_2. The relative clauses

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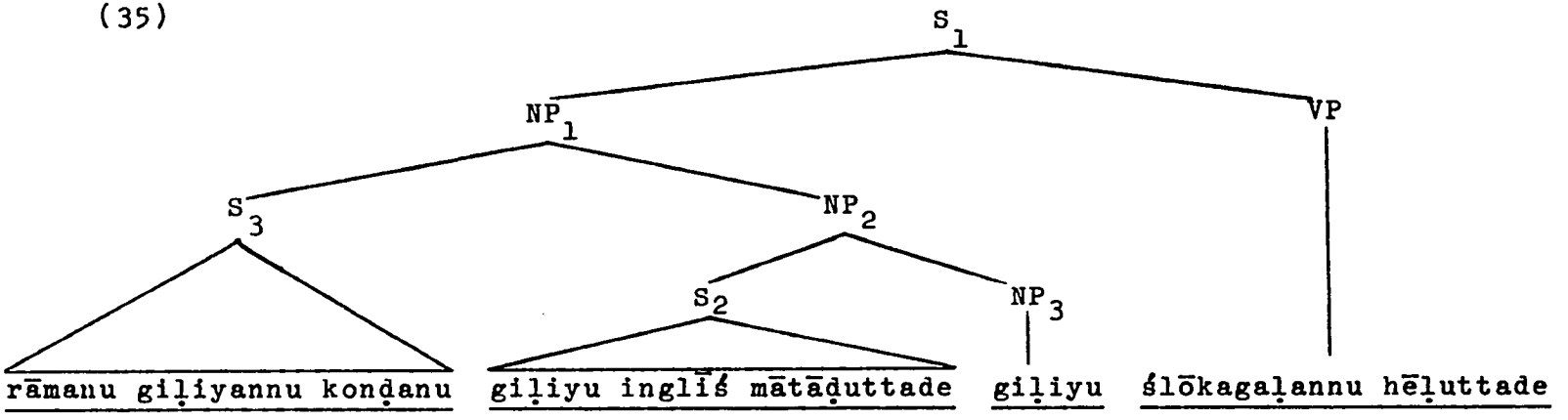
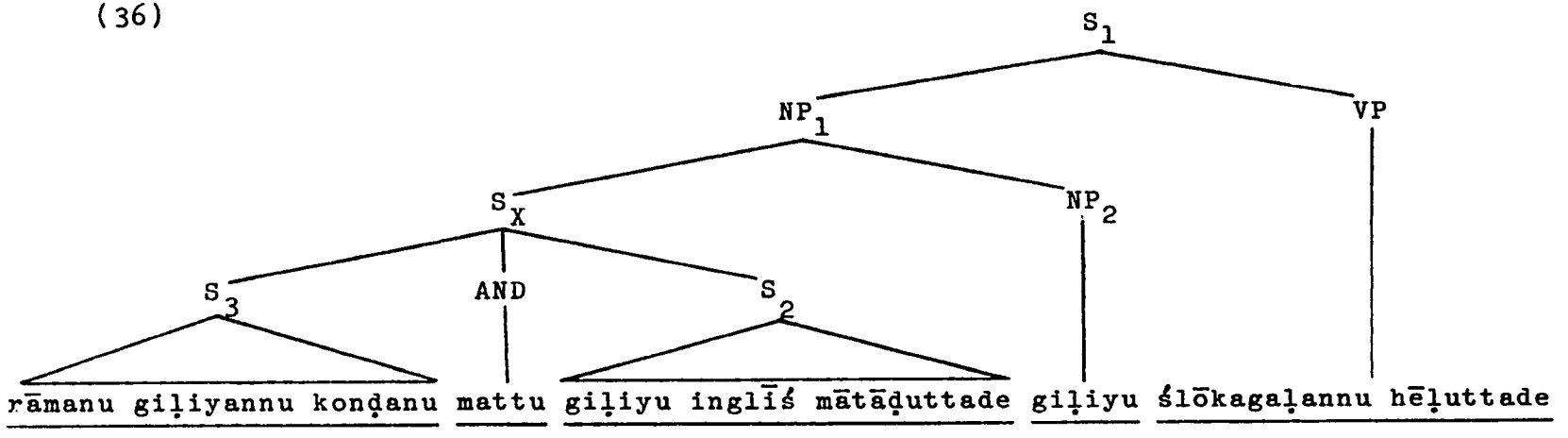
(35)



'Ram bought the parrot' 'The parrot speaks English' 'parrot' 'recites slokas'

(36)



'Ram bought the parrot' 'The parrot speaks English' 'parrot' 'recites slokas'

in (36) are conjoined, i.e. it is assumed that they are parallel and independent modifiers of the head noun gi̱iyu of NP_2. The hierarchical relationship that holds between S_2 and S_3 does not hold in (36). Now the question naturally arises whether this underlying syntactic distinction between (35) and (36) signifies a real semantic or syntactic distinction observed in the language, or whether it is merely an artifact of the analysis of relative clauses proposed here and in fact, one of these underlying structures is redundant. If it turns out to be the case that the stacked structure is superfluous, then, as Thompson (1969) suggests, one of the main arguments in favor of analysing (restrictive) relative clauses as underlying embedded structures collapses.

In recent years, there have been at least two attempts to answer this question with reference to the analysis of relative clauses in English (see Vol. 1, sect. 8 in UESP (1969), and Chapter 2 in Thompson (1969)). Authors of Integration of Transformational Theories of English Syntax (same as UESP (1969)) and Thompson arrive at exactly opposite conclusions on this issue. The former, while recognizing that stacked interpretation of relative clauses is possible only in some dialects of English, go on to cite some syntactic evidence which is hard to account for if it is maintained that stacking is not necessary in the grammar of English. Thompson, on the other hand, comes to the conclusion that there is no basis for maintaining that stacking

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is necessary in the grammar of English, and that relative clauses are best derived from underlying conjoined structures. Since this issue is of general interest, I wish to examine here some evidence from Kannada which has a direct bearing on it, although this discussion is somewhat of a digression from the main concerns of this study.

Turning to our Kannada examples, we may specify that the semantic interpretation of the stacked underlying structure (35) is (37), and that of the conjoined underlying structure (36) is (38).

(37) Stacked interpretation 1: Out of all the parrots which speak English, the parrot that recited slokas is the one that Ram bought.

(38) Conjoined interpretation: The parrot that recites slokas has two determining characteristics; it was bought by Ram, and it speaks English.

It may not be easy to see in what way (37) differs from (38), particularly since, 'the reference of a noun restricted by two or more stacked relatives, and the reference of the same noun restricted by the same two relatives in a conjoined construction would not be distinct'.[6]

The distinction between (37) and (38), however, does not lie in the object defined by them, i.e. in their specific reference, but in the universe of discourse presupposed by them. In this universe, in both cases a particular

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English-speaking, and Ram-bought parrot is the subject of judgement. The stacked interpretation but not the conjoined one, i.e. (37) but not (38), presupposes that there are other parrots in this universe, and some of them speak English, although I am not sure that this difference in the presupposed universe of discourse is accurately indicated by the overly explicit readings (37) and (38).

We may now return to the underlying structures (35) and (36), and apply the Part. rel. tr. and see if the resulting surface structures reflect this semantic distinction. If we apply Part. rel. tr. to S_2 and S_3 of (35), we get the following sentence.

(39) rāmanu koṇḍa inglīś mātāḍuva giḷiyu ślōkagaḷannu hēḷuttade.

(39) is grammatical and fully acceptable, but it is syntactically ambiguous because the same sentence can be derived from the conjoined underlying structure (36). If we apply Part. rel. tr. to S_3 and S_2 of (36), we get (40), from which we can derive (39) by deleting the conjunction <u>mattu</u> 'and'.

(40) rāmanu koṇḍa <u>mattu</u> inglīś mātāḍuva giḷiyu ślōkagaḷannu hēḷuttade.

Now since (39) can be derived from (35) as well as from (36), it may be argued that the stacked underlying structure (35) is superfluous unless it can be shown that (39) is semantically ambiguous as between the conjoined interpretation (38) and the stacked interpretation (37). In any case, we need

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(36) since (40), which contains the conjunction mattu 'and', cannot be derived from (35).

(39) is certainly semantically ambiguous, but the interesting thing about this sentence is that it has not two but three possible semantic interpretations and these are correlated with the way the sentence is pronounced. If the sentence is pronounced without giving any special prominence to either of the relative clauses, and with a slight pause after each clause, it has the conjoined semantic reading (38).

(39.i) rāmanu koṇḍa, inglīś mātāḍuva, giḷiyu ślōkagaḷannu hēḷuttade.

If the sentence is said with prominence on the first relative clause (i.e. rāmanu koṇḍa 'which Ram bought'), we get stacked interpretation 1 (= 37).

(39.ii) rāmanu' koṇḍa inglīś mātāḍuva giḷiyu ślōkagaḷannu hēḷuttade.

If, on the other hand, prominence is placed on the second relative clause (inglīś mātāḍuva 'which speaks English'), we get stacked interpretation 2, (41).

(39.iii) rāmanu koṇḍa inglīś' mātāḍuva giḷiyu ślōkagaḷannu hēḷuttade.

(41) Stacked interpretation 2: Out of all the parrots that Ram bought, the parrot that recites slokas is the one that speaks English.

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(41) presupposes that there are other parrots, and that some of them have been bought by Ram. Now the question arises if (36) matches the semantic interpretation of (39.i), and if (35) matches the semantic interpretation of (39.ii), which is the underlying structure that matches the semantic interpretation of (39.iii)? The difference between the two stacked interpretations is that in (37) S_3 (rāmanu koṇḍa 'which Ram bought') is construed as the higher ranking clause which modifies the head noun giḷiyu 'parrot' as already modified by the lower ranking clause S_2 (inglīś mātāḍuva 'which speaks English'), but in (41), S_2 is construed as the higher ranking clause that modifies the head noun as already modified by the lower ranking clause S_3. This difference will have to be represented in the deep structure such that S_2 is the higher ranking clause which modifies the lower ranking clause S_3 and the head noun. Stacked interpretation 2, (41), and the sentence that bears this interpretation, (39.iii), can therefore come only from an underlying structure in which S_2 occurs as the higher ranking clause, namely from (42), on page 108. (42) may be the underlying structure which gives the semantic interpretation of (39.iii), but it certainly does not give the surface form of (39.iii). If we apply Part. rel. tr. to S_3 and S_2 of (42), we get (43).

(43) inglīś mātāḍuva rāmanu koṇḍa giḷiyu ślōkagaḷannu hēḷuttade.

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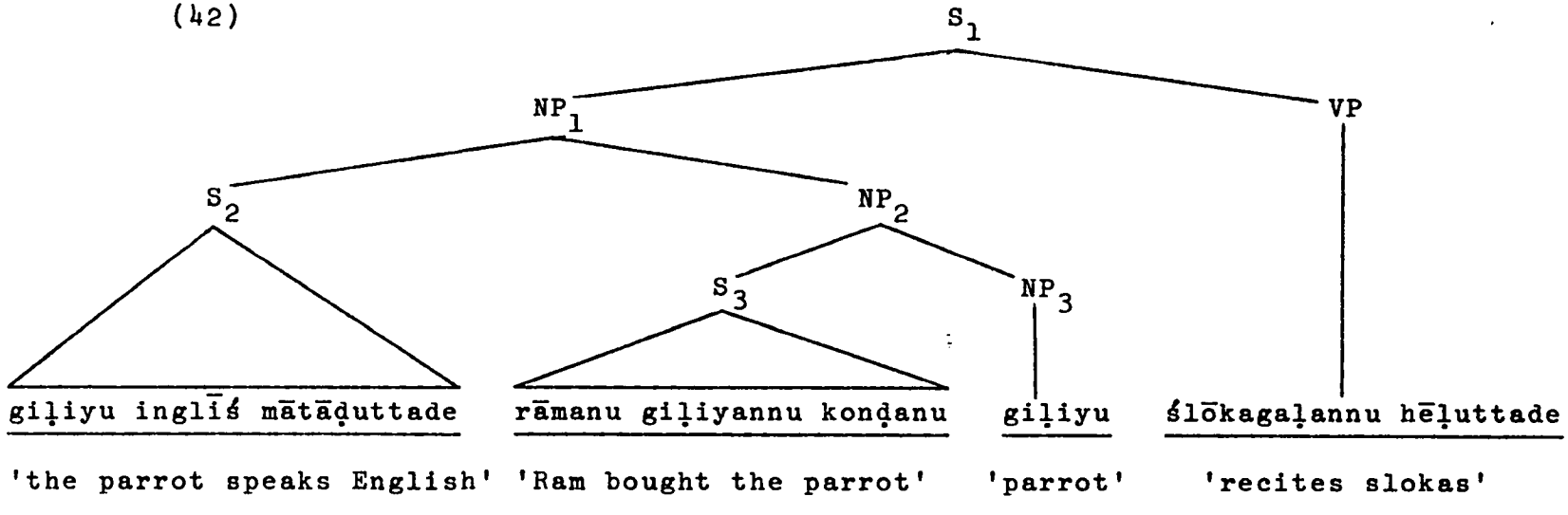
(42)



In (39.iii), inglīś mātāḍuva occurs as the inner clause preceded by rāmanu koṇḍa, but in (43), this order is reversed. We cannot therefore derive (39.iii) from (42) unless we had a clause scrambling rule available, and there is no other evidence in the language which suggests that such a rule is necessary. Besides, (43) has also exactly the three possible semantic readings that (39) has. When pronounced with equal prominence or lack of it on both the relative clauses, (43) has the conjoined semantic interpretation (38). Prominence on the outer clause S_2 gives it the same interpretation that (39.iii) has, namely stacked interpretation 2 (41); and prominence on the inner clause S_3 gives it the same semantic interpretation that (39.ii) has, namely, stacked interpretation 1, (37).

(39.i) ($_{S_3}$ rāmanu koṇḍa)$_{S_3}$ ($_{S_2}$ inglīś mātāḍuva)$_{S_2}$
giḷiyu ślōkagaḷannu hēḷuttade. = (38)

(43.i) ($_{S_2}$ inglīś mātāḍuva)$_{S_2}$ ($_{S_3}$ rāmanu koṇḍa)$_{S_3}$
giḷiyu ślōkagaḷannu hēḷuttade. = (38)

(39.ii) ($_{S_3}$ rāmanu koṇḍa)$_{S_3}$ ($_{S_2}$ inglīś mātāḍuva)$_{S_2}$
giḷiyu ślōkagaḷannu hēḷuttade. = (37)

(43.iii) ($_{S_2}$ inglīś mātāḍuva)$_{S_2}$ ($_{S_3}$ rāmanu koṇḍa)$_{S_3}$
giḷiyu ślōkagaḷannu hēḷuttade. = (37)

(39.iii) ($_{S_3}$ rāmanu koṇḍa)$_{S_3}$ ($_{S_2}$ inglīś mātāḍuva)$_{S_2}$
giḷiyu ślōkagaḷannu hēḷuttade. = (41)

(43.ii) ($_{S_2}$ inglīś mātāḍuva)$_{S_2}$ ($_{S_3}$ rāmanu koṇḍa)$_{S_3}$
giḷiyu ślōkagaḷannu hēḷuttade. = (41)

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This very clearly shows that the stacked interpretation of either (39) or (43) is not a function of the particular stacked underlying structure that has been postulated for them. Having S_3 as the higher ranking clause as in (35) does not guarantee that the sentence derived from it will have only stacked interpretation 1; nor does having S_2 as the higher ranking clause as in (42) guarantee that the sentence derived from it will have only stacked interpretation 2. If the hierarchical relationship between the two relative clauses in the underlying structure plays no useful purpose in the semantic interpretation, it would seem that there is no justification in postulating such a relationship at all. As for (39), it can as easily be derived from the conjoined underlying structure (36), and (43) can be derived from a similar structure in which S_2 occurs as the left conjunct and S_3 as the right conjunct.

Thompson (1969) makes similar observations with regard to the stacked interpretation of an English sentence which also has two stacked interpretations depending on whether prominence is placed on the first relative or the second.[7] She therefore comes to the conclusion that stacked interpretation of such sentences is independent of the stacked underlying structure. This conclusion naturally strengthens the case for deriving relative clauses from underlying conjunction.

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I wish to argue here that so far as the facts of Kannada are concerned, the argument against stacking that has been presented above is by no means conclusive. I believe that a fairly strong case can be made in favor of assuming that stacking is necessary in the grammar of Kannada.

If, as we have now assumed, (39) has three possible semantic readings, and if the distinction between these three readings is not a function of deep structure, how and at what stage in the derivation of this sentence does it get these different readings? I wish to consider this question briefly here, although at the present stage of our knowledge of the semantic component one can only make some broad and tentative observations on such issues. I believe that there is a real difference between the conjoined and non-conjoined semantic interpretations claimed for this sentence. I also believe that there is a valid distinction between the two stacked interpretations. However, I am not at all sure that the non-conjoined interpretations of this sentence are exactly of the form in which the exponents of stacking often express them, namely, (37) and (41) in this case. The clue to the different meanings of (39) lies, as we have seen, in the way it is pronounced. What seems to be crucially involved here is that by placing the prominence on one or the other of the two relative clauses, we are indicating which of these is the 'focus' and which is the 'presupposition'. To express the conjoined meaning, we take care to see that

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both the relative clauses have the same level of prominence or the lack of it, and this probably is the reason why a slight pause is felt to be necessary after each of the two relative clauses. If the pause is not given, then the two relative clauses become a single phonological phrase. Since each phonological phrase has to have a point of prominence, this prominence is bound to fall on one of the two relative clauses, which then gives it a nonconjoined meaning. To avoid this, the two relative clauses have to be treated as two separate phonological phrases and hence the slight pause. Barring situations which call for contrastive stress, we may indicate the three pronunciations of (39) and the placement of focus and presupposition which are correlated with the three possible semantic interpretations as follows:

(39.i) rāmanu koṇḍa, inglīś mātāḍuva
giḷiyu <u>ślōkagaḷannu hēḷuttade</u>.
focus
(conjoined interpretation (38))

(39.ii) <u>rāmanu koṇḍa</u> inglīś mātāḍuva
focus
giḷiyu <u>ślōkagaḷannu hēḷuttade</u>.
focus
(stacked interpretation 1 (37))

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(39.iii) rāmanu koṇḍa inglīś mātāḍuva

focus

giḷiyu ślōkagaḷannu hēḷuttade.

focus

(stacked interpretation 2 (41))

In all noncontrastive situations, the predicate of the principal clause ślōkagaḷannu hēḷuttade 'recites slokas' has a focus in all the three readings of this sentence. In (39.i), both the relative clauses are equal in prominence, i.e. both are either focuses or presuppositions. This equal status of the two clauses with respect to focus and presupposition signals the conjoined semantic interpretation (38). In (39.ii), rāmanu koṇḍa 'which Ram bought' is the focus, and inglīś mātāḍuva 'which speaks English' is the presupposition. That is why in the interpretation of (39.ii) rāmanu koṇḍa is felt to be the determinant that restricts the scope of the head noun already determined by the presupposed clause. In (39.iii), the focus falls on inglīś mātāḍuva, and the other clause is treated as the presupposed determinant. This it seems to me is the essential distinction between the three semantic interpretations of (39). When we say that two relative clauses are 'stacked', what is implied is that they are uneven with regard to their presupposition and focus status. Perhaps this distinction is more subtle than is indicated by the explicit paraphrases such as (37), (38) and (41).

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This account of the semantic interpretation of (39) assumes that part of the semantic interpretation of a sentence is determined at levels other than the deep structure. In fact, Chomsky (1969) is a revision of the standard theory just on this point.[8] In this paper, Chomsky specifically mentions focus and presupposition as one of the aspects relevant to the semantic interpretation of a sentence that is not determined by deep structure. At what point precisely in the derivation of a sentence focus assignment takes place is not clear, although there is good reason to believe that it takes place at a level rather close to surface structure.

Recall that (39) is syntactically ambiguous. It can be derived from the stacked underlying structure (35) as well as from (40), which in turn comes from the conjoined underlying structure (36).

(40) rāmanu koṇḍa mattu inglīś mātāḍuva giḷiyu
ślōkagaḷannu hēḷuttade.
'The parrot which Ram bought and which speaks English recites slokas.'

Deletion of the conjunction mattu 'and' from (40) gives (39).

Now if the placement of focus is totally independent of the syntactic structure of a sentence, it should be possible to assign focus to one of the two conjunct relative clauses in (40). That is, it should be possible to derive from (40) the same three semantic interpretations as are possible from (39). But it is significant that only the conjoined semantic

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interpretation (38) is possible for this sentence. Neither of the stacked semantic interpretations can be derived from this sentence.

(40) i. *rāmanu koṇḍa mattu inglīś mātāḍuva giḷiyu
focus
ślōkagaḷannu hēḷuttade.

ii. *rāmanu koṇḍa mattu inglīś mātāḍuva giḷiyu
focus
ślōkagaḷannu hēḷuttade.

Both these sentences are starred because neither of them has the nonconjoined semantic interpretation intended to be conveyed by the particular placement of stress. Increasing the loudness or pitch on either of the two relative clauses fails to signal stacked interpretation. Whichever way the sentence is read, it has only the conjoined interpretation (38). Of course, we can place prominence on some element of either of the two relative clauses and contrast it with something outside of the sentence. We can, for example, place emphasis on inglīś in the second relative clause if the context contains some reference to 'Spanish or French speaking parrots'. But that does not make the entire second relative clause the focus and the first relative clause the presupposition. As far as the mutual relationship between the two relative clauses is concerned, they are equal in terms of focus and presupposition. Thus it seems to me that in a conjoined expression focus cannot be placed exclusively on

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one of the conjuncts. Whether this is a universal phenomenon is not clear at this point, but the following generalization seems to be valid for Kannada.

(44) Focus cannot be assigned to only one of the conjuncts in a conjoined expression.

Now it may be argued that this is a merely semantic fact; since (40.i) and (40.ii) contain the conjunction 'and', the placement of focus on any one of the conjuncts only leads to semantic anomaly. Therefore, (44) has nothing to do with the syntactic fact of conjunction.

Suppose there is a sentence X which contains two relative clauses modifying the same noun and that can come only from a conjoined underlying structure. Assume further that the conjunction 'and' is deleted from this sentence. Since 'and' does not occur in X, the constraint on focus assignment formulated as (44) above should not apply in this case, and it should be possible to derive stacked as well as conjoined semantic interpretations from this sentence. But if it turns out to be the case that X has only the conjoined semantic interpretation, it would imply that the fact that X originates from a conjoined underlying structure is not entirely irrelevant to its semantic interpretation. I will now discuss some evidence from Kannada which will exemplify this.

Consider the following sentence which is the Non-participial equivalent of (39).

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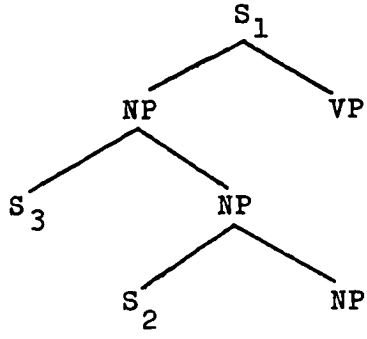
(45) rāmanu yāva giḷiyannu koṇḍanō yāva giḷiyu inglīś mātāḍuttadō ā giḷiyu ślōkagaḷannu hēḷuttade.

Both the relative clauses in (39) are Participial; in (45) both are Non-participial. But unlike (39), (45) is not syntactically ambiguous; it can be derived only from the conjoined underlying structure (36) and not from the stacked underlying structure (35). This is because there is a general constraint on Non-participial relative clauses in Kannada that they cannot be stacked. Given an underlying structure such as the following, Non-part. rel. tr. cannot be applied to S_3, although it can be applied to S_2.

(46)



Earlier in this study, we examined the various constraints on Non-participial relativization in Kannada. To these may be added this constraint against stacking. Part. rel. tr., on the other hand, can be applied to S_3 in (46) irrespective of whether S_2 has undergone Participial or Non-participial relativization.

There, however, is no restriction on conjoining two or more Non-participial relative clauses which modify the same noun. We can apply Non-part. rel. tr. to S_2 and S_3 of (36) and derive (47).

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(47) rāmanu yāva giḷiyannu koṇḍanō mattu yāva giḷiyu inglīś mātāḍuttadō ā giḷiyu ślōkagaḷannu hēḷuttade.

(45) is derived by deleting the conjunction mattu 'and' from (47). The most significant fact about (45) is that it has only the conjoined semantic interpretation (38); neither of the nonconjoined interpretations is possible for this sentence. Of course, we can pronounce one of the two relative clauses in (45) with increased loudness or pitch but as in the case of (40) this does not signal stacked interpretation. (47) too does not have either of the stacked interpretations, but like (40), (47) contains the conjunction mattu 'and'; therefore in both these sentences focus cannot be assigned to any one of the two relative clauses. The conjunction mattu 'and' does not occur in (45) and in this respect it is exactly like (39). If (39) can have three semantic interpretations, why can we not have the same three semantic interpretations for (45)? The obvious answer seems to be that (39) has two possible sources, stacked and conjoined, and therefore it has stacked as well as conjoined interpretations. (45) has only one source, it can come only from a conjoined underlying structure, and therefore it has only the conjoined interpretation. Thus we see that after all the stacked interpretation is not completely independent of the stacked structure.

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An alternative to this conclusion would be to maintain that focus assignment is blocked when the relative clauses involved are of the Non-participial type. It is true that (45) does not give either of the stacked interpretations because it is not possible to assign focus to either of the two relative clauses in the sentence. But then this would be a constraint sensitive to the morphological form of the constituents involved, because the only difference between (39) and (45) lies in the morphological form of the relative clauses. Besides, we will be missing a generalization. Among (40), (39), (47) and (45), the only sentence that could be syntactically ambiguous, namely, (39), is also semantically ambiguous; the other three sentences which can be derived only from a conjoined underlying structure can have only the conjoined semantic interpretation. Thus the fact that we cannot assign focus to any of the two relative clauses in (45) is not due to the morphological shape of the relative clauses it contains; it is something that is determined by its syntax.

This, of course, does not necessarily mean that the semantic interpretation of any of these sentences is completely determined by the underlying structures from which they are derived. We have already seen in the case of (39) that this position has its own difficulties; focus assignment to this sentence does not take place in deep structure. It is also clear that focus assignment does not take place

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at the final derived structure, i.e. the surface structure. Otherwise it would be hard to explain why focus cannot be assigned to any of the relative clauses in (45) unless we maintained that the derivational history of a sentence is marked in the surface structure of a sentence in some manner. (45) has the conjunction 'and' in the earlier stages of its derivation but it is deleted before (45) is derived. But I do not think that there is any way of recognizing this from the surface structure. I think that a simple solution to this problem is to assume the following:

(48) Focus assignment precedes conjunction deletion in the grammar of Kannada.

(48) in conjunction with (44) accounts for all the syntactic and semantic facts about (39), (40), (45), and (47) we have so far discussed. (40) and (47) are ineligible for focus assignment because of (44), i.e. they contain the conjunction mattu 'and' which blocks focus assignment. Therefore these sentences can have only the conjoined interpretation. (45) is derived from (47) by conjunction deletion and since focus assignment precedes conjunction deletion, (45) cannot have nonconjoined interpretation if (47) cannot have it. In one possible derivation of (39), there is never any conjunction. This is the derivation from the stacked underlying structure (35). Therefore, it is eligible for focus assignment; it can have stacked interpretation 1 or 2 depending on whether focus is assigned to the outer or the inner relative

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clause. Since (39) can also be derived from (40) by deleting the conjunction mattu 'and', it can also have the conjoined interpretation. The conclusion from all this is clear; (39) has to have two underlying sources and therefore, it is necessary to assume that stacking is necessary in the grammar of Kannada.

There is a more direct, purely syntactic argument which supports this conclusion forcefully. Recall that (40) and (47) were derived from the conjoined underlying structure (39) by applying to both of the conjoined relative structures Part. rel. tr. and Non-part. rel. tr. respectively. Now there are two more alternatives. We may apply Part. rel. tr. to S_3 and Non-part. rel. tr. to S_2 and derive (49) from (36) or we may apply Non-part. rel. tr. to S_3 and Part. rel. tr. to S_2 and derive (50) from (36).

(49) *rāmanu koṇḍa mattu yāva giḷiyu inglīś mātāḍuttadō ā giḷiyu ślōkagaḷannu hēḷuttade.

(50) *rāmanu yāva giḷiyannu koṇḍanō ā mattu inglīś mātāḍuva giḷiyu ślōkagaḷannu hēḷuttade.

Both these sentences are ungrammatical. Recall that the Part. rel. tr. and the Non-part. rel. tr. introduce totally different structural changes into the structures to which they are applied. As a result, the derived structure of the two relative clauses in each of these sentences is so dissimilar that they cannot be conjoined. Thus what makes

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these sentences ungrammatical is some fairly universal property of conjoined structures.

Let us now turn to the stacked underlying structure (35). If we apply Part. rel. tr. to S_2 and Non-part. rel. tr. S_3 of this structure, we get the ungrammatical sentence (51).

(51) *rāmanu yāva giḷiyannu koṇḍanō ā inglīś mātāḍuva giḷiyu ślōkagaḷannu hēḷuttade.

The ungrammaticality of (51) is easily explained by the fact mentioned earlier; the Non-part. rel. tr. can never apply to the outer or higher ranking clause in a stacked structure. There is, however, one other possibility; we can apply Non-part. rel. tr. to the inner clause S_2 of (35) and Part. rel. tr. to the outer clause S_3, and derive (52).

(52) rāmanu koṇḍa yāva giḷiyu inglīś mātāḍuttadō ā giḷiyu ślōkagaḷannu hēḷuttade.

(52) is not only grammatical but it is also the most preferred of the sentences derivable for (35) in actual usage. Now this sentence has the two stacked semantic interpretations depending on whether the focus is placed on the inner clause or the outer clause. But it does not have the conjoined semantic interpretation (38). This is only predictable since this sentence cannot be derived from the conjoined underlying structure (36), because as we have just seen, we can apply either the Part. rel. tr. or the Non-part. rel. tr. to both the clauses in a conjoined structure but we

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cannot apply one of these transformations to one clause and the other transformation to the second clause. This shows that the only possible source from which (52) can be derived is the stacked underlying structure (35). This syntactic argument lends strong support to the conclusion we reached earlier, namely, that stacking of relative clauses is necessary in the grammar of Kannada. From this it follows that (restrictive) relative clauses in Kannada originate from underlying embedded structures.

I have now examined some evidence from Kannada which strongly supports the analysis of relative clauses as underlying embedded structures. But I do not wish to imply that the embedding analysis proposed in this study is without its share of problems. For one thing it is not yet clear how exactly to state the identity condition that is so crucial for any relative transformation. Secondly, sentences such as the following are also problems for this analysis.

(53) gīteyannu ōdida hindugaḷu svargakke hōguttāre.
'Hindus who read the Gita go to heaven.'

(54) nānu aivaru udda gaḍḍavidda huḍugarannu ūṭakke karediddēne.
'I have invited to dinner five boys who have long beards.'

Sentences such as these will continue to be problems until we arrive at satisfactory analyses of Generic NP's, and Quantifiers. These happen to be among the issues that have

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led to serious controversies among linguists in recent years. In any case, they are not problems which are special to relativization.

After this digression I now return to the central issue of this section, namely, an examination of the constraints on Non-participial relativization in Kannada. I briefly summarize here some of the features of this mode of relativization which make it such a marginal structure in the language. The fact that Non-part. mode of relativization is not native to Kannada may have something to do with the limited role it plays in the language. We have also noted that basically it is a cumbersome structure when compared with the native, Participial mode of relativization. We have now also seen that the Non-part. mode but not the Part. mode is subject to the following constraints:

(55) i. it cannot be normally used appositively,

ii. when the NP in which it is embedded has a complex Determiner, the sentence often becomes unacceptable.

iii. sentences derived by iterating the Non-part. rel. tr. often lead to self-embedding or to violation of the Complex NP Precedence condition, or both,

iv. it cannot be stacked, i.e. the Non-part. rel. tr. cannot be applied to the higher ranking clause in a stacked underlying structure.

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None of these constraints applies to the Part. mode of relativization in the language. Now it is interesting to examine if the Non-part. mode of relativization has any special role to play in the language at all or whether it is entirely superfluous and can do only some of the things that the Part. mode does, and even these things less frequently and less economically. I will examine this question in some detail in the following section.

Section 3

When we speak of languages 'borrowing' phonological features, syntactic structures, and so on, we are, of course, using a metaphor. We may extend the use of this metaphor a bit further and ask the following question: if the Non-participial mode of relativization is so uneconomical and so constraint-ridden and can be used only in a limited number of situations, why was it 'borrowed' by Kannada and other Dravidian languages particularly when their native mode of relativization, the Participial mode, was so economical and apparently so versatile? In less teleological and more neutral terms, are there any constraints on Participial relativization which do not apply to the Non-participial mode? If there are, it would mean that the Non-participial mode with all its limitations still plays a useful role in the language. In this section I will try to demonstrate that Non-part. relativization is not entirely superfluous in the language and that there are certain constraints which apply

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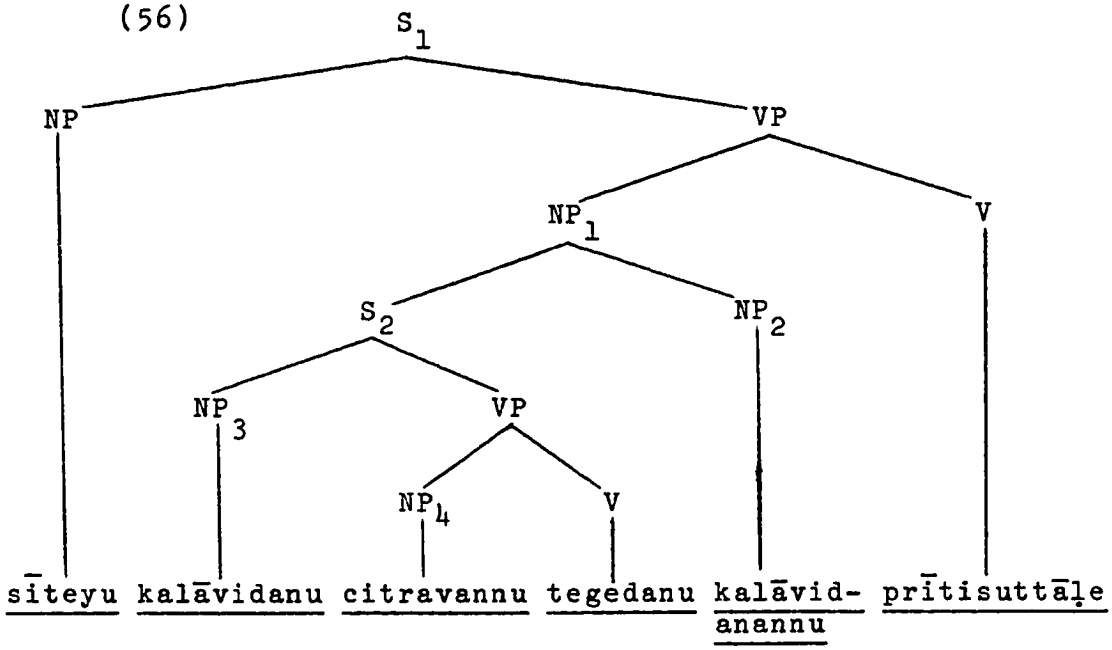
only to the Participial but not to the Non-participial mode of relativization.

Consider the following underlying structure.

(56)



'Sita' 'artist' 'picture' 'drew' 'artist' 'loves'

Notice that NP_3 and NP_2 are identical and S_2 meets the conditions for a relative transformation. So we may apply the Part. rel. tr. to S_2 and embed it into NP_1 to derive (57).

(57) sīteyu citravannu tegeda kalāvidanannu prītisuttāḷe.

'Sita loves the artist who drew the picture.'

The derived structure of (57) is represented by the following tree diagram.

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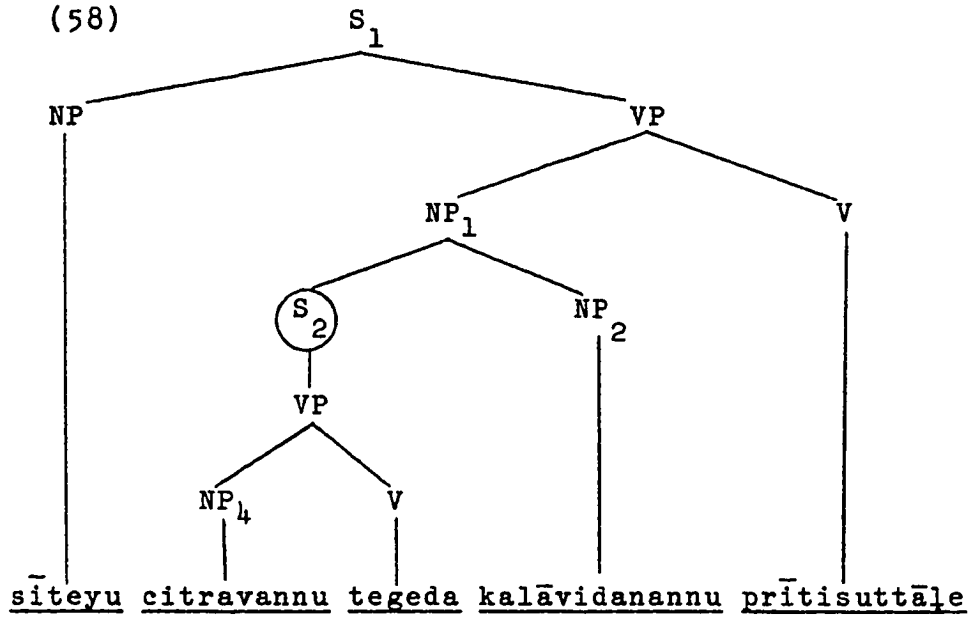
(58)



(58) differs from (56) in two respects; as a result of the application of Part. rel. tr., the identical noun kalāvidanu 'artist' in the constituent S, i.e. NP_3 of (56), is deleted and does not occur in (58), and secondly, the verb tegedanu 'drew' of S_2 in (56) is replaced by the corresponding relative participle tegeda 'drawn' in (58). Observe that S_2 in (58) is a non-branching node; it dominates a single node (VP). Now Ross (1967a, Ch. 3) has sought to establish on the basis of an impressive array of arguments a condition upon the well-formedness of trees which deletes any embedded node S which does not branch (i.e. which does not immediately dominate at least two nodes). S_2 in (58) is obviously a candidate then for deletion. I shall, however, argue later in this section that S_2 of (58) should be retained and not

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deleted. For the present let us assume that this S_2 is deleted, although nothing will depend on this in our present discussion.

Let us now embed (57) in (59), which shares with the former the identical noun citravannu 'picture', as shown in (60) on page 129.

(59) gōpālanu citravannu koṇḍanu.
'Gopal bought the picture.'

(57) sīteyu citravannu tegeda kalāvidanannu prītisuttāḷe.
'Sita loves the artist who drew the picture.'

If we now apply Part. rel. tr. to S_1 and relativize on citravannu 'picture' (the boxed node NP_4), we get (61).

(61)**gōpālanu sīteyu tegeda kalāvidanannu prītisuva citravannu koṇḍanu.
*'Gopal bought the picture which Sita loves the artist who drew.'

(61) is ungrammatical and even worse than its English rendering suggests. But we get a perfectly grammatical sentence if we relativize on the same NP_4 of (60) by applying the Non-part. rel. tr.

(62) gōpālanu sīteyu yāva citravannu tegeda kalāvidanannu prītisuttāḷō ā citravannu koṇḍanu.

This shows that there is a constraint which blocks the application of Part. rel. tr. to NP_4 of (60) but does not block Non-part. rel. tr. What this constraint is may become clear

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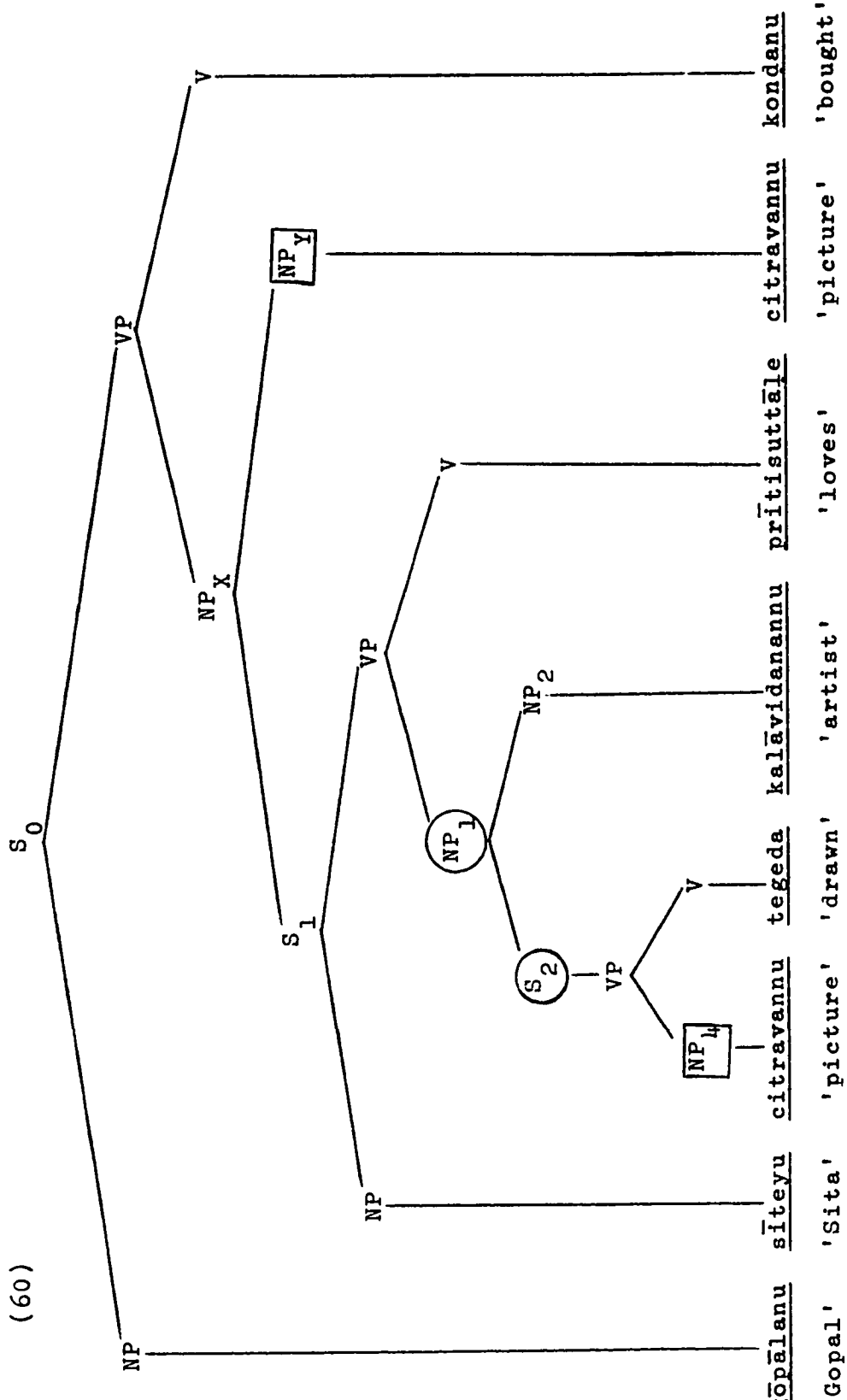
(60)



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if we examine the underlying structure (60) from which (61) and (62) are derived. In (60), the identical nouns concerned are citravannu 'picture' of NP_Y and NP_4. Now notice that NP_4 which is being relativized is embedded in a larger phrase of the same category, namely, NP_1. If it is this that blocks the Part. rel. tr., then we have here a constraint which is generally referred to in the literature as the A-over-A principle. Chomsky (1964, pp. 930-931), who first discovered this principle, explains it as follows:

> What it asserts is that if the phrase X of category A is embedded within a larger phrase ZXW which is also of category A, then no rule applying to the category A applies to X (but only to ZXW).

In other words, if there is a rule that applies to identical categories of a labelled bracketing, then the rule must be taken to apply to the dominating, not to the dominated category.

The Part. rel. tr. but not the Non-part. rel. tr. seems to be a rule which is bound by this constraint. NP_4 in (60) is clearly a phrase dominated by a larger phrase (NP_1) of the same category. In fact, the Non-part. rel. tr. can relativize on an NP which is successively embedded in any number of other NP's, subject, of course, to the usual performance constraints. Take, for example, (63) which has approximately the derived constituent structure represented by (64).

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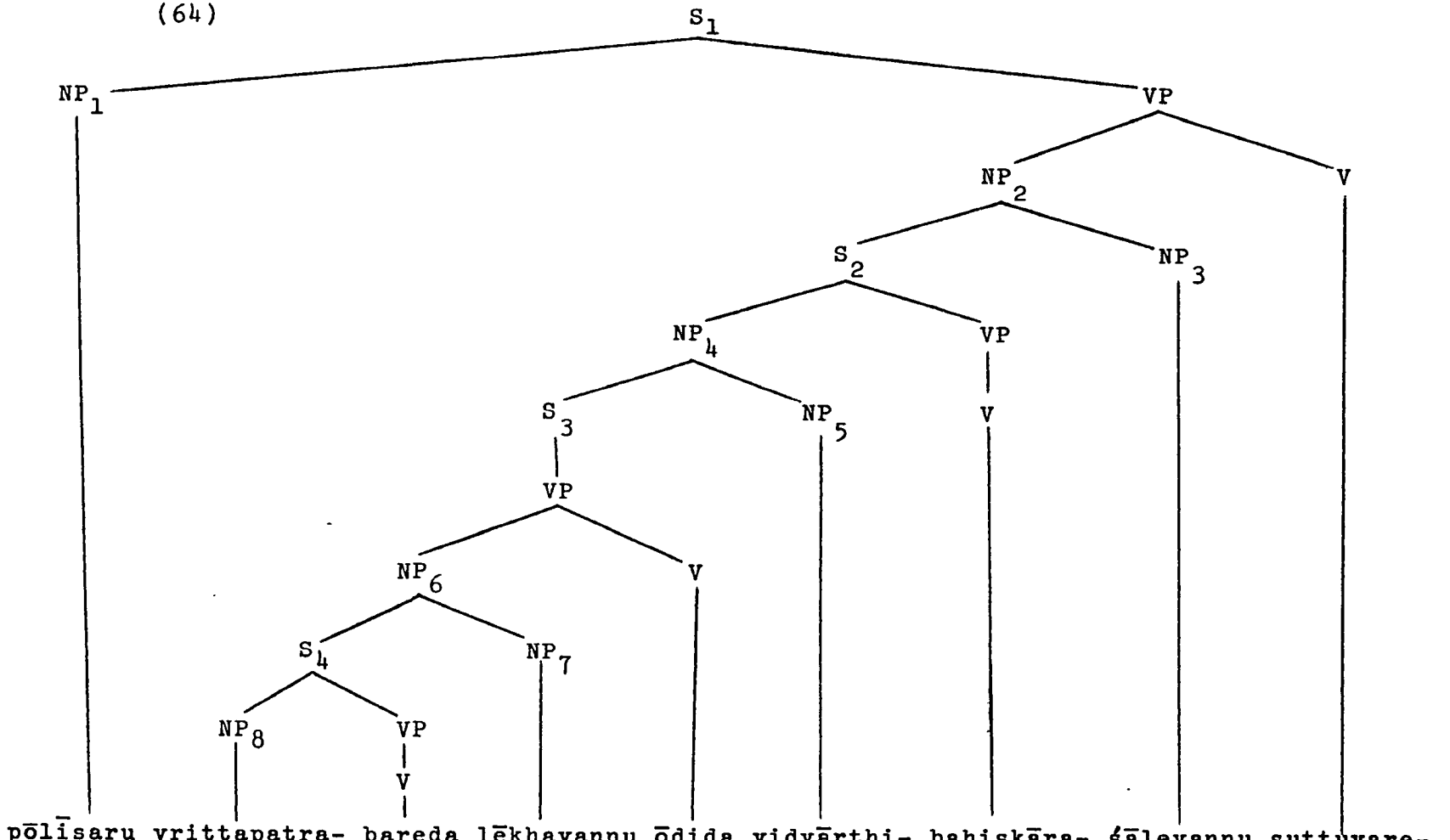
(64)



(63) vṛittapatrakāranu bareda lēkhavannu ōdida vidyārthigaḷu bahiṣkārahākida śāleyannu pōlīsaru suttuvaredaru.

'The police surrounded the school which was boycotted by the students who had read the article written by the journalist.'

In (64), NP_8 is embedded in NP_6 which is embedded in NP_4 which in turn is embedded in NP_2 and yet NP_8 can be relativized by applying to it the Non-part. rel. tr. given an appropriate matrix sentence such as (65). (66) is derived by embedding (64) into (65), and the Non-part. rel. tr. is applied to NP_8 of (64).

(65) ṿrittapatrakāranu krāntikāriyāgi iddāne.

'The journalist is a revolutionary.'

(66) <u>yāva ṿrittapatrakāranu</u> bareda lēkhavannu ōdida vidyārthigaḷu bahiṣkārahākida śāleyannu pōlīsaru suttuvaredarō ā <u>ṿrittapatrakāranu</u> krāntikāriyāgi iddāne.

Similarly, NP_7 <u>lēkhavannu</u> 'article' which is embedded in NP_4 which in turn is dominated by NP_2 can be relativized by applying to it the same transformation given a matrix sentence such as (67). The resulting sentence would be (68).

(67) <u>lēkhavu</u> suḷḷina kanteyāgide.

'The article is a bundle of lies.'

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(68) vṛittapatrakāranu bareda yāva lēkhavannu ōdida vidyārthigaḷu bahiṣkārahākida śāleyannu pōlīsaru suttuvaredarō ā lēkhavu suḷḷina kanteyāgide.

Finally, NP_5 which is embedded in NP_2 can also be relativized in the same manner given a matrix sentence such as (69).

(69) vidyārthigaḷu prāmāṇikarāgi iddāre.
'Students are honest.'

(70) vṛittapatrakāranu bareda lēkhavannu ōdida yāva vidyārthigaḷu bahiṣkārahākida śāleyannu pōlīsaru suttuvaredarō ā vidyārthigaḷu prāmāṇikarāgi iddāre.

The meaning of (66), (68) and (70) can easily be construed from the meaning of the corresponding matrix sentence and of the constituent sentence (63). All these three sentences are grammatical and perfectly acceptable.

Thus it is clear that the A-over-A principle does not apply to the Non-part. rel. tr. in Kannada. It is interesting to observe that (64) itself is derived by applying the Part. rel. tr. to S_4, S_3 and S_2 in its underlying structure. NP_3 and NP_1 of (64) can also be relativized by applying the Part. rel. tr. but not NP_5, NP_7 or NP_8. It is in these contexts that the borrowed, Non-part. mode of relativization plays a useful role in the language.

Ross (1967a) has demonstrated on the basis of evidence from English that the A-over-A principle is not entirely adequate, since although it correctly blocks the derivation

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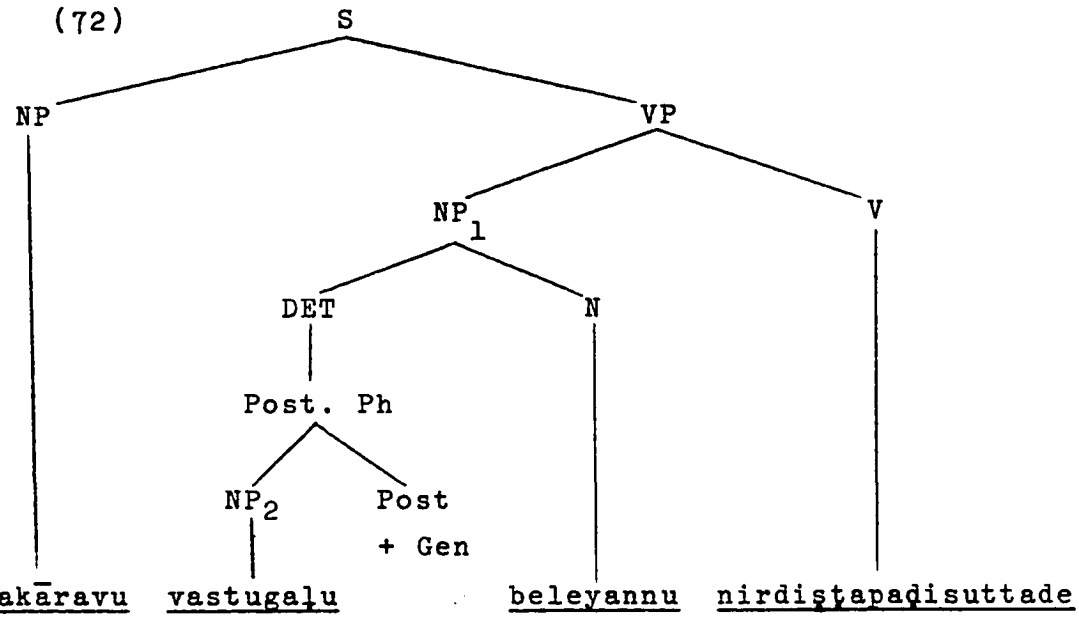
of a large number of ungrammatical sentences, it also blocks the derivation of certain grammatical ones. Exactly the same kinds of examples that Ross uses to show that this principle is too strong as a constraint on the Relative and Question transformations in English can be used to show that it is not entirely adequate as a constraint on the Part. rel. tr. in Kannada. Consider (71) and its derived constituent structure (72):

(71) sarakāravu vastugaḷa beleyannu
nirdiṣṭapaḍisuttade.
'The government fixes the price of the articles.'

(72)



In (72), NP_2 vastugaḷu 'articles' is embedded in NP_1 and yet it is possible to relativize on NP_2 by using the Part. rel. tr.

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(73) sarakāravu beleyannu nirdiṣṭapaḍisida vastugaḷu kaḷḷa santeyannu sēruttave.

'The articles the government fixes the price of disappear into the black market.'

The A-over-A principle predicts that this sentence is ungrammatical but it is not. A more complex example of the same type given below conclusively shows that this principle is too strong as a constraint on the Part. rel. tr. in Kannada.

(74) prakāśakanu patrikeya jāhīrātina puṭagaḷa ākāravannu gottupaḍisuttāne.

'The publisher fixes the size of the pages of advertisement in the journal.'

The derived constituent structure of this sentence may be approximately represented as (75) on page 136. The A-over-A principle predicts that the only NP's in this structure that can be relativized by applying the Part. rel. tr. are the circled nodes NP_x and NP_y since they are not embedded in any higher NP. NP_6, on the other hand, is embedded in NP_4 which is embedded in NP_2 which in turn is embedded in NP_1. Similarly, NP_5 and NP_3 are successively embedded in one or more NP's. Yet it is possible to relativize on NP_6, NP_5 and NP_3 by applying the Part. rel. tr. as shown below:

<u>NP_6 relativized</u>:

(76) prakāśakanu jāhīrātina puṭagaḷa ākāravannu gottupaḍisida <u>patrikeyu</u> ...

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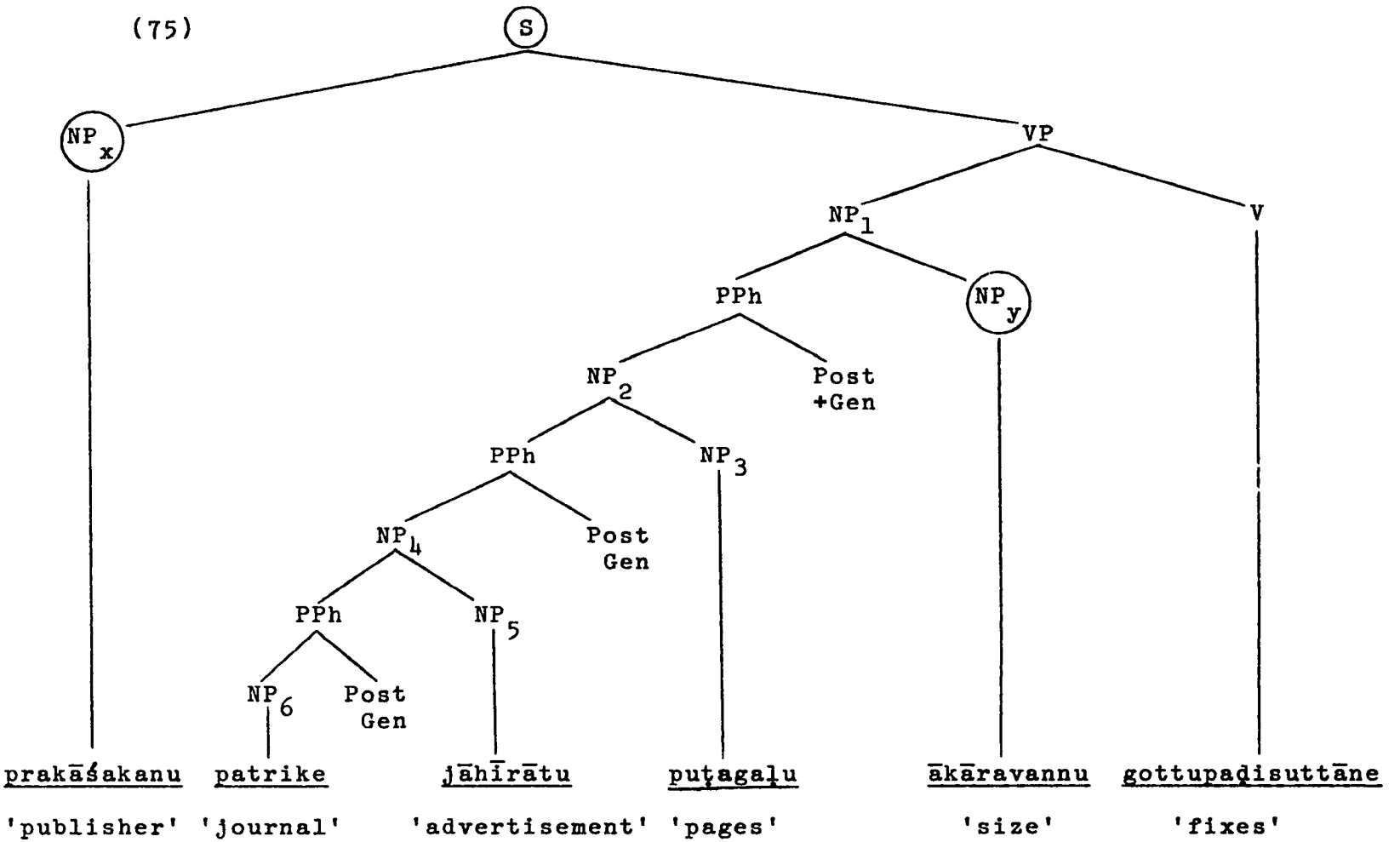
(75)



'the journal of which the publisher fixes the size of the pages of advertisement ...'

NP$_5$ relativized:

(77) prakāśakanu patrikeya, puṭagaḷa ākāravannu gottupaḍisida jāhīrātugaḷu ...

'the advertisement in the journal of which the publisher fixes the size of the pages ...'

NP$_3$ relativized:

(78) prakāśakanu patrikeya jāhīrātina ākāravannu gottupaḍisida puṭagaḷu ...'

'the pages of advertisement in the journal of which the publisher fixes the size ...'

All these sentences are not equally acceptable as is only to be expected. (76) and (78) are in my judgement perfectly acceptable, and the only problem with (77) is that it is ambiguous. One of its meanings is that which is indicated by the English rendering given above. The other possible meaning can be forced if patrikeya 'in/of the journal' and puṭagaḷa 'of the pages' are read together without a pause. The phrase would then mean 'the size of the pages of the journal of which the publisher fixes the advertisement of' and thus would lead to anomaly. This meaning can be easily avoided by pausing after patrikeya as indicated by the comma.

The grammaticality of (73), (76), (77) and (78) shows that the A-over-A principle is too strong as a constraint on the Part. rel. tr. It seems to me that the appropriate

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constraint which would allow these sentences but would exclude sentences such as (61) is rather analogous to the Complex NP constraint which Ross (1967) has proposed as a universal constraint on certain types of reordering transformations. Ross formulates this constraint as follows:

(79) 'No element contained in a sentence dominated by a noun phrase with a lexical head noun may be moved out of that noun phrase by a transformation.' (Ross, 1967a, Ch. 4).

By a 'reordering transformation', Ross means a rule 'whose structural change specifies that some term of the structural index is to be moved around some other term of it'. He makes a distinction between two types of reordering rules, chopping and copying. In chopping rules, if a term of the structural index is adjoined to, or permuted around another term, the original term is deleted or substituted for. In copying rules, on the other hand, the original term is not deleted, but remains behind in pronominal form, as a kind of placemarker. Ross specifies that the Complex NP constraint applies only to chopping rules but not to copying rules (Ross, 1967a, Ch. 6).

The Part. rel. tr. in Kannada, however, does not seem to be a reordering transformation. The structural changes it brings about consist of the following: it deletes the identical noun in the constituent sentence, and it introduces the feature [+ relative participle] into the verb of

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the constituent sentence. No element of the structural index is moved by this transformation. I showed in section 3 that it would be undesirable to formulate this transformation as a reordering transformation for two reasons; the reordering version would be more complex than the version I have adopted here and would have, so far as I can see, no attendant advantages to justify the added complexity, and secondly, such a transformation would inevitably involve moving some term of the structural index rightward around another term of it, and then it would be exactly the kind of rule which Ross himself, in his paper 'Gapping and the order of constituents', has asserted cannot occur in languages whose basic word order is SOV and which allow only backward gapping. I have already shown that Kannada, like Japanese, is also a language whose basic word order is SOV and which allows only backward gapping. Furthermore, as I indicated earlier, it seems very likely that the grammar of Kannada does not require any reordering rule at all, whether of the copying type or the chopping type. It is interesting to note that the relative transformation in Japanese too is generally considered to be a simple deletion rule that does not involve any reordering. Ross in his dissertation (the same as Ross, 1967a) discusses this rule at some length and argues in favor of assuming that it is not a simple deletion rule and that it probably involves reordering. One of his arguments is a rather complex one and has to do with the

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interaction of relativization in Japanese with other syntactic phenomena in that language such as reflexivization and crossover principle. His other argument rests on the fact that the relative transformation in Japanese obeys the Complex NP constraint and the Coordinate structure constraint which, Ross is inclined to believe, are universal constraints that apply only to transformations which involve reordering. But there can also be another possibility which Ross himself mentions later in his dissertation, and I am inclined to believe that evidence from Kannada favors this alternative which Ross puts as follows:

> ... it is not the case that the crossover condition and the constraints of Chapter 4 (mainly the Complex NP constraint and the Coordinate structure constraint, MVN) only affect 'reordering transformations'; rather, there are some transformations whose only effect is to delete constituents under identity, but which are nonetheless still subject to these constraints' (Ross, 1967a, 6.1.3.).

I will support this below by showing that the Part. rel. tr. in Kannada is bound by some version of Ross's Complex NP structure and also by the Coordinate structure constraint. So far as the crossover principle is concerned, I do not see how it is relevant at all for transformations that do not involve reordering, since this principle is specifically a constraint that can apply only to reordering transformations. I will also show that the Non-part. rel. tr. which is neither a reordering transformation nor a deletion transformation is not bound by either the Complex NP or the Coordinate structure constraint.

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The Part. rel. tr. in Kannada is not a purely deletion rule since, besides deleting the identical noun from the constituent sentence, it also inserts the feature [+ relative participle] into the verb of the constituent sentence. In this respect it meets the definition of what Ross calls 'feature-changing' rules. By 'feature-changing rule' he means any rule whose structural index is of the form (80.a), and whose structural change is of the form of either (80.b) or (80.c).

(80) a. $\ldots A_1 \ldots A_2 \ldots$

b. $\ldots A_1 \ldots \begin{bmatrix} A_2 \\ +F \end{bmatrix} \ldots$

c. $\ldots \begin{bmatrix} A_1 \\ +F \end{bmatrix} \ldots A_2 \ldots$

(Ross, 1967a, 5.1.3.)

Since the Part. rel. tr. inserts a feature (i.e. [+ relative participle] into a term of the structural index, it may be regarded as a feature-changing rule.[9] Ross has stated that 'All feature-changing rules obey the same constraints as chopping rules' (Ross, 1967a, 6.4.). So when considered as a feature-changing rule, the Part. rel. tr. lends good support to Ross's hypothesis.

We may now examine in what respect the Complex NP constraint (CNPC) applies to the Part. rel. tr. The constraint specifies a context which may be diagrammatically represented as follows:

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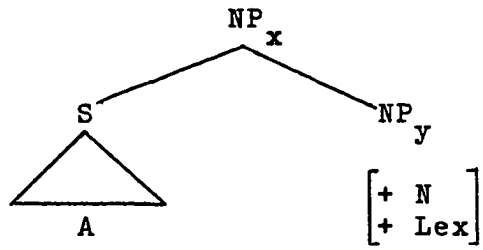
(81)



NP_x in (81) is a complex NP since it dominates the node S. The head noun of NP_x is the noun under NP_y and the feature [+ Lex] indicates that it is a lexical noun such as boy or idea and not an abstract noun or a PROnoun such as 'it'. A is any noun in S. Now CNPC stipulates that A cannot be relativized under identity with any noun which is not within the Complex NP (NP_x). Consider now the underlying structure represented by the tree diagram (56). The noun kalāvidanu 'artist' of the boxed node NP_3 is identical with the noun kalāvidanu 'artist' of the boxed node NP_2. NP_3 is in S_2 which is dominated by the circled node NP_1 which is therefore a complex NP. NP_2 is the head noun of NP_1, i.e. it is within NP_1. Therefore, kalāvidanu of NP_3 can be relativized under identity with the noun of NP_2. The Part. rel. tr. can apply in this case and the resulting sentence (57) is grammatical.

But now consider the structure represented by (75). I showed that the Part. rel. tr. can relativize on NP_6, NP_5 and NP_3 of this structure as well as on NP_x and NP_y. This is now easy to explain since none of these NP's occurs in a sentence which is dominated by a complex NP. Therefore, the circled node S under which all these NP's occur can be

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embedded in an NP which will then be a complex NP, and if the head noun of this NP is identical with any of the NP's under the boxed S node then the Part. rel. tr. can apply. For the same reason vastugaḷu of NP_2 in (72) can also be relativized. Thus all our counter examples to the A-over-A principle can be accounted for with the help of CNPC.

The tree diagram (82), on page 144, exemplifies a situation in which the Part. rel. tr. is blocked by CNPC. S_1, the matrix sentence in this structure, is (83), and S_2, the constituent sentence, is (84).

(83) huḍuganu curukāgiddāne.
'The boy is smart.'

(84) sikṣakanu huḍuganu biḍisida citravannu hogaḷidanu.
'The teacher praised the picture drawn by the boy.'

Now if we apply the Part. rel. tr. in this case to huḍuganu of NP_6 which is identical with NP_2 of the matrix sentence, we get (85).

(85) *sikṣakanu biḍisida citravannu hogaḷida huḍuganu curukāgiddāne.
*'the boy who the teacher praised that drew the picture is smart.'

(85) is ungrammatical because in this case the Part. rel. tr. has violated CNPC. huḍuganu 'boy' of NP_6 is relativized here under identity with the noun of the boxed node NP_2. But

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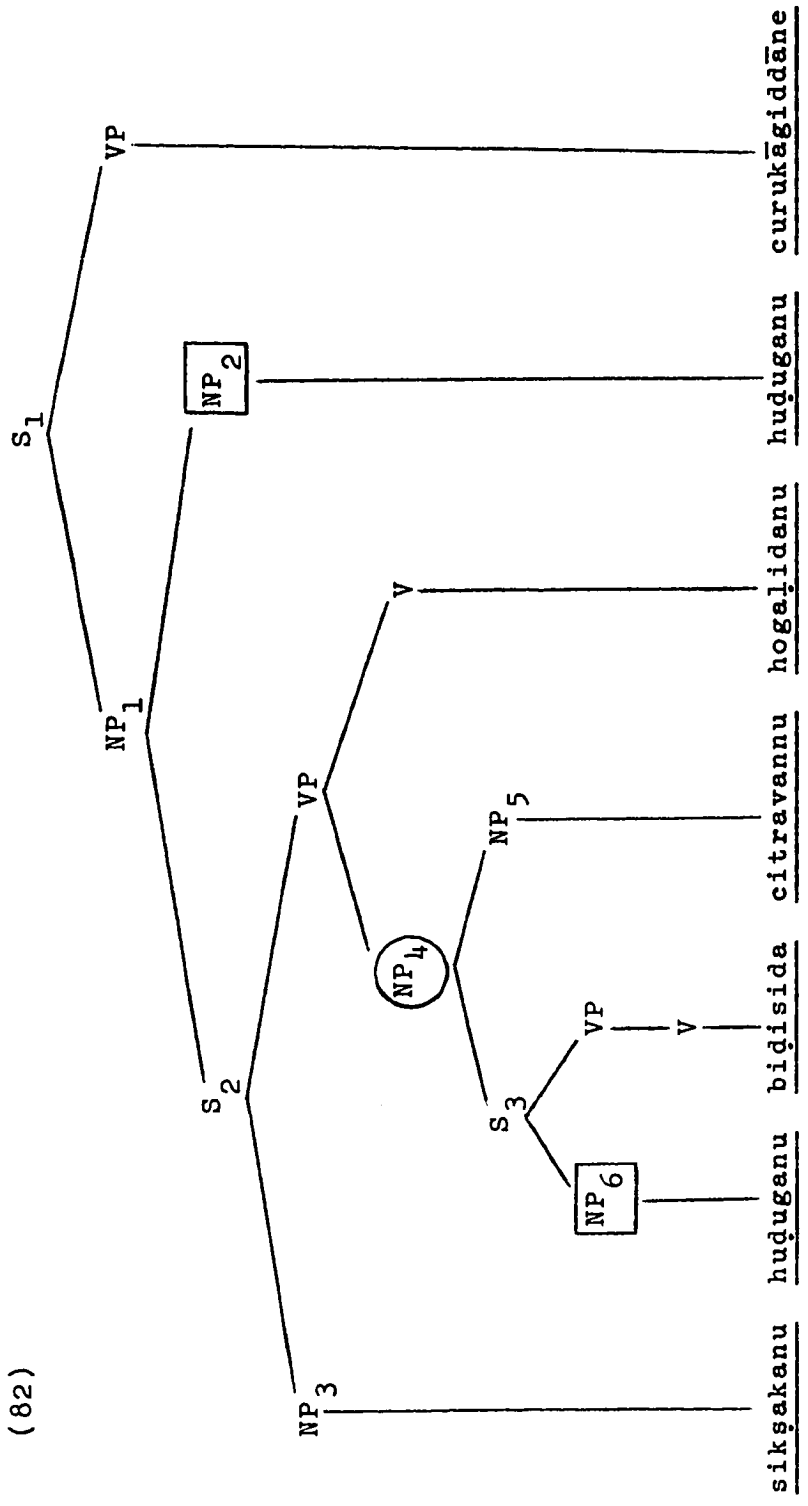
(82)



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notice that NP_6 is in S_3 which is dominated by the circled node NP_4 which is a complex NP, and NP_2 is not within this complex NP. Therefore, the Part. rel. tr. blocks in this case.

It must be pointed out that the Non-part. rel. tr. in Kannada is not bound by CNPC since we can relativize on NP_6 of (82) by employing this transformation and derive (86).

(86) sikṣakanu yāva huḍuganu biḍisida citravannu
hogaḷidanō ā huḍuganu curukāgiddāne.

(86) is perfectly grammatical and fully acceptable.

We may now go back to the structure represented by (60) and see why (61) derived by applying the Part. rel. tr. to NP_4 of (60) is ungrammatical. Notice that NP_4 <u>citravannu</u> is relativized under identity with NP_y. NP_4 is under S_2 which is dominated by the circled node NP_1 which is a complex NP, and NP_y falls outside this complex NP. Thus once again it is CNPC that blocks the Part. rel. tr. in this case.

But observe that S_2 of (60) is a nonbranching node since it immediately dominates only one node, VP. According to Ross's S-Pruning convention, this S_2 should have been pruned. But if S_2 is pruned, NP_1 cannot any more be regarded as a complex NP since it dominates no other S node. In that case, the only complex NP in this structure would be NP_x since it dominates S_1. If NP_4 falls directly within the domain of NP_1, it should be possible to relativize on it under identity with NP_y because NP_y too falls within NP_x. But

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we have seen that the Part. rel. tr. blocks in this case. This shows that S_2 of (60), though nonbranching, should not be pruned but retained.

Consider the derivational history of this node S_2. It starts out as the constituent sentence in the underlying structure represented by the tree diagram (56). In (56), NP_3 kalāvidanu 'artist' is relativized under identity with NP_2. Since Part. rel. tr. was applied in this case, NP_3 gets deleted leaving behind S_2 as a nonbranching node. This derived structure is represented by (58), which shows S_2 as a nonbranching node. It is this (58) which is embedded in NP_x of (60).

I must admit that cases such as (60) are the only ones in Kannada that I know of in which the adoption of the S-Pruning convention leads to incorrect syntactic results. But it may be pointed out that there are some fairly common situations involving the Part. rel. tr. in this language in which adoption of the convention leads to derived structures which are clearly counter-intuitive. Ross (1967a, 3.0.2.) has suggested that adoption of the S-Pruning convention enables us to reconstruct within the framework of generative grammar the traditional notion of clause of a sentence as "any subpart (not necessarily proper) of the terminal string of the final derived phrase marker of a sentence which is dominated by the node S". Now consider a sentence which has the following structure.

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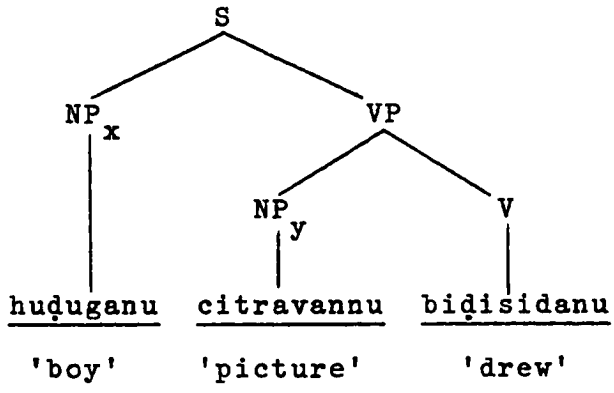
(87)



We can relativize either on the subject NP huḍuganu 'boy', or the object NP citravannu 'picture' of this sentence given the appropriate matrix sentence. Recall that the Part. rel. tr. deletes the identical noun to which it applies from the constituent sentence. Now if we relativize on the subject noun of (87), NP_x will get deleted, and then the S node will be a nonbranching node and will therefore have to be pruned. This would mean that the resulting relative structure will not meet Ross's definition of a clause. If, on the other hand, we relativize on the object noun of (87), NP_y will get deleted, but now the S node will still continue to dominate two nodes, namely, NP_x and VP, and therefore cannot be pruned. This would mean that the resulting relative structure will meet Ross's definition of a clause. It is surely counter-intuitive to maintain that when the Part. rel. tr. applies to the subject of a sentence, the resulting relative structure is a phrase, but that when it applies to the object of a sentence, the resulting relative structure is a clause. S_2 of (60) was an example of a relative structure of the

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former type, and S_3 of (82) was an example of a relative structure of the latter type. I showed earlier that both these S nodes were necessary.

Ross's S-pruning convention is certainly a very insightful attempt to characterize an important notion. But it seems to me that, whether a given constituent is a clause or a phrase depends, among other things, on the presence or absence of the verb in that constituent. A way may have to be found to incorporate this essential property of the clause in this convention.

We have now seen how CNPC when adapted in the manner shown above can serve as a constraint on the Part. rel. tr. in Kannada. I now wish to show that the constraint has to be modified in one respect before it can be considered to be entirely adequate. Notice that the constraint as formulated by Ross applies only to elements in a sentence dominated by a complex NP which has a <u>lexical</u> noun as its head. That is, if the head noun of the complex NP is an abstract noun or a PROnoun, the constraint does not apply. Ross supports this claim by showing that in English a noun that is in a sentence which is a complement on a lexical noun like <u>claim</u> cannot be relativized (88.a and 88.b) but it can be relativized if it occurs in a sentence that is a complement on an abstract noun such as 'it' (89.a and 89.b).

(88) a. I believed the claim that Otto was wearing this <u>hat</u>.

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b.*The hat which I believed the claim that Otto was wearing is red.

(89) a. I believed that Otto was wearing this hat.

b. The hat which I believed that Otto was wearing is red.

(Ross, 1967a, 4.1.3.)

But so far as the Part. rel. tr. in Kannada is concerned, it makes no difference whether the head of the complex NP is a lexical noun or an abstract noun; an element in a sentence dominated by a complex NP cannot be relativized in either case, under identity with a noun which falls outside this complex NP.

The sentential complement in (90) and (91) is the same, but in the former, the head noun to which it is attached is the lexical noun suddi 'news', while in the latter, it is attached to the abstract noun adu 'it' (see Ch. 5 of this dissertation for details of this analysis).

(90) gōpālanu kāru koṇḍanu emba sangatiyannu nānu kēḷiddēne.

'I have heard the news that Gopal has bought a car.'

(91) gōpālanu kāru koṇḍanu embudannu nānu kēḷiddēne.

'I have heard that Gopal has bought a car.'

The derived structure of both these sentences may be represented by the following tree diagram with alternate entries for the head of the object NP.

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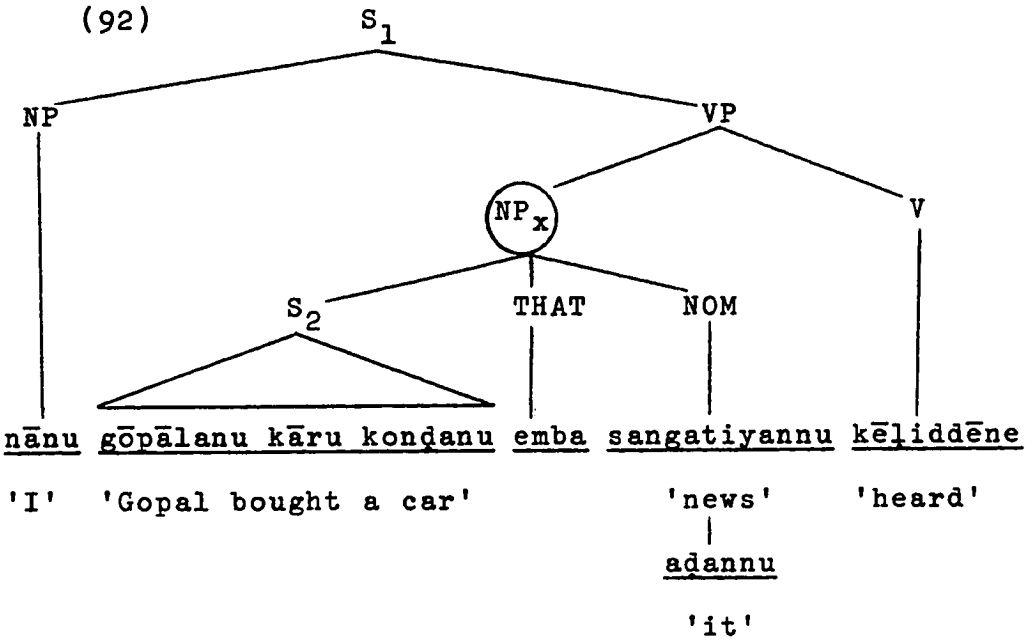
(92)



kāru 'car' is in S_2 which is dominated by the circled node NP_x. This complex NP has a lexical head noun (sangatiyannu 'news') in (90) but an abstract head noun (aḍannu 'it') in (91). The Part. rel. tr. cannot apply to kāru in either of these sentences.

kāru relativized from (90):

(93) *gōpālanu koṇḍanu emba sangatiyannu nānu kēḷida kāru bahaḷa oḷḷeyadu ideyante.

*'The car which I have heard the news that Gopal has bought is said to be very good.'

kāru relativized from (91):

(94) *gōpālanu koṇḍanu embudannu nānu kēḷida kāru bahaḷa oḷḷeyadu ideyante.

'The car which I have heard that Gopal has bought is said to be very good.'

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Both (93) and (94) are ungrammatical. The difference between English and Kannada in this respect becomes clear when we notice that the English rendering of (93) is ungrammatical but that of (94) is grammatical. Thus it is clear that the Part. rel. tr. cannot be applied to a noun which is contained in a sentence dominated by an NP whether the head of this NP is a lexical noun or an abstract noun.

Note once again that the Non-part. rel. tr. in Kannada can relativize on kāru in (90) as well as in (91).

Non-part. rel. tr. applied to kāru in (90):

(95) gōpālanu yāva kārannu koṇḍanu emba sangatiyannu nānu kēḷiddenō ā kāru bahaḷa oḷḷeyadu ideyante.

*'The car which I have heard the news that Gopal has bought is said to be very good.'

Non-part. rel. tr. applied to kāru in (91):

(96) gōpālanu yāva kāru koṇḍanu embudannu nānu kēḷiddenō ā kāru bahaḷa oḷḷeyadu ideyante.

'The car which I have heard that Gopal has bought is said to be very good.'

This conclusively shows that the Non-part. rel. tr. is not bound by the Complex NP constraint. As for the Part. rel. tr., the version of the Complex NP constraint that applies to it may be formulated as follows:

(97) The Part. rel. tr. cannot apply to any element contained in a sentence that is dominated by a noun phrase with a head noun.

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I now wish to examine the two relative transformations in Kannada with respect to another constraint also proposed by Ross (1967a) as a universal constraint on chopping and feature-changing transformations.

(98) The Coordinate Structure Constraint

In a coordinate structure, no conjunct may be moved, nor may any element contained in a conjunct be moved out of that conjunct.

(Ross, 1967a, 4.2.)

Since I have not yet examined in detail the syntax of conjunction in Kannada, I will not enter here into any discussion having to do with the deeper analysis of the conjoined structures themselves. I shall merely examine whether any of the relative transformations in this language can apply to a noun in one of the conjuncts in a conjoined structure.

There are mainly two elements which serve as conjunctions in Kannada, the regular conjunction mattu 'and', and an enclitic ū which is added at the end of each conjunct.

The conjunction mattu 'and' occurs in the following sentence.

(99) khurciya mattu sōfāda naḍuve avaru mējannu iṭṭiddāre.

'They have placed the table between the chair and the sofa.'

The derived structure of this sentence may be represented as follows:

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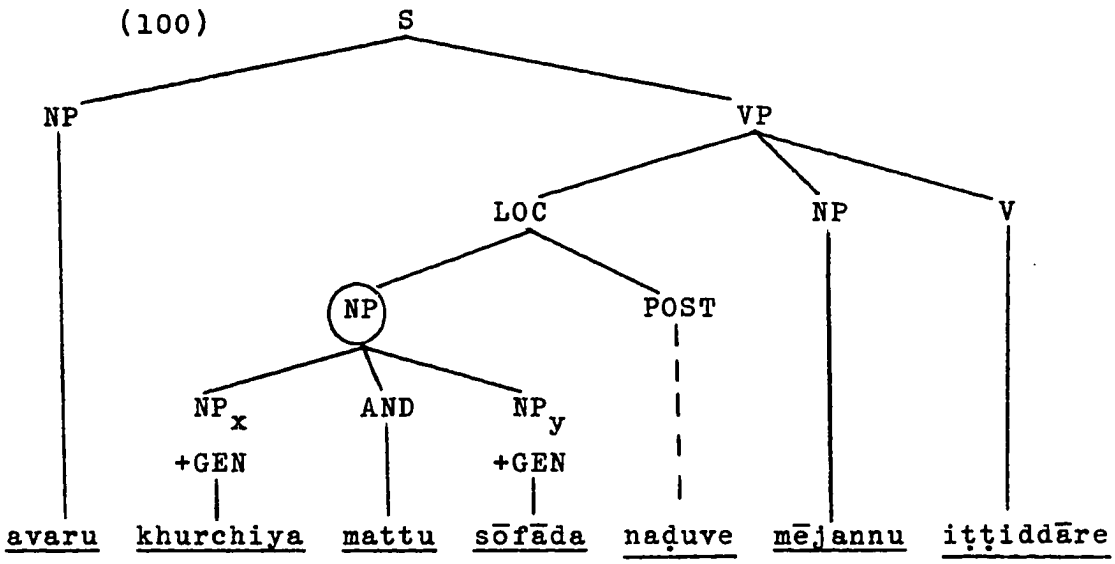
(100)



In (100), the circled node NP dominates two conjoined NP's (NP_x and NP_y). (101.a) and (101.b) are derived by applying the Part. rel. tr. to NP_x (khurciya 'of the table') and NP_y (sōfāda 'of the sofa!) respectively, and both are ungrammatical.

(101) a. *mattu sōfāda naḍuve mējannu avaru
iṭṭiruva khurchiyu muridide.
*'the chair which they have placed a table between and a sofa is broken.'

b. *khurciya mattu naḍuve avaru mējannu
iṭṭiruva sōfāvu muridide.
*'the sofa which they have placed a table between a chair and is broken.'

Both these sentences are extremely bad. This shows that the Part. rel. tr. cannot be applied to a noun which occurs in a

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conjoined structure. But it seems that the Non-part. rel. tr. can be applied to such a noun. (102.a) and (102.b) are derived by applying the Non-part. rel. tr. to NP_x and NP_y respectively of (100).

(102) a. yāva khurciya mattu sōfāda naḍuve avaru mējannu iṭṭiddārō ā khurci muridide.

b. khurciya mattu yāva sōfāda naḍuve avaru mējannu iṭṭiddārō ā sōfā muridide.

It is not possible to render these sentences into English using the appropriate relative clauses because the Coordinate structure condition applies to the relative transformation in English too. The matrix sentence in (102.a) is 'the chair is broken' and that in (102.b) is 'the sofa is broken'; (99) is the constituent sentence in both.

Thus we see that the Coordinate Structure constraint (CSC) does not apply to the Non-part. rel. tr. in this situation but only to the Part. rel. tr. Nouns conjoined by the enclitic ū can also be relativized by applying the Non-part. rel. tr.

(103) nariyū simhavū ondu guheyalli bheṭṭiyādavu.

'The fox and the lion met in a cave.'

Non-part. rel. tr. applied to nariyu 'fox':

(104) yāva nariyū simhavū ondu guheyalli bheṭṭiyadavō a nari bahaḷa dhūrtavittu.

'The fox was very clever.' (matrix)

'The fox and the lion met in a cave.' (constituent)

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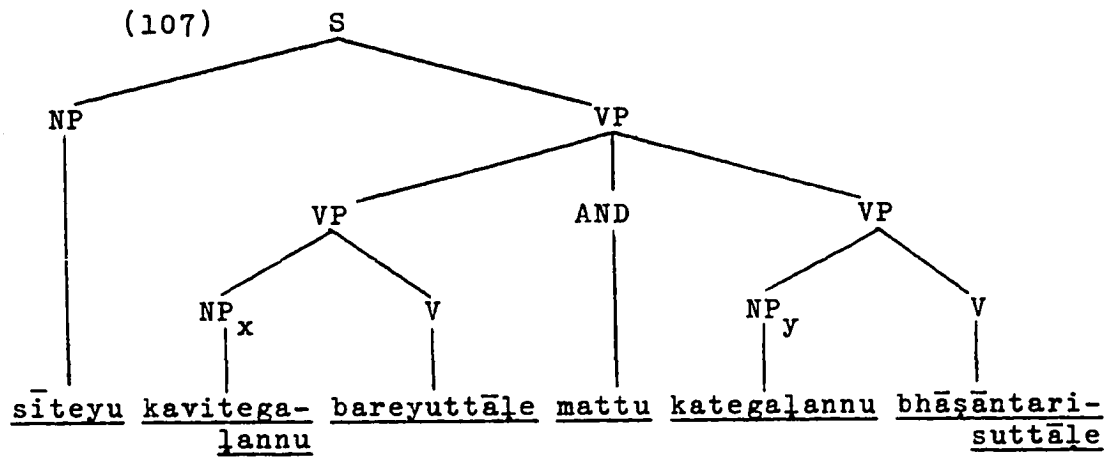
Non-part. rel. tr. applied to simhavu 'lion':

(105) nariyū yāva simhavū ondu guheyalli bheṭṭiyādavō
ā simhavu gāyagoṇḍittu.
'The lion was wounded.' (matrix)
'The fox and the lion met in a
cave.' (constituent)

It must, however, be pointed out that even the Non-part. rel. tr. cannot be applied to relativize on a noun in a conjoined VP or in a conjoined S. This transformation blocks in both these situations.

(106) sīteyu kavitegaḷannu bareyuttāḷe mattu
kategaḷannu bhaṣāntarisuttāḷe.
'Sita writes poems and translates stories.'

(107)



We can relativize neither on NP_x nor on NP_y of (107) by applying the Non-part. rel. tr.

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NP_x relativized:

(108) *sīteyu yāva kavitegaḷannu bareyuttāḷō mattu kategaḷannu bhāṣāntarisuttāḷe ā kavitegaḷu paritōṣakavannu paḍedavu.

'The poems won a prize.' (matrix)

(constituent) = (106)

NP_y relativized:

(109) *sīteyu kavitegaḷannu bareyuttāḷe mattu yāva kategaḷannu bhāṣāntarisuttāḷō ā kategaḷu pāritōṣakavannu paḍedavu.

'The stories won a prize.' (matrix)

(constituent) = (106)

(108) and (109) are both ungrammatical, which shows that the Non-part. rel. tr. blocks in these situations. It also blocks when the noun to which it is applied occurs in a conjunct S as in (110).

(110) gōpālanu mīnu hiḍiyuttāne mattu avanu adannu
'Gopal' 'fish' 'catches' 'and' 'he' 'it'
māruttāne.
'sells'

'Gopal catches fish, and he sells it.'

The following sentence is derived by applying the Non-part. rel. tr. by applying it to mīnu 'fish' in the first conjunct S.

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(111) *gōpālanu yāva mīnu hiḍiyuttānō mattu avanu
adannu māruttāne ā mīnannu nānu koṇḍenu.
'I bought the fish.' (matrix)
(constituent) = (110)

Thus when more than one verb is involved in the conjoined structure as in VP conjunction or S conjunction, the Non-part. rel. tr. cannot be applied to any element occurring in one of the conjuncts. It can apply, as we saw above, to a noun in one of the conjuncts only in NP conjunction.

In this section, I have now discussed the two relative transformations in Kannada with reference to CNPC and CPS. So far as CNPC is concerned, it is clear that the version of it reformulated as (97) above is a constraint on the Part. mode of relativization. The Non-part. mode of relativization is not bound by this constraint at all. The Part. mode of relativization is also bound by CSC. The Non-part. mode is bound by CSC only in the case of VP conjunction or of S conjunction.

We may now answer the question with which we began this section. Although the Non-part. mode of relativization is cumbersome, and is prone to run into various kinds of performance constraints, it is not entirely superfluous. There are situations involving relativization in which Kannada cannot employ the native, Participial mode, and has to depend entirely on the borrowed, Non-participial mode.

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Footnotes

[1]There, however, are certain very interesting exceptions to this generalization.

(A) yāva gāndhījiyavaru hindū-muslim aikyakke tamma jīvanvannu muḍipāgiṭṭarō ā gāndhījiyavaru obba dharmāndhana guṇḍige baliyādaru.

'Gandhiji, who devoted his entire life to the cause of Hindu-Muslim unity, became the victim of the bullet of a religious fanatic.'

(B) yāva nehrūavaru hindī-cīnī bhāi bhāi endu ghoṣisidarō ā nehrūavaru bhāratada gaḍi rakṣaṇege cīnī sainyadoḍane hōrāḍalu bhāratīya sainyavannu kaḷuhisabēkāyitu.

'Nehru, who had proclaimed, 'Indians and Chinese are brothers' had to send the Indian army to protect the frontiers of India against the Chinese army.'

(C) yāva valmīki krūra vyādhanāgiddanō ā vālmīki īga kraunca vadhakke maraguttiddanu.

'Valmiki, who was once a cruel hunter, was now agonized over the death of a kraunca bird.'

(D) *yāva gandhījiyavaru pūrṇa sasyāhārigaḷāgiddarō ā gāndhījiyavaru kuriya hālu mattu sōyā bīnannu mātra tamma āhāradalli upayōgisuttiddaru.

'Gandhiji, who was a complete vegetarian, used only goat's milk and soy bean in his diet.'

(E) *yāva gōpālarāyaru inśūrans ējantariddārō avaru dinā 10 maili naḍeyuttāre.

'Gopal, who is an insurance agent, walks ten miles every day.'

Each of these five sentences contains a Non-part. rel. clause which is appositional. It can only be appositional since the head noun it is attached to in each case is a proper noun. But notice that (A), (B) and (C) are perfectly acceptable, while (D) and (E) are not. That the latter are not possible does not need any explanation because, as we have already seen, Non-part. rels. in Kannada cannot be used appositively. What needs explaining is why for the same reason (A), (B) and (C) are not unacceptable. How are these sentences

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different from the last two? It seems to me that there is a very good explanation but that it is not 'formal' but semantic. If we examine the semantic content of (A), (B) and (C), we notice that each of these sentences contains an element of irony or paradox. In (A), we have Gandhi, the great apostle of religious harmony, but he himself becomes a victim to a religious fanatic. In (B), Nehru, the great champion of Indo-Chinese friendship, is obliged to send the Indian army to fight the Chinese. In (C), Valmiki, who was once a cruel head hunter, now cannot bear the sight of a mere bird being killed. The semantic content of (D) and (E) does not contain this element of irony or paradox.

Here then, we have an interesting phenomenon. The Non-part. rel. in Kannada cannot normally be used appositively, but it can be so used only if the juxtaposition of the relative clause and the main clause semantically approaches irony or paradox. The theoretical implications of this situation are interesting. Take, for instance, (A) and (D). The Non-part. rel. clause in both these sentences is attached to a proper name, Gandhi. A restrictive interpretation of either of these relative clauses is ruled out since 'Gandhi' is used in these sentences as a pure proper name and not as a proper name used as a common name as in the following English sentence.

(F) The Bloch I was referring to was a well-known French linguist.

Thus the relative clauses in (A) and (D) can be regarded only as appositives. Recall that (D) is not a possible sentence. This follows from the general constraint on Non-part. rel. Now the problem is to formulate the transformation which gives appositive Non-part. rels. in such a way that it does not block in the case of (A) but does block in the case of (D). We have seen that the difference between these two sentences is semantic and not 'formal'; the juxtaposition of the components sentences of (A) semantically approaches irony but that of (D) does not. In the present theory there seems to be no obvious way in which the transformation can be made sensitive to this semantic fact. There are certain kinds of semantic notions to which a transformation can be made sensitive. Thus the restrictive relative transformation does not apply if the head noun is marked [+proper] or [+specific]. But in this case, 'irony' is not a feature on any single constituent of the underlying string; it is something that results from the total semantic output of the string. What we need is some way in which a transformation can take the total semantic reading of a string before it applies to that string. This is not possible now within the standard theory.

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There, however, is another solution to this problem within the standard theory which looks more promising. We may assume that the constraint against the appositive use of Non-part. rels. is a purely surface constraint. That is, there is nothing in the underlying structure which blocks the appositive transformation from applying to the underlying structure of (D). (A) and (D) are both freely derived by the grammar of the language. But then there is an output condition which rejects (D) but not (A). This output condition will have to be a semantic condition on well-formedness. In recent years, Ross (1967), Perlmutter (1968) and others have shown the need for 'output conditions' that serve as well-formedness conditions for surface structures. But the output conditions they have suggested are 'formal', and are in terms of the syntactic well-formedness of surface structures. In the case of (A) and (D), we need an output condition which is semantic and which will say something to this effect:

(G) Sentences containing Non-participial appositive relatives are semantically anamolous and therefore unacceptable unless their semantic interpretation entails 'irony' or 'paradox'.

This solution seems to me consistent with the standard theory. In fact, (G) may be regarded as a surface semantic interpretation rule which 'filters out' unacceptable sentences such as (D) and (E).

[2](10.a), (10.b) and (10.c) are exemplified by the structures represented by the tree diagrams (12), (21) and (35) respectively.

[3]One of the two cases in which iteration of the Non-part. rel. tr. gives sentences that are grammatical as well as acceptable is (10.a). The other such case is the following:

S_1 : NP NP V
S_2 : NP NP V
S_3 : NP NP V

An example of a sentence that can be derived from such an underlying structure by iterating the Non-part. rel. tr. is the following:

yāva kāvalugāranu kālu muridukonḍanō ā kāvalugāranu yāva pōlīsanannu karedanō ā pōlīsanu kaḷḷanannu aṭṭidanu.

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'The policeman whom the guard who broke his leg called chased the thief.'

The Kannada sentence does not contain a self-embedded relative clause although its English rendering does.

[4]Cf. Chomsky (1965: 10-15).

[5]The eight sets in which iteration of the Non-part. rel. tr. leads to self-embedding are those in which the same NP is shared by all the three underlying sentences.

[6]Cf. UESP (1969: 469)

[7]The English sentence discussed by Thompson (1969) is the following: The colt that our stallion sired that grew up in Indiana won the Derby. This sentence can give two stacked semantic interpretations depending on whether we stress the inner clause or the outer clause.

[8]One of the empirical hypotheses of the syntactic/semantic theory developed by Katz and Postal (1964) was that all semantically relevant information about a sentence must be present in the deep structure. Chomsky (1965) made this explicit in Aspects: "... the semantic interpretation of a sentence depends only on its lexical items and grammatical functions and relations represented in the underlying structure in which they appear." Chomsky has since revised his position, and in 'The formal nature of language' (Chomsky, 1967: 409), he suggests that while deep structure completely determines certain highly significant aspects of semantic interpretation, 'surface structure contributes in a restricted but significant way to semantic interpretation'. In 'Deep Structure, Surface Structure, and Semantic Interpretation',(Chomsky, 1969), he suggests that such matters relevant to semantic interpretation as focus and presupposition, topic and comment, reference, scope of logical elements such as negation and quantifiers, and perhaps other phenomena are determined in part at least by properties of derived structure, in particular by properties of surface structure.

The original Katz and Postal hypothesis that all semantically relevant information must be present in the deep structure, and that transformations are necessarily meaning preserving has in recent years been called into question also by Kuroda (1965), Partee (1968), and Jackendoff (1969) among others. For a discussion of its historical development and of the current debate about it, see Partee (1969).

[9]It is not unlikely that the feature [+relative participle] is added by a separate transformation, because the same feature is added by a transformation required in nominal complementation. For details, see Ch. 5.

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Chapter 4

EXPLORATIONS IN THE SYNTAX OF ADJECTIVES IN KANNADA

Adjectives constitute probably one of the least understood areas of the grammar of Dravidian languages. Whether adjectives exist in these languages as a separate category has itself been a subject of controversy among leading linguists in the field. In this study, I am primarily concerned with adjectives in Kannada, more specifically, with certain peculiar syntactic traits which adjectives in this language exhibit, and which, I believe, hold the key to an explanatorily adequate account of this area of the syntax of the language. One of the implications of the conclusions reached here is that we cannot understand even this small area of the syntax of Kannada, if we fail to take into consideration the dual status of this language--as a Dravidian language, and also as a language that belongs to the unified linguistic area that is India.

As for the question whether 'there are adjectives' in Kannada, I have tried to explain what it is about adjectives in this language that has given rise to this controversy. This explanation also suggests an approach to this issue which when worked out in detail may help resolve this controversy.

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The title of this chapter emphasizes the exploratory character of this study. I have suggested here certain possible approaches to some of the problems in this area, without working out all the details. This is particularly true of the analysis of predicative adjectives suggested here.

This study is in three sections; section 1 deals with the problem of characterizing the categorial status of adjectives in this language, section 2 and 3 deal with attributive and predicative adjectives respectively.

Section 1

Sanskrit grammarians recognized four classes of words. According to Yāska's Nirukta, "catvāri padajātāni nāmākhyāte ca upasarganipātāśca". 'Word classes are four--nāma (noun), ākhyāta (verb), upasarga (preposition) and nipāta (participle).' The general Sanskrit tradition is to regard nouns and verbs as primary classes because they have independent meaning, and to consider prepositions and participles as secondary classes because they do not have independent meaning of their own. The division-line between noun and adjective is extremely uncertain in Sanskrit, and what we call 'adjectives' were probably regarded as a subclass of nouns.

Most early grammars of Tamil such as Tolkāppiyam and Nannūl follow Yāska's scheme; they consider peyar and viṉai (which roughly correspond to noun and verb respectively) as the two primary classes to which they add the two subsidiary classes iṭai-c-col and uri-c-col. iṭai-c-col is a

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miscellaneous class consisting of conjunctions, case-suffixes, personal terminations of verbs, interjections, etc. uri-c-col comprises mainly nominal and verbal bases. As P. S. Subrahmanya Sastri (1934:105) points out, it seems that uri-c-col has been incorporated in this scheme only to maintain consistency with the Sanskrit model of four classes. Notice that there is nothing in this scheme to correspond to adjectives and adverbs. The typically adjectival form in Tamil is a relative participial construction and the typically adverbial form often contains a verbal participle or gerund. Traditional Tamil grammarians called these peyar-eccam (noun-defective) and vinai-y-eccam (verb-defective) respectively; they were called 'defectives' because they contain a nonfinite form of the verb.

Modern students of Dravidian languages differ in their views regarding the status of adjectives in these languages. Caldwell (1956:309) held that

> The majority of adjectives in all the Dravidian dialects are nouns of quality or relation, which become adjectives by position alone, without any structural change whatever, and without ceasing to be, in themselves, nouns of quality.

To illustrate his point, Caldwell cites (Tamil) pon aridu 'gold is scarce', and pon muḍi 'a golden crown', where pon 'gold' is used without any change in form, first as a noun and then as an adjective.

Kittel (1903:242-51) in his Grammar of the Kannada Language calls adjectives guṇavacanas (attributive nouns)

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and treats them as a subclass of nouns. His famous dictionary of Kannada (Kittel, 1894) does not show adjectives as a separate class. Jules Bloch (1954:42) is equally insistent on maintaining that 'there are no adjectives, properly so called, in Dravidian'. Spencer (1950:239) in his Kanarese Grammar categorically states that

> If by adjectives we understand, as in English, a class of indeclinable words attached to declinable words in order to attribute qualities or other distinguishing features to the objects indicated by them, then Kanarese has, strictly speaking, no adjectives.

There is an impressive group of linguists who insist equally strongly on recognizing adjectives as a separate class of words in Dravidian languages. Reviewing Bloch's Structure Grammaticale des Langues Dravidiennes, Burrow (1947:254-55) and Master (1949:107) have taken strong exception to Bloch's contention that there are no adjectives in Dravidian. Burrow argues that there is a clear morphological distinction between adjectives and nouns in ancient Tamil and Kannada; adjectives such as peru 'great' cannot take case terminations while nouns like perumai 'greatness' can. Master (1949:107) argues in the same vein and concludes, "In spite of Kittel (who was a German), English grammatical theory admits of Dravidian adjectives and Dravidian grammar distinguishes them from nouns." Zvelebil (1956:167) maintains that there is a semantic as well as a syntactic distinction between adjectives and nouns in Dravidian languages. He argues that words like cil 'small' and per 'great' are

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adjectives because the meaning inherent in them expresses 'a certain quality' as against 'a complex of qualities' which is the meaning inherent in nouns. These adjectival bases, he points out, cannot function as subjects and therefore are not nouns.[1] I shall examine later in this section the morphological, semantic and syntactic arguments on the basis of which these linguists seek to establish adjectives as a category distinct from nouns.

Burrow and Bhattacharya (1953) in their description of Parji, Winfield (1928) in his description of Kui, Emeneau (1955) in his description of Kolami, Bright (1958) in his description of Kannada, and Sekhar (1953) of Malayalam have postulated a category 'adjective'. But they are all unanimous in pointing out that this class has very few members, consisting mainly of words for 'young', 'big', 'small', etc. and of color words such as 'white', 'black', 'blue' and so on. The following neat statement of Emeneau's (1955:31) about adjectives in Kolami is representative of the approach generally taken by these authors:

> An adjective is a word that syntactically is in attributive construction with a noun which it precedes, but that does not agree with the noun in gender and number. When the same word is in congruence with its head noun, it is classed as a noun, since the forms that occur in congruence are also found in constructions where the usual types of nouns occur.

Let us now examine some of the facts on which this observation is based and which have given rise to this controversy.

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(1) ā huḍuganu tunṭanu (iddāne).
1 2 3 4

'That boy is naughty.'
1 2 4 3

(2) ā huḍugiyu tunṭaḷu (iddāḷe).

'That girl is naughty.'

(3) ā huḍugaru tunṭaru (iddāre).

'Those boys are naughty.'

(4) ā huḍuganu kalāvidanu (iddāne).
1 2 3 4

'That boy is an artist.'
1 2 4 3

(5) ā huḍugiyu kalāvidaḷu (iddāḷe).

'That girl is an artist.'

(6) ā huḍugaru kalāvidaru (iddāre).

'Those boys are artists.'

Most people would readily agree that naughty in the English rendering of (1) to (3) is a predicative adjective, and that artist in the English rendering of (4) to (6) is a predicative nominal. Let us examine now the Kannada sentences. Notice first of all that the equivalent of 'naughty' in (1) to (3) agrees with the subject noun in the sentence in gender and number just as the equivalent of 'artist' does in (4) to (6). Thus tunṭanu in (1) and kalāvidanu in (4) are masculine and singular because the subject noun of these sentences (huḍuganu 'boy') is masculine and singular. Similarly, tunṭaḷu in (2) and kalāvidaḷu in (5) are feminine and

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singular because the subject noun of these sentences (huḍugiyu 'girl') is feminine and singular. The same kind of agreement holds in (3) and (6). Note further that tunṭanu of (1) literally means not 'naughty' but 'a naughty person (masc + sing)' just as kalāvidanu in (4) means 'an artist (masc + sing)'. Nominal meaning is attached in the same manner to tunṭaḷu and tunṭaru. Thus when used predicatively, there does not seem to be any difference between the forms meaning 'naughty' and those meaning 'artist'. Notice further that these very forms occur as subjects as in the following:

(7) ā tunṭanu yāru?
1 2 3

'Who is that naughty person (masc)?'
3 1 2

(8) ā tunṭalu yāru?

'Who is that naughty person (fem)?'

(9) ā tunṭaru yāru?

'Who are those naughty persons?'

(10) ā kalāvidanu yāru?

'Who is that artist (masc)?'

(11) ā kalāvidaḷu yāru?

'Who is that artist (fem)?'

(12) ā kalāvidaru yāru?

'Who are those artists?'

Thus we see that the forms of 'naughty' that occur predicatively also occur as subjects. In this respect therefore it

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is exactly like the word meaning 'artist', which is admittedly a noun. This is why it is said that in Kannada, and in Dravidian languages generally, 'adjectives' in the predicative position are nouns. Let us now examine this 'adjective' in the attributive position.

(13) ā tuṇṭa huḍuganu yāru? 'Who is that naughty boy?'
1 2 3 4 4 1 2 3

(14) ā tuṇṭa huḍugiyu yāru? 'Who is that naughty girl?'

(15) ā tuṇṭa huḍugaru yāru? 'Who are those naughty boys?'

Observe that a single form tuṇṭa occurs in (13) to (15) where it has an adjectival meaning 'naughty' as in English. That is, when in an attributive construction, the so-called 'adjective' in Kannada has no concord with the following noun. It is generally recognized that in this respect Kannada and Dravidian languages in general differ from Indo-Aryan languages such as Hindi and Marathi in which an adjective agrees with the noun it accompanies in gender and number, whether it occurs attributively or predicatively.[2] Thus in Hindi, for example, 'good' has three forms in the attributive position (16) as well as in the predicative position (17).

(16) acchā laṛkā 'a good boy'
acchī laṛkī 'a good girl'
acche laṛke 'good boys'

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(17) vō laṛkā acchā hai. 'That boy is good.'

vō laṛkī acchī hai. 'That girl is good.'

ve laṛke acche hãi. 'Those boys are good.'

Notice that kalāvida 'artist' can also occur attributively and in this respect again, it is exactly like the so-called adjective tunṭa.

(18) ā kalāvida taruṇanu yāru?
1 2 3 4

'Who is that artist-young man?'
4 1 2 3

(19) ā kalāvida taruṇiyu yāru?

'Who is that artist-young woman?'

(20) ā kalāvida taruṇaru yāru?'

'Who are those artist-young men?'

Even morphologically they seem to be alike in that tunṭa can be declined in all cases just like kalāvida.

(21)	tunṭanu	kalāvidanu	Nominative
	tunṭanannu	kalāvidanannu	Accusative
	tunṭaninda	kalāvidaninda	Instrumental/ Ablative
	tunṭanige	kalāvidanige	Dative
	tunṭana	kalāvidana	Genitive
	tunṭanalli	kalāvidanalli	Vocative

These then are some of the reasons why some students of Dravidian languages maintain that there are no adjectives in these languages and that the so-called 'adjectives' are really nouns. Linguists such as Burrow and Zvelebil, who insist on maintaining that adjectives exist in these

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languages as a separate class, would probably agree that words belonging to the class here represented by tuṇṭa are perhaps nouns. Other members of this class are catura 'clever', daḍḍa 'stupid', svārthi 'selfish' and so on. But they base their claim on a small class of words such as cikka 'small', doḍḍa 'great', hosa 'new', baḍa 'poor' and color words like biḷei 'white', haḷadi 'yellow' and so on. Let us now examine how this class of 'adjectives' differs in its surface syntax from 'adjectives' of the tuṇṭa class.

Syntactically, cikka functions exactly like tuṇṭa. In the predicative position, it agrees with the subject noun in gender and number; in the attributive position it shows no concord; and the forms of cikka that occur predicatively also occur as subjects. This can be seen in (22), (23) and (24) respectively.

(22) ā huḍuganu cikkavanu (iddāne).
1 2 3 4

'That boy is small.'

ā huḍugiyu cikkavaḷu (iddāḷe).

'That girl is small.'

ā huḍugaru cikkavaru (iddāre).

'Those boys are small.'

(23) ā cikka huḍuganu yāru?
1 2 3 4

'Who is that little boy?'
4 1 2

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ā cikka huḍugiyu yāru?

'Who is that little girl?'

ā cikka huḍugaru yāru?

'Who are those little boys?'

(24) cikkavanu elli iddāne?

1 2 3

'Where is the little one (masc)?'

2 3 1

cikkavaḷu elli iddāḷe?

'Where is the little one (fem)?'

cikkavaru elli iddāre?

'Where are the little ones?'

What then is the difference between words of the tunṭa class and those belonging to the cikka class? Most students of Dravidian would probably agree with the purport of the quote from Emeneau (p. 5 above) that in the predicative position in Kannada there is no difference between adjectives and nouns. Even those who insist on recognizing adjectives as a separate class would probably say that the so-called 'adjectives' are adjectives only when they occur attributively. Now in transformational studies it has generally been assumed that attributive adjectives originate in the underlying structure as predicates in relative clauses. Thus in English, the adjective tall in the tall man is derived from the man who is tall. The first of the transformational rules that are relevant here deletes WH and BE, and we get from the man who is tall ⟹ the man tall. Then there is an

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obligatory rule which shifts the adjective to the attributive position, that is, from the man tall ⟹ the tall man. Nobody has yet suggested derivation in the opposite direction, i.e. predicative adjectives from attributive adjectives. If it is the case that adjectives generally originate in the predicate position in the underlying structure, and if in Dravidian languages, adjectives are nouns in that position, then it follows that in deep structure we do not need the category adjective for these languages.

I have now cited some evidence which argues in favor of treating nouns and adjectives in Kannada as a single category. It is evidence of this kind that linguists who do not regard adjectives as a separate category in Kannada seem to have in mind. The arguments which linguists such as Burrow and Zvelebil have advanced in favor of treating adjectives as a distinct class of words are mainly semantic and morphological. I shall reconstruct them briefly here on the basis of evidence from Kannada.

Zvelebil draws between adjectives and nouns a semantic distinction; adjectives express 'a certain quality' while nouns express 'a complex of qualities'.[3] This is the same distinction which Jespersen (1965:81) draws between what he calls 'substantives' and 'adjectives'.[4]

> ... substantives are broadly distinguished as having a more special signification, and adjectives as having a more general signification, because the former connote the possession of a complex of qualities, and the latter the possession of one single quality.

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Now it is difficult to see how this definition can serve to distinguish between adjectives and nouns in Kannada. Take for example, the abstract noun cikkatana 'smallness' derived from cikka 'small'. Nobody has ever suggested that cikkatana is an adjective, and yet cikka and cikkatana both connote a single quality and not 'a complex of qualities'. Besides, it may be argued that there is no difference between tuṇṭa and cikka in this respect, since each connotes a single quality, namely 'naughtiness' and 'smallness' respectively.

Yet I feel that most native speakers of Kannada would probably agree that the primary connotation of cikka is adjectival and that its nominal connotation is secondary. In the case of tuṇṭa, the nominal connotation seems to be primary and the adjectival connotation secondary. What they base this intuition on may not be entirely clear but I do not think it is possible to dismiss this as something they must have acquired from school grammars. But at the same time, I do not regard the native speaker's intuition as sufficient basis on which to base the distinction between adjectives and nouns in this language. We need less subjective criteria which would justify this distinction and thus explain the native speaker's intuition.

Perhaps a morphological argument can be advanced to maintain that adjectives should be regarded in Kannada as a distinct class, or at least to maintain that cikka really

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belongs to a different morphological class of words from that to which tuṇṭa belongs. There are in Kannada suffixes such as avanu, avaḷu, adu, avaru and avu which are known as pronominalizing suffixes, and which are added to forms which are not nouns, to derive nominal forms. Thus we pronominalize the relative participle banda (from the verb baru 'to come') by adding these suffixes:

(25) banda + avanu = bandavanu
'the one who came' (masc. sing.)
banda + avaḷu = bandavaḷu
'the one who came' (fem. sing.)
banda + adu = bandadu
'the one which came' (neut. sing.)
banda + avaru = bandavaru
'the ones which came' (masc. & fem. pl.)
banda + avu = bandavu
'the ones which came' (neut. & pl.)

cikkavanu, cikkavaḷu and cikkavaru, which occur in (22) and (24) seem to be similarly derived by adding the pronominalizing suffixes to the base form cikka. tuṇṭa, on the other hand, does not take pronominalizing suffixes. Its forms tuṇṭanu, tuṇṭaḷu and tuṇṭaru, that occur in (1) to (3) and (7) to (9) are derived very much like the forms sēvakanu 'servant (masc + sing)', sēvakaḷu 'servant (fem + sing)' and sēvakaru 'servants', all of which are derived from the base form sēvaka 'servant', which admittedly is a noun. If this

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argument is valid, then cikka and tunṭa will have to be treated as members of two different morphological classes.

This same argument is used in different forms by linguists who are convinced that adjectives exist in Dravidian languages as a separate category. Zvelebil calls it a syntactic argument that base forms such as cil 'small' and per 'great' cannot function as subjects and therefore are adjectives and not nouns. As we have seen, cikka cannot function as a subject until we add to it one of the pronominalizing suffixes. The same is true of cil and per. Burrow also refers to this fact when he points out that peru 'great' cannot take case terminations and therefore is not a noun but an adjective. cikka too can take case terminations only after one of the pronominalizing suffixes has been added to it.

Even this morphological argument is not entirely satisfactory because there are words such as prasiddha 'famous', pavitra 'holy', adbhuta 'wonderful' and so on which are like tunṭa in that they too do not take the pronominalizing suffixes but which are like cikka in that they are felt to be primarily adjectives. Then there are words such as ettara 'high/height', āḻa 'deep/depth' and so on, which too do not take the pronominalizing suffixes and yet are felt to be adjectives. Even color words such as kappu 'black', kempu 'red', etc., which are generally regarded as adjectives, do not take pronominalizing suffixes.

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Now I have reviewed the main arguments for both sides of this controversy. We have one rather strong argument based on the deep structure status of words like tuṇṭa and cikka in favor of treating them as nouns. We have one argument based on the primary meaning of words such as cikka and tuṇṭa which favors the view that these two words probably belong to two distinct classes. Then there is a morphological argument which also suggests the same conclusion. And yet we cannot draw any firm conclusion from these various arguments. Before we discuss the implications of this apparently conflicting evidence, it may prove instructive to see if there is any evidence based on co-occurrence relations and transformational potential which has bearing on this issue.

It is difficult to devise reliable syntactic tests of this kind particularly for a language like Kannada which has so meagerly been analyzed within the transformational framework so far. It is probably true that in most languages the equivalent of 'very' generally co-occurs with adjectives but not with nouns, and that the equivalent of 'great' co-occurs with only nouns and not with adjectives. In English, very is also used with the meaning 'true, real, actual' as an adjective to emphasize the nature of the noun it qualifies as in I caught him in the very act of stealing it. I do not have this use of very in mind, but very used as an adverb to intensify the meaning of an adjective.

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(26) John is very clever/naughty/wise/brave/honest.

*artist/*teacher/*gambler/*poet.

(27) John is a great *clever/*naughty/*wise/*brave/*honest.

artist/teacher/gambler/poet.

We may try this co-occurrence test in Kannada with baḥaḷa 'very' and doḍḍa 'great'.

Only adjectives have degrees of comparison. That is, generally, only adjectives can undergo the transformation that gives in English a structure such as the following:

(28) John is cleverer than Bill.

naughtier

more cunning

*artister

*more teacher

In English, there is also a construction which expresses the comparative degree with nouns as in the following:

(29) John is more (of) a scholar than Bill.

an artist

*tall

*brave

The comparative construction in Kannada is the following:

(30) gōvindaniginta rāmanu baḍavanu iddāne.

'more than Govind' 'Ram' 'poor/poor man' 'is'

'Ram is poorer than Govind.'

Whether the Kannada comparative construction is equivalent to the English construction (28) or (29) depends on whether

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we regard baḍavanu in (30) as an adjective ('poor') or as a noun ('a poor man'). Therefore the comparative test in Kannada is not very reliable in separating adjectives from nouns. But the fact that the Kannada comparative construction is equivalent to both (28) and (29) of English is very significant because it implies that even if there is a distinction between adjectives and nouns in Kannada, it is not of the same type as that which obtains in English. If we bear this in mind, we can still use the comparative test in Kannada to distinguish words which have degrees of comparison from those which do not.

I shall now try these tests on about forty Kannada words. Some of the words to be tested are pure nouns, some are 'adjectives' of the tunṭa class, and others adjectives belonging to the cikka class, and so on. The following four tests will be applied:

i. co-occurrence with doḍḍa 'great',

ii. co-occurrence with bahaḷa 'very',

iii. the comparative test,

iv. words which take the pronominalizing suffixes and those which do not.

The results of these tests are tabulated below. Column I of the table lists the words tested; column II shows which of these words co-occur with doḍḍa 'great' and which do not. + indicates the former while - indicates the latter. Columns III, IV and V similarly give the results on the

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co-occurrence test with bahaḷa 'very', on the comparative construction test and on the pronominalization test respectively. ? indicates that the word in question passes the test which the column refers to only marginally.

	I	II	III	IV	V
	words tested	co-occurs with doḍḍa	co-occurs with bahaḷa	compara-tive	prono-minal. suffix
#	naṭa 'actor'	+	-	-	-
#	kalāvida 'artist'	+	-	-	-
#	śikṣaka 'teacher'	+	-	-	-
#	kavi 'poet'	+	-	-	-
#	vyāpari 'business man'	+	-	-	-
#	vidyārthi 'student'	+	-	-	-
&	tunṭa 'naughty'	+	+	+	-
&	catura 'clever'	?	+	+	-
&	sāhasi 'adventurous'	+	+	+	-
&	svārthi 'selfish'	+	+	+	-
&	daḍḍa 'stupid'	+	+	+	-
&	niṣṭhura 'harsh'	+	+	+	-
&	paṇḍita 'scholar'	+	+	+	-
&	parākrami 'valiant'	+	+	+	-
&	sātvika 'virtuous'	?	+	+	-
&	duṣta 'wicked'	+	+	+	-
&	dayāḷu 'kind'	?	+	+	-
%	sundara 'handsome'	-	+	+	-
%	prasiddha 'famous'	-	+	+	-

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I		II	III	IV	V
% pavitra	'holy'	-	+	+	-
% adbhuta	'wonderful'	-	+	+	-
% apūrna	'imperfect'	-	+	?	-
% krūra	'cruel'	-	+	+	-
% mukhya	'chief'	-	+	+	-
%$ ettara	'high/height'	-	+	+	-
%$ agala	'wide/width'	-	+	+	-
%$ āḻa	'deep/depth;	-	+	+	-
%$ dappa	'thick/thick-ness	-	+	+	-
%$ bisi	'hot/heat'	-	+	+	-
%$ kempu	'red'	-	+	+	-
%$ kappu	'black'	-	+	+	-
@ cikka	'small'	-	+	+	+
@ oḻḻei	'good'	-	+	+	+
@ eḻei	'young'	-	+	+	+
@ baḍa	'poor'	-	+	+	+
@ saṇṇa	'small'	-	+	+	+
@ hosa	'new'	-	+	+	+
@ doḍḍa	'great'	-	+	+	+
@ keṭṭa	'bad'	-	+	+	+
@ kiri	'small'	-	+	+	+

It seems to me that this table clearly brings out the real nature of adjectives in Kannada. The following are some of the interesting points in this table that deserve careful attention.

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Notice first of all that columns III and IV give completely consistent results. That is, words which co-occur with the adverbial intensifier bahaḷa 'very' and only these, undergo the comparative transformation. The intensifier 'very' and the comparative may both be considered as representations of the Degree Adverbial node, and both these syntactic properties of these words may be regarded as the function of a single strict subcategorization feature [+ ___ DEG(ree)]. All the words in this table except the first six (marked #) may be said to have the strict subcategorization feature [+ ___ DEG].

The first seventeen words of this table (marked either # or &) co-occur with doḍḍa 'great', and none of these take pronominalizing suffixes. Let us assume that these seventeen words have a syntactic feature [+ SUB(stantive)], since doḍḍa generally co-occurs only with nouns.

There are sixteen words (marked % and %$) which do not co-occur with doḍḍa, and do not take pronominalizing suffixes. These words, however, have the strict subcategorization feature [+ ___ DEG].

The last nine words in this table (marked @) take pronominalizing suffixes and therefore may be said to have the feature [+ PRONOM]. These words have the feature [+ ___DEG], and they do not co-occur with doḍḍa 'great'.

Thus the table divides these forty words neatly into four classes which explain much of the native speaker's

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intuition about these words. The feature composition of each class with one representative word of each class may be shown as below.

(32)

A	B	C	D
# <u>naṭa</u>	& <u>tunṭa</u>	% <u>prasiddha</u>	@ <u>chikka</u>
'actor'	'naughty'	'famous'	'small'
[+ SUB]	[+ SUB]	[- SUB]	[- SUB]
[- ___ DEG]	[+ ___ DEG]	[+ ___ DEG]	[+ ___ DEG]
[- PRONOM]	[- PRONOM]	[- PRONOM]	[+ PRONOM]

The question whether adjectives exist in Kannada is very nicely answered in (32). If we define adjectives as words which have the feature [+ ___ DEG], then words belonging to classes B, C and D are all adjectives and they are distinguishable from nouns by this feature. Adjectives belonging to classes B and C, however, share with nouns the feature [- PRONOM]. Furthermore, those words which belong to the class B also share with nouns the feature [+ SUB]. On the other hand, if we define adjectives as those words which have the features [+ ___ DEG] and [- SUB], then only words belonging to classes C and D will have to be regarded as adjectives. There is some justification for doing so, because it is only in words belonging to C and D that the adjectival meaning is 'felt' to be primary and the nominal meaning secondary. Even in this proposal, adjectives of class C share with nouns the feature [- PRONOM]. There is even a third alternative available. We may regard as

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adjectives only those words which have all the features of D. It is this class of words and a few others from class C (those marked %$ in the table) that are generally regarded as adjectives by linguists who maintain that adjectives exist in Dravidian languages as a separate category. We have seen that until pronominalizing suffixes are added to words of class D, they cannot occur as subjects, nor can they take case terminations. Given the base forms <u>naṭa</u> and <u>cikka</u>, most native speakers would regard the former as having only a nominal connotation and the latter as having only an adjectival connotation. <u>cikka</u> begins to have a nominal connotation only when its predicative forms <u>cikkavanu</u>, <u>cikkavaḷu</u>, etc. are taken into consideration. What makes the distinction between adjectives and nouns in this language fuzzy is the existence of classes C and B which share with D the crucial feature [+ ___ DEG]. On the other hand, words of class A also share with B and C certain important features. Thus the basic problem in distinguishing adjectives from nouns in Kannada is that we cannot quite identify [- SUB] words, [+ ___ DEG] words, or even [+ PRONOM] words with our familiar notion of adjectives.

Those who wish to maintain that adjectives do not exist as a separate category in Kannada can also interpret these facts in favor of their position. They may contend that A, B, C and D of (32) are all subclasses of a single lexical category NOUN. Notice for instance that the feature

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[___ DEG] cross classifies with the feature [SUB] although [-SUB] must be [+ ___ DEG]. The four subclasses seem to be adjectival in varying degrees. Words of class D are most like adjectives and those in class A are least like adjectives. Words belonging to class C are more adjective-like than those belonging to class B but less adjective-like than those belonging to class D.

From most of the words of classes B, C and D, we also get derived abstract nouns such as prasiddhi 'fame' from prasiddha 'famous', tuṇṭatana 'naughtiness' from tuṇṭa 'naughty', cikkatana 'smallness' from cikka 'small', and so on. None of these derived abstract nouns takes pronominalizing suffixes. Some of these such as prasiddhi co-occur with bahaḷa used in the sense 'much' and with doḍḍa 'great' (bahaḷa prasiddhi 'much fame', doḍḍa prasiddhi 'great fame'). The main syntactic difference between the abstract derived nouns and words of classes B, C and D is that the former cannot occur attributively.

Those who maintain that adjectives exist as a separate category in Kannada generally include in that class not only words of class D (indicated by @ in the table (31)) but also words such as ettara 'high/height', bisi 'hot/heat', etc. and color words such as kempu 'red', kappu 'black', etc. (indicated in (31) by %$). Although these words have the same features as words of class C such as prasiddha 'famous' have, they seem to constitute a special subclass. These

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words unlike other words in (31) do not have concord with the subject noun when they occur predicatively. Recall that words belonging to classes A, B, C, D when used predicatively as in (1) to (6) and in (24) agree with the subject noun in gender and number. But observe that neither ettara 'high/height' nor kappu 'black', for example, show this concord.

(33)

gōpālanu		iddāne.	'Gopal is	
sītēyu	ettara(vāgi)	iddāḷe.	'Sita is	tall.'
kudureyu		ide.	'The horse is	
sainikaru		iddāre.	'The soldiers are	

(34)

gōpālanu		iddāne.	'Gopal is	
sītēyu	kapp(age)	iddāḷe.	'Sita is	black.'
kudureyu		ide.	'The horse is	
sainikaru		iddāre.	'The soldiers are	

Notice that ettara(vagi) 'tall' and kapp(age) 'black' do not change in (33) and (34) in accord with the gender and number of the subject noun. In this respect these words are exactly like the English adjectives tall and black. That is why although these words do not take pronominalizing suffixes, some linguists group them together with words of class D such as cikka, which take pronominalizing suffixes, into a separate category. Linguists such as Burrow, Master and Zvelebil seem to have such words in mind when they claim that adjectives constitute a separate category in Dravidian languages.

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But it is also possible to maintain that words such as ettara and kappu constitute a separate subclass of NOUNS having all the features of class C plus the additional feature [- CONCORD]. This would mean that we should add to the four classes shown in (32) a fifth class, class E, consisting of words like ettara, kappu, etc. (indicated in (31) by %$).

Section 2

From this point on in this study, the term 'adjective' will be used to refer to those subclasses of NOUN which are marked by the feature [+ ___ DEG]. This section deals with the attributive use of these adjectives.

As was mentioned earlier, in most transformational studies attributive adjectives are generally derived from underlying relative clauses in which the adjectives occur predicatively. Thus, for example in English, the tall man is derived from the man who is tall. But there is not much direct evidence in surface structure in English which suggests that attributive adjectives come from relative clauses. Such evidence is clearly available in Kannada in the form of the relative participle āda (from the stative copula āgu) which is often found attached to adjectives when they occur attributively. Very few modern students of this language have noticed this feature of attributive adjectives, and fewer still have paused to examine its full implications. Most attributive adjectives especially in the literary dialect of Kannada are often followed by the relative participle

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thus attesting to their origin from relative clauses, although there is now a growing tendency to delete the relative participle under the impact of Indo-Aryan languages. I shall try to demonstrate in this section that this relative participle holds the key to an explanatorily adequate account of the syntax of adjectives in this language.

In the preceding section I grouped words having the feature [+ ___ DEG] into four classes. The following four pairs of sentences exemplify the predicative use of one adjective from each class. catura 'clever' in (35) belongs to class B, prasiddha 'famous' in (36) belongs to class C, cikka 'small/young' belongs to class D, and agala 'wide' belongs to class E, which has among its other members such words as ettara 'high/tall' and kappu 'black'.

(35) a. huḍuganu caturanu (iddāne).
1 2 3
'The boy is clever.'
1 3 2

b. huḍuganu caturanāgi iddāne.
1 2 3
'The boy is clever.'
1 3 2

(36) a. ī dēvasthānavu prasiddha(vu) ide.
1 2 3 4
'This temple is famous.'
1 2 4 3

b. ī dēvasthānavu prasiddhavāgi ide.
1 2 3 4
'This temple is famous.'
1 2 4 3

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(37) a. gōpālanu cikkavanu (iddāne).
1 2 3

'Gopal is young.'
1 3 2

b. gōpālanu cikkavanāgi iddāne.
1 2 3

'Gopal is young.'
1 3 2

(38) a. ī mēju bahaḷa agala(vu) ide.
1 2 3 4 5

'This table is very wide.'
1 2 5 3 4

b. ī mēju bahaḷa agalavāgi ide.
1 2 3 4 5

'This table is very wide.'
1 2 5 3 4

The finite verb in each of these sentences is a form of iru 'to be'. In (35.a) and (37.a) it can be optionally deleted. Notice the two important facts about these four pairs of sentences: (a) and (b) of each pair are perfect paraphrases of each other; secondly, (a) of each pair has the same elements and in the same order as (b) except that (b) has the additional element āgi attached to the adjective. āgi is the verbal participle or gerund of the verb āgu 'to be'. A more precise interpretation of this verb will be suggested later.

If (a) and (b) of each pair are perfect paraphrases, we must ask how these sentences are related in the underlying

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structure. Since they are so close to each other, besides being semantically identical, it seems reasonable to assume that they are derived from the same underlying structure. One strong possibility is that in each pair, the member without the verbal participle ägi is derived from the member which retains ägi. That is, (a) is derived from (b) by deleting ägi. The other possibility is that (b) is derived from (a) but it will be clear from subsequent discussion that this alternative cannot be maintained. The deletion of ägi from predicate adjective sentences is a regular process in modern Kannada, except that in the literary dialect, there are cases in which the member with ägi is preferred. (38) is a case in point; (38.b) is preferred to (38.a), although both are grammatical. That (b) is in fact primary is supported by the attributive use of these adjectives as in (c) and (d) below.

(35) c.?catura huḍuganu ī samasyeyannu biḍisidanu.
1 2 3 4 5

d. caturanāda huḍuganu ī samasyeyannu biḍisidanu.
1 2 3 4 5

'The clever boy solved this problem.'
1 2 5 3 4

(36) c. ī prasiddha dēvasthānavu 24 ghanṭe teredu
1 2 3 4 5 6

iruttade.
7

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d. ī prasiddhavāda dēvasthanāvu 24 ghaṇṭe teredu
1 2 3 4 5 6

iruttade.
7

'This famous temple is open 24 hours.'
1 2 3 7 6 4 5

(37) c. cikka gōpālanu bahaḷa sāhasi(yāgi) iddāne.
1 2 3 4 5

d. cikkavanāda gōpālanu bahaḷa sāhasi(yāgi) iddāne.
1 2 3 4 5

'Young Gopal is very adventurous.'
1 2 5 3 4

(38) c.?ī agala mējannu illi yāru tandaru?
1 2 3 4 5 6

d. ī agalavāda mējannu illi yāru tandaru?
1 2 3 4 5 6

'Who brought this wide table here?'
5 6 1 2 3 4

The underlined elements in these sentences consist of adjectives used attributively. These adjectives are the same as those occurring in the corresponding (a) and (b) sentences above. Notice that here too in each pair (c) and (d) sentences are perfect paraphrases of each other. Observe also that (c) and (d) of each pair contain the same elements in the same order except that (d) has an additional element āda attached to the attributive adjective. āda is the relative participle of the same verb āgu, the verbal participle of which occurs in the (b) sentences of (35) to (38). It should

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also be pointed out that the (c) sentences of (35) and (38) are less acceptable than the corresponding (d) sentences.

The implications of these facts are clear. Since (c) and (d) of each pair are synonymous, and since they are so close even in the surface form, it is reasonable to assume that they have the same underlying structure. Since some (c) sentences are less acceptable than the corresponding (d) sentences, that is, since (d) is the more regular form, we may assume that (c) is derived from (d) by the deletion of the relative participle ādа in each of these four pairs. Thus the relationship between (c) and (d) of (35) to (38) parallels that between the corresponding (a) and (b).

I stated earlier in this study that there is clear evidence in Kannada which suggests that attributive adjectives come from relative clauses. This evidence is found in all the (d) sentences above. In fact, caturanāda (caturanu + ādа) of (35.d), prasiddhavāda (prasiddhavu + ādа) of (36.d), cikkavanāda (cikkavanu + ādа) of (37.d), and agalavāda (agalavu + ādа) of (38.d) are all reduced relative clauses. It will be shown later that each of these is a Participial relative clause derived without choosing TENSE in the underlying structure. Recall that the Participial Relative transformation (discussed in Chapters 2 and 3) replaces the finite verb of the constituent sentence by the corresponding relative participle. ādа in all the (d) sentences above is the relative participle derived by applying

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the Part. rel. tr. to the underlying structure of the relative clause from which it comes. What is peculiar about the syntax of attributive adjectives in Kannada is not that they are derived from relative clauses, but that the reduced relative clause itself occurs as the primary attributive adjective form. This fact has so far gone largely unnoticed. I will cite some evidence later in this section which suggests that the construction with ādа in fact is the regular attributive adjective construction in Kannada, and that the (c) sentences above are derived from the (d) sentences. I will also offer an explanation why some secondary attributive adjective constructions as in (35.c) and (38.c) are less acceptable than the corresponding (d) sentences.

I shall now outline in brief how the four sentences of each group (35) to (38) are derived and related. Let us take the sentences of (35). Underlying (35.d) are the matrix sentence (39) and the constituent sentence (35.b) related as shown in (40).

(39) huḍuganu ī samasyeyannu biḍisidanu.
1 2 3 4

'The boy solved this problem.'
1 4 2 3

(35) b. huḍuganu caturanāgi iddāne.

'The boy is clever.'

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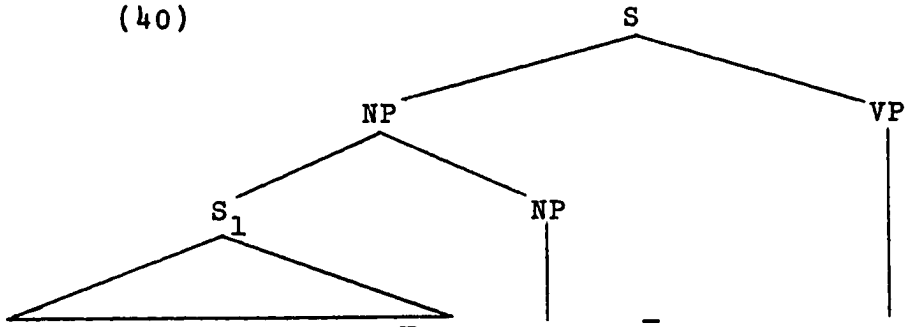
(40)



huḍuganu caturanu iddāne huḍuganu ī samasyeyannu biḍisidanu

'the boy is clever' 'the boy' 'solved this problem'

The Participial Relative transformation applies to S_1, and as a result, the identical noun huḍuganu 'boy' is deleted from S_1, and its verb is replaced by the corresponding relative participle. The verb in (35.b) (i.e. in S_1 of (40)) is iddāne and from this we should get the relative participle iruva. But we have in (35.d) not caturanu āgi iruva but caturanu āda. How we get the latter instead of the former in (35.d) will be explained later in this study. The Part. rel. tr. applies to (41), the underlying structure represented by the tree diagram (40), to derive (35.d).

(41) #huḍuganu caturanu āgi iddāne # huḍuganu ī samasyeyannu biḍisidanu ⟹

(35) d. Ø caturanu āda Ø huḍuganu ī samasyeyannu biḍisidanu.

(35.c) is derived from (35.d) by deleting the relative participle āda.

(35) d. caturanu āda huḍuganu ī samasyeyannu biḍisidanu ⟹

(35) c. caturaØ Ø huḍuganu ī samasyeyannu biḍisidanu.

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Notice that when we derive (35.c) from (35.d), not only is the relative participle ādа deleted but the gender and number marker nu from caturanu is also deleted. Thus we get the base form catura 'clever' in (35.c) which is more like the adjective clever in clever boy in English. When linguists refer to the attributive adjective in Kannada, they have the form that appears in (35.c) in mind, and that is why it is generally maintained that in Kannada the attributive adjective has no concord with the noun it accompanies. In the analysis that I have proposed here the primary form of the attributive adjective is the one that occurs in (35.d), namely, caturanu + ādа, and the form caturanu is masculine and singular and therefore is in concord with the following noun huḍuganu 'boy'. This means that I am now required to explain why when the relative participle ādа is deleted from (35.d), the gender and number morpheme is also deleted from the attributive adjective. This explanation will be suggested shortly.

One important difference between English and Kannada with respect to the derivation of the attributive adjective may be noted. In English, the relative clause follows the noun it qualifies as, for example, in the temple which is famous. Which is famous the temple is not possible in English. But this is exactly what we have in Kannada; the relative clause always precedes the head noun. That is, it is already in the attributive position (for details see

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Chapter 2). In English when WH and BE are deleted from the relative clause, the adjective has to be shifted to the attributive position.

(42) the temple which is famous ⟹ the temple famous ⟹ the famous temple.

In Kannada, since the relative clause always precedes the head noun, there is no need for adjective shift even when the relative participle ādа is deleted.

In the light of our discussion so far, we can now see that the four sentences of (35) to (38) are related as shown below:

(35)

b. huḍuganu caturanāgi iddāne. 'The boy is clever.'

⇓

a. huḍuganu caturanu iddāne. 'The boy is clever.'

Transformation: deletion of āgi

(35)

b. huḍuganu caturanāgi iddāne. 'The boy is clever.'

⇓

d. caturanāda huḍuganu ... ... 'The clever boy ...'

Transformation: Participial relative transformation

(35)

d. caturanāda huḍuganu ... ... 'The clever boy ...'

⇓

c. catura huḍuganu ... ... 'The clever boy ...'

Transformation: deletion of āda

The same relation holds between the sentences of (36), (37) and (38).

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Now I have claimed above that the attributive adjective construction in the (d) sentences of (35) to (38) is primary and that in the (c) sentences is derived from the former by deleting ādа. Furthermore, I also stated that especially in the literary dialect the form in which ādа is retained is preferred to that from which it is deleted. Thus (35.d) and (38.d) are preferred to (35.c) and (38.c) respectively. This suggests that although ādа deletion is a regular process in the language its output is subject to certain stylistic constraints. Besides, I have also to explain why when ādа is deleted, the gender and number morpheme is also deleted from the attributive adjective. That is, we need an explanation why from caturanu ādа huḍuganu of (35.d), we do not get caturanu huḍuganu but catura huḍuganu. The rest of this section is largely devoted to these issues.

There are in fact a large number of cases in which literary Kannada prefers the attributive construction in which ādа is retained to that from which it is deleted. In (42), phrases in (a) are preferred to those in (b).

(42)

a.	b.	
ādа retained	ādа deleted	
sariyādа uttara	sari uttara	'correct answer'
bhavyavādа kaṭṭaḍa	bhavya kaṭṭaḍa	'grand building'
sundaravādа udyāna	sundara udyāna	'beautiful garden'
inidādа svara	?ini svara	'sweet tone'

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āḷavāda bāvi	āḷa bāvi	'deep well'
kaṭhiṇavāda samasye	kaṭhiṇa samsye	'difficult problem'
sāhasiyāda bālakanu	sāhasi bālakanu	'adventurous boy'
dayāḷuvāda vyāpari	dayāḷu vyāpari	'kind merchant'
udāttanāda sanyāsi	udātta sanyāsi	'noble ascetic'

and so on.

None of the phrases in (b) is ungrammatical, but they are all less acceptable in varying degrees than the corresponding (a) phrases. This is particularly true of the literary dialect. Even historically, it appears that the attributive construction in which āda is retained is very frequent and may very well have been the preferred form in Old and Medieval Kannada, which use appa, aha and āha in such constructions. These forms are the equivalents of the modern relative participle āda. For example,

(43)

eḷedappa pasu	'a young cow'
ballidarappa rakkasar	'powerful demons'
beṭṭatappa dhvani	'a harsh sound'
hiriyappa mīn	'a big fish'
oḷḷitaha ratnam	'a precious jewel'
piridāha icche	'a great desire'
hiridāha dāna	'an excellent gift'

Even when adjectives were borrowed from Sanskrit, they normally fell into the native pattern as in the following:

(44)

nirmalamappa vastu	'a pure object'
priyamappa nuḍi	'pleasant speech'

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atiśayamappa parākramam 'great prowess'

hṛasvamāda 'o' 'short 'o''

The deletion of āda, however, is very frequent in colloquial dialects of Kannada, and normal for those dialects of Kannada which are spoken in the areas of the present Mysore state which are in the vicinity of Marathi speaking regions.[5] Following are some of the cases in which the deletion of āda is perfectly acceptable even in the literary dialect and is preferred in the colloquial dialects.

(45) udda kūdalu 'long hair'

kahi haṇṇugaḷu 'bitter fruit'

cikka ūru 'a small town'

daḍḍa huḍuga 'a stupid boy'

baḍa kūlikāra 'a poor labourer'

huccu nāyi 'a mad dog'

kappu baṇṇa 'black color'

doḍḍa mane 'a large house'

bisi nīru 'hot water'

It is significant that almost all of the adjectives in (45) belong either to class D (cikka class) or to class E (ettara class). Recall that linguists such as Zvelebil and Burrow refer primarily to these two classes of words when they claim that adjectives exist as a separate category in Dravidian languages. But even with adjectives of class B (tuṇṭa class) and of class C (prasiddha class) deletion of āda is so frequent that most linguists tend to treat the

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attributive construction without ādа as the only attributive construction in the language. They fail to take into consideration the much more regular construction with ādа. I stated above that although the deletion of ādа is a regular process in the language, there are certain stylistic constraints on its output. This stylistic constraint is valid mainly in the literary dialect, and it may be generalized approximately as follows: it is only with adjectives of class D and with some adjectives of class E that ādа deletion is normal and makes no difference in acceptability, but with adjectives of other classes, ādа deletion often leads to lower acceptability. The important thing is that the deletion never leads to ungrammaticality.

It still needs to be explained why the number and gender marker is deleted from the attributive adjective when ādа is deleted. It is certainly possible to write a transformational rule which brings about this result, but that does not explain it. To the best of my knowledge, the only grammarian who has noticed this problem and tried to seek an explanation for it is Spencer. In his Kanarese Grammar, Spencer (1950:241) offers the following explanation:

> The typical construction is apposition but in practice the 'adjectival noun' enters into combination (samāsa) with declinable words, and, as in all samāsa (italics in the original, MVN), the case and other endings of the former member disappear. So that in composition, these 'adjectival nouns' have a crude form, which is the nearest approach to an English adjective which the Kanarese language possesses. The difference is that the Kanarese 'adjective' is not an independent word, and cannot be used except in a compound.

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Spencer, as we have seen, is one of those who maintain that there is no adjective proper in Kannada. An 'adjective + noun' such as catura + huḍuga 'clever + boy' is according to him a noun + noun construction. That is why he calls them 'appositional' constructions. He considers them to be compounds. That means, according to Spencer, in Kannada there is no construction exactly equivalent to the English construction blue sky, in which blue is regarded as an independent element, an adjective qualifying the noun sky. The Kannada construction is more like blue-sky, a compound, in which blue is felt to be a bound element, that is, the first element of a compound. He would consider all the adjective + noun phrases in (45) as instances of Karmadhāraya compound. In a typical Karmadhāraya samāsa (compound), the first element is a qualifier and the second element the qualified. Some examples of this compound from Sanskrit are the following:

(46)	nīlōtpalam	'a blue lotus'
	kṛsnasarpaḥ	'a black snake'
	mahārājaḥ	'a great king'
	priyabhārya	'a dear wife'

Spencer suggests that all instances of adjective + noun formation be regarded as such Karmadhāraya compounds. Recall that in my proposal, these would be derived by a regular grammatical process, namely, by deleting āda from what I have called the primary attributive adjective constructions.

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Spencer's interpretation helps explain why in the attributive position adjectives do not have concord with the following noun. A compound is a single unit, and morphological variations which mark gender, number, etc. apply to the unit as a whole and not to its individual components. So, if the adjective + noun formation is a compound, the adjective is naturally a bound element and cannot undergo any morphological variations. This explains why in such formations, the adjective always occurs in its base form and is unaffected by the number and gender of the following noun. In English, the predicative adjective itself does not have concord, and so when we derive the attributive adjective from the underlying relative clause, we do not have to explain the lack of concord between this adjective and the following noun. In Indo-Aryan languages such as Hindi and Marathi, those adjectives which have concord in the predicative position also have concord when they occur in the attributive position. But adjectives in Kannada except those belonging to class E (ettara class) have concord in the predicative position but not in the attributive position. This phenomenon is neatly explained by Spencer's interpretation of adjective + noun constructions in this language as compounds.

While I accept Spencer's interpretation as of considerable value in offering a historical explanation of certain features of the adjective + noun construction in Kannada, I

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find it unacceptable as a synchronic characterization of this construction. I think that Spencer completely ignores the synchronic aspect of this construction. In modern Kannada, the adjective in these constructions is not 'felt' to be the first element of a compound by most native speakers of the language. The most superficial (and not always completely reliable) expression of this may be seen in the fact that in almost all cases, the attributive adjective and the following noun are written as two separate words as shown in (45). Furthermore, as repeatedly stressed in this study, the deletion of ada is a regular process in modern Kannada; there is hardly any instance in which the deletion leads to ungrammaticality. Although the construction has certain features of a compound because of historical reasons, it is being used in modern Kannada like a regular syntactic construction. In English, there is a regular adjective + noun construction, and we can generally take any adjective and place it before a noun so long as the resulting construction is semantically congruous. The adjective + noun construction can be used equally freely in modern Kannada. A construction which can be formed so freely cannot be regarded as a compound.[6]

It is probably true that at some early stage, Kannada had no regular adjective + noun construction. During that stage, what I have called here adjectives of classes B and C probably occurred attributively only in a reduced relative

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clause, i.e. the construction with ādа (or whatever was its equivalent at that stage). The language at that stage did not have the ādа deletion rule which exists in modern Kannada. That means, adjective + noun structures could not be syntactically formed. In their place the language had probably a certain number of compounds the first member of which belonged to what we have called here class D (cikka class). These compounds were probably lexically derived. The first element of such compounds is referred to as an attributive adjective by most students of Old Kannada. It is significant that only four native Kannada words occur as 'attributive adjectives' in the oldest available specimens of Old Kannada. If we combine the lists of 'attributive adjectives' given by Narasimhia (1941:164) in his Grammar of Oldest Kannada Inscriptions and by Gai (1946:64) in his Historical Grammar of Old Kannada, we get exactly four items all of which belong to our class D--nal 'good', per 'big', vel/bel 'white' and kar 'black'. In fact, their combined list contains one more word, ini 'this', which is really a Demonstrative adjective.

How then did Kannada eventually come to acquire the modern adjective + noun structure as a regular syntactic construction? The answer, I believe, is to be found in linguistic acculturation. Kannada came under two kinds of influences from Indo-Aryan languages. Even the earliest specimens of Old Kannada now available abound in Sanskrit loan

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compounds. In course of time more and more of these compounds must have entered the language, especially its literary dialect. As a result, words of classes B (tunṭa class) and C (prasiddha class) which occurred formerly only in reduced relative clauses now began to occur in compounds. Gradually, the formation of compounds must have become a semi-productive process in the language as it is in Classical Sanskrit.[7]

The lack of a regular adjective + noun construction was no doubt a gap in the structure of Kannada. But such a construction exists in almost all Indo-Aryan languages. While literary Kannada was getting saturated with loan compounds from Sanskrit and with compounds formed from native elements on the Sanskrit model, colloquial dialects must have begun to use their native compound system as a regular attributive construction under the impact of Indo-Aryan languages. Kannada already had the reduced relative clause which also occurred attributively. All that it needed was the āda deletion rule. This rule, of course, did not come from Indo-Aryan languages because they have no such rule. Kannada must have developed this rule through its own compound system under pressure from Indo-Aryan attributive construction.

Take an Indo-Aryan language like Marathi. Marathi has two kinds of adjectives, variable and invariable. The

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variable adjective has concord with the noun it accompanies in the predicative as well as in the attributive position.

(47) hā āmbā cāṅglā āhe. 'This mango is good.'
1 2 3 4 1 2 4 3

hī gāḍi cāṅglī āhe. 'This cart is good.'

hē bhāṇḍə cāṅglə āhe. 'This vessel is good.'

(48) cāṅglā āmbā 'good mango'
1 2 1 2

cāṅglī gāḍi 'good cart'

cāṅglə bhāṇḍə 'good vessel'

Notice the adjectival forms cāṅglā, cāṅglī, and cāṅglə which agree with āmbā (masc.) 'mango', gāḍi (fem.) 'cart' and bhāṇḍə (neut.) 'vessel' respectively. We may assume that as in English and Kannada, in Marathi too the attributive adjective comes from a relative clause. But there is no reduced relative clause construction in this language. Nor is there anything to suggest that the attributive constructions in (48) are compounds.[8] In short, in Marathi, the adjective + noun construction is a regular grammatical structure and not a compound. But at the surface level, there is a very close similarity between this construction and the compound-like construction in Kannada. Both these seem to have semantically two distinct elements, the first qualifying the second.

(49)

	'good'	'mango'
Marathi	cāṅglā	āmbā
Kannada	oḷḷei	māvinahaṇṇu

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	'good'	'cart'
Marathi	cāṅglī	gāḍi
Kannada	oḷḷei	baṇḍi
	'good'	'vessel'
Marathi	cāṅglə	bhāṇḍə
Kannada	oḷḷei	pātre

The closeness in surface form and in semantic structure between the regular attributive construction in Indo-Aryan languages and the compound-like construction in Kannada is very striking. Under this influence Kannada must have come to acquire the ādа deletion rule in cases of adjectives which did not occur in such compounds and then to treat its compounds themselves as regular grammatical constructions. Thus it seems to me that modern adjective + noun construction was adopted into Kannada under the impact of Indo-Aryan languages but based on its own compound system and the reduced relative clause.

I should like to point out that my assumption that Kannada at one time had no regular adjective + noun construction does not make Old Kannada in any way an unnatural language. It only means that the language had only attributive structures exemplified by the (d) sentences of (35) to (38) and not those exemplified by the corresponding (c) sentences. Take, for example, (c) and (d) of (36).

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(36) c. ī prasiddha dēvasthānavu 24 ghaṇṭe teredu
1 2 3 4 5 6

iruttade.
7

d. ī prasiddhavāda dēvasthānavu 24 ghaṇṭe teredu
1 2 3 4 5 6

iruttade.
7

'This famous temple is open 24 hours.'
1 2 3 7 6 4 5

The underlined attributive phrases in (c) and (d) are identical in every way except that (d) but not (c) has in it the relative participle āda. But notice prasiddha in (d) is still in the attributive position with respect to the following noun devasthānavu 'temple'. In a language such as English, we need the Adjective Shift rule to get the predicative adjective of the relative clause in the attributive position. But in Kannada, the relative clause always occurs to the left of the noun it qualifies, and thus the relative clause itself can function as the attributive structure. prasiddhavāda (prasiddhavu + āda) 'famous + relative participle āda' is such a relative clause. As will be seen in the next section, it is not a full relative clause but one derived without choosing TENSE in the underlying structure. Thus it is easy to see how Kannada has in its relative clause itself an attributive construction. It is also easy to see how once a large number of compounds were acquired by

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the language, the ā́da deletion rule must have naturally developed.

The brief historical account I have given here is many ways an unorthodox one, and although I have not worked out all its details, I feel that it is a coherent explanation of the facts of the language as they are found in its various stages. The orthodox view on this matter is that Kannada has always had the regular adjective + noun construction. But then it is difficult to explain why only four native adjectives occur in this construction in earlier stages of the language. Nor is it possible to explain why when ā́da is deleted from the reduced relative clause as in (36.d), the gender and number morpheme also gets deleted from the adjective. On the other hand, Spencer's interpretation of attributive constructions in modern Kannada as compounds is also not consistent with the facts. If they are compounds, it is difficult to explain the fact that they can be as freely formed in modern Kannada as they are in English. The hypothesis I have presented here is that a gradual transition has taken place in the grammar of adjectives in Kannada; what were once Karmadhāraya compounds (roughly, adjective + noun compounds) and were therefore a part of the lexical structure of the language, are in modern Kannada regular syntactic structures. In terms of rules in the grammar of the language, all that this change involves is the addition of a single ā́da deletion rule.

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This hypothesis has considerable explanatory value. When the ādа deletion rule was formed in the language, it had to be adequate to generate what until then were compounds. That is, deletion of the relative participle ādа was not enough; it also had to incorporate into itself another step, namely deletion of the gender and number morpheme. That is why we do not get from caturanu ādа huḍuganu in (35.d) caturanu huḍuganu in (35.c), but catura huḍuganu 'clever boy'. This explains why in Kannada only predicative but not attributive adjectives have concord with the noun they accompany.

We can now also explain why (35.c) and (38.c) are less acceptable than the corresponding (d) sentences. In this connection, I pointed out above that in the literary dialect, the output of ādа deletion rule has certain stylistic constraints on it. Literary dialects generally tend to be conservative. Before ādа deletion was adopted in the language, adjective + noun constructions were treated as compounds. Now which compounds are allowed and which are not, depends largely on previous usage in the language. agala mēju in (38.c) is grammatical in all dialects but it is less acceptable in the literary dialect than agalavāda mēju 'wide table' of (38.d). The reason may be that mēju 'table' itself is a rather recent loan word from Portuguese. So it is unlikely that the compound agala mēju 'wide table' ever occurred in literary Kannada before. Besides, agala 'wide'

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itself is not a particularly literary word. Therefore, agala mēju 'wide table' must have come to be considered stylistically less elegant than the regular (reduced relative clause) construction agalavāda mēju. Again, take for instance, catura huḍuganu 'clever boy' of (35.c). It is not considered very elegant probably because a good Karmadhāraya compound requires that both the elements in it be either native Kannada words or loan words from Sanskrit. catura 'clever' is a Sanskrit loan word, while huḍuganu 'boy' is a native Kannada word. catura bālakanu 'clever boy' is perhaps better, since bālaka 'boy' is also a loan word from Sanskrit. catura śṛgāla 'clever fox' probably is still better since both the elements are loan words from Sanskrit and the compound itself must have occurred many times in fables and so on. Some mixed compounds with one element from Kannada and the other from Sanskrit were also allowed. These even had a special name: ari samāsa 'hybrid compound'. Some hybrid compounds which had the sanction of literary usage are the following:

(50) a. Kannada Sanskrit

baḍa	samsāra	'a poor family'
keṭṭa	jāti	'bad kind'
oḷḷei	muhūrta	'an auspicious moment'

b. Sanskrit Kannada

śubha	kelasa	'auspicious task'
śatru	kāṭa	'trouble caused by enemies'

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These stylistic preferences are gradually disappearing as the literary dialect is becoming less formalized.

In certain respects, the literary dialect has still not caught up with the colloquial dialects. When two adjectives qualify a single noun, the reduced relative clause with ādа as in (51.b) is even now preferred to a mere sequence of two adjectives as in (51.c).

(51) a. sōmāri huḍuga 'a lazy boy'

b. sōmāriyū mūrkhanū ādа huḍuga 'a lazy and stupid boy'

c.?sōmāri mūrkha huḍuga[9] 'a lazy and stupid boy'

This preference is perhaps based on the fact that at one time a construction such as sōmāri huḍuga 'a lazy boy' was a compound. Therefore, it was not possible to insert another adjective between sōmāri 'lazy' and the following noun huḍuga 'boy'. (51.b) is derived by conjoining the two reduced relative clauses sōmāriyu āda and mūrkhanu āda. At an earlier stage, this was the only way of deriving more than one adjective in the attributive position. In fact (51.c) is barely possible in literary Kannada.

There are a few minor points that may be dealt with briefly here. In attributive constructions, we sometimes come across forms such as the following, particularly in the literary dialect.

(52) uddanna kūdalu 'long hair'

taṇṇanna usabu 'cold sand'

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daṭṭanna have	'dense atmosphere'
tējavuḷḷantha oḍavegaḷu	'bright objects'
sundaravādantha kalā kṛitigaḷu	'beautiful works of art'

These are all literary expressions which have preserved certain archaic phonological forms. The adjectival element in the last two examples in (52) may be analyzed as follows:

tēja + uḷḷa + antu + aha

sundara + āda + antu + aha

aha is an old form of āda, uḷḷa is the relative participle of a verb meaning 'to possess/to have', and antu means 'such that'. So these expressions literally mean 'such that it is bright' and 'such that it is beautiful'. anna in uddanna 'long' and taṇṇanna 'cold' is an archaic form of antu + aha 'such that it is'. Although these phonological forms are archaic, they have not lost their use in modern Kannada. Expressions such as the following are frequently used in colloquial as well as in literary dialects.

(53) a.

baḍavanu+ādantha brāhmaṇa	'the poor Brahmin'
kuruḍanu+ādantha arasanu	'the blind king'
caturanu+ādantha mantriyu	'the clever minister'

b.

mettanna hāsige	'soft bed'
dappanna togaṭe	'thick bark'

Notice once again the relative participle āda in all the examples of (a); anna in (b) also comes from a form which had āda in it originally.

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The first element in the following is also looked upon as an attributive adjective.

(54) kattaleya kōṇe 'a dark room'

himada pradēśa 'snowy region'

bangārada kirīṭa 'a gold crown'

The attributive elements in these examples are different from the ones we have so far considered. For one thing, āda cannot occur in these phrases. Secondly, each attributive element in these phrases ends in the genitive case. So kattaleya kōṇe literally means 'a room of darkness', and himada pradēśa literally means 'a region of snow', and so on. Therefore, it is best to analyze these examples as NP + Genitive + NP.

This concludes our discussion of attributive adjectives, except that I have not yet explained how exactly the reduced relative clause is derived and what the relative participle āda means. These questions will be dealt with in the following section. I tried to make two major points in this section: (i) the reduced relative clause is the primary attributive construction in Kannada, and (ii) attributive constructions without āda were historically compounds but they are regular syntactic structures in modern Kannada. I am not concerned here primarily with diachronic syntax of adjectives in Kannada. A brief account of the diachronic development was necessary because it helps us to explain some important synchronic features of the syntax of

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adjectives in the language. I believe that the hypothesis presented here is true to facts and explains among other things why attributive adjectives in this language do not have concord with the noun they accompany.

Section 3

The analysis of predicative adjectives presented in this section is for the most part very tentative. Most of the questions that arise with regard to the syntax of predicative adjectives in this language happen to be very closely related to the syntax of the verb, particularly to such aspects of the verb as tense, mood, stativity, etc. At present, I do not have a good description of the syntax of the verb in this language. Therefore, I have not always been able to support the analysis presented here with fully convincing arguments.

First of all, it is necessary to examine the forms ādа and āgi, which occur regularly with attributive and predicative adjectives as in (35.d) and (35.b) respectively.

(35) b. huḍuganu caturanu āgi iddāne.

'The boy is clever.'

(35) d. caturanu āda huḍuganu ī samasyeyannu biḍisidanu.

'The clever boy solved this problem.'

The relative participle āda in (35.d), and the verbal participle āgi in (35.b) come from the verb āgu. āgu has a wide variety of meanings and syntactic functions in the language.

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It is quite possible that underlying the varied meanings of this verb is a common semantic core, but this is one of the questions that still remains to be investigated. The most general meaning of ā̲gu is 'to become' as in the following sentences:

(55) gōpālanu ḍākṭaranu ā̲danu. 'Gopal became a doctor.'
1 2 3 1 3 2

(56) nīru ugi ā̲yitu. 'Water became steam.'
1 2 3 1 3 2

ā̲danu and ā̲yitu are two of the finite forms of the verb ā̲gu 'to become'. But when the finite forms of ā̲gu are used with adjectives, they do not have the meaning 'to become'. Thus,

(38) b. ī mēju bahaḷa agalavu ā̲gi ide.

does not mean 'this table b̲e̲c̲o̲m̲e̲s̲ wide'; it means 'this table i̲s̲ wide'. The Kannada equivalent of 'this table becomes wide' is (57).

(57) ?ī mēju bahaḷa agalavu ā̲gutta ide.

(57) literally means 'this table is becoming very wide', and is only marginally possible. Similarly,

(36) b. ī dēvasthānavu prasiddhavu ā̲gi ide.

does not mean 'this temple b̲e̲c̲o̲m̲e̲s̲ famous'; it means 'this temple i̲s̲ famous'. Something like the former meaning is conveyed by

(58) ī dēvasthānavu prasiddhavu ā̲gutta ide.

Once again, (58) literally means, 'the temple is becoming famous'. Similarly, the relative participle ā̲da which occurs with the attributive adjectives in the (d) sentences of (35)

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to (38) is not related in meaning to 'to become', but to 'to be'.

I suggest that there are two verbs in the language which have the same phonological form āgu. One of them has the active meaning 'to become', and the other is the STATIVE copula. It is the nonfinite forms of this stative copula that occur with adjectives in this language. Consider the following English sentences.

(59) Delhi is the capital of India.

(60) In 1911 Delhi became the capital of India.

These sentences are rendered into Kannada by (61) and (62) respectively.

(61) dilli bhāratada rājadhāni āgi ide.

(62) 1911 ralli dilli bhāratada rājadhāni āyitu.

We find here that became is translated by āyitu, which is a finite form of the verb āgu, and is of (59) is translated by āgi ide. The tense in āgi ide is present. In the past tense, the form āgi remains unchanged as in (63).

(63) dilli bhāratada rājadhāni āgi ittu.

'Delhi was the capital of India.'

The past tense in (63) is expressed by ittu. Now ide which occurs in (61) and ittu which occurs in (63) are two of the finite forms of the existential copula iru 'to be'. Therefore, it seems to me that in (61) and (63), iru is merely the tense carrier, and the semantic load of the verb in these sentences is borne by āgi, the verbal participle of the

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stative copula āgu. This, however, is not the only context in which iru 'to be' occurs as the tense carrier or the helping verb. Like to be in English, iru is most commonly used in Kannada as the helping verb in forming the progressive tense.

This analysis claims that there are two copulatives verbs in Kannada, the existential copula iru 'to be', and the stative copula āgu 'to be'. There is some evidence in the language which supports this analysis. There are two negative copulas in Kannada, illā, and allā. illā generally negates existence, and allā negates quality or state.

(64) ī cīladalli sakkare illā.

'There is no sugar in this bag.'

(65) gōpālanu amērikannanu allā.

'Gopal is not American.'

(66) dēvaru svargadalli illā.

'God is not in the heaven.'

(67) dēvaru krūranu allā.[10]

'God is not cruel.'

Notice that (64) and (66), in which 'existence' is negated, have illā as the negative copula, and that (65) and (67), in which 'quality' or 'state' is negated, have allā as the negative copula. I am suggesting that illā is the negative form of the existential copula iru, and that allā is the negative form of the stative copula āgu. Observe that āgu in the sense of 'to become' has a negative form that contains not allā but illā.

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(68) mīdāsanu śrīmantanu ādanu ādare sukhiyu āgalu illā.

'Midas became rich but he did not become happy.'

We saw in (61) and (63) that the stative copula āgu does not occur finitely; in both these sentences, iru is used as the helping verb. Now this suggests two possibilities. Either āgu the stative copula has only nonfinite forms, and it always occurs with some finite form of iru, or the stative copula is not āgu, as I have claimed, but āgiru (āgi + iru). I shall now examine both these alternatives.

Consider once again (35.a) and (35.b).

(35) a. huḍuganu caturanu (iddāne).

'The boy is clever.'

b. huḍuganu caturanu āgi iddāne.

'The boy is clever.'

I maintained in the preceding section that (b) represents the primary or regular predicate adjectival construction, and that (a) is derived from (b) by deleting āgi. Let us assume that the stative copula is in fact āgu. Now the verbal participle of this verb occurs in (35.b). In Kannada, whenever there is a nonfinite form of any verb in the surface, it generally has a source in an underlying sentence. This is particularly true of verbal participles, which are used in the so-called 'absolutive' constructions in Indo-Aryan as well as in Dravidian languages. The verbal participle is used in all Indian languages to link a subordinate

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clause to the main clause in certain contexts. It is generally believed that the verbal form and the 'absolutive' construction in which it is often used came into Indo-Aryan languages from Dravidian.[11] Take, for example, the following Sanskrit sentence:

(69) iti prabōdhya ātithyam kṛtvā ālingyaca sampreṣitaḥ.

'Having thus discoursed (to them), treated (them) with hospitality, and embraced them, he sent (them) away.'

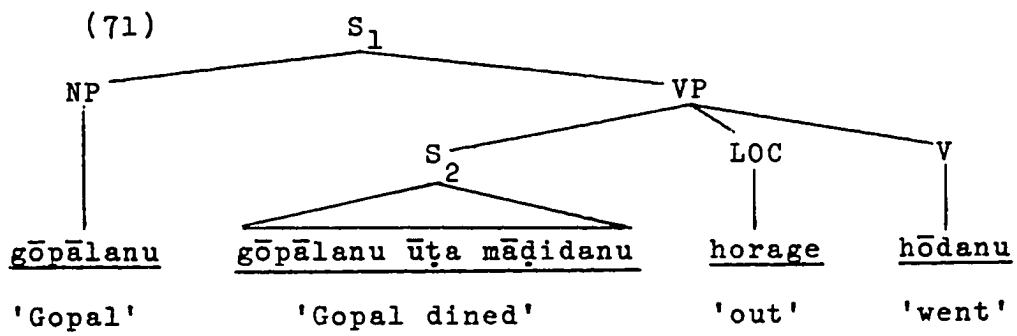
There are three verbal participles in this sentence; prabōdhya 'having discoursed', ātithyam kṛtva 'having treated (them) with hospitality', and ālingya 'having embraced (them)'. It is clear that underlying each verbal participle is a sentence, and the verbal participles are used to conjoin these sentences to the main clause. Now consider the following Kannada sentence.

(70) gōpālanu ūṭa māḍi horage hōdanu.

'Having dined, Gopal went out.'

The underlying structure of this sentence is probably the following:

(71)



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Now the Gerundive transformation applies to this underlying structure. This transformation deletes the identical noun gōpālanu 'Gopal' from the subordinate S, i.e. from S_2, and it introduces the feature [+ verbal participle] into the verb ūṭa māḍu 'dine' of S_2.

(72) gōpālanu # gōpālanu ūṭa māḍidanu # horage hōdanu

⟹

(73) gōpālanu Ø ūṭa māḍidanu horage hōdanu.
+ verbal prt.

(70) gōpālanu ūṭa māḍi horage hōdanu.

I am not making any firm claims about the details of the analysis of the absolutive construction. But I think that it will be granted that the subordinate clause (gōpālanu) ūṭa māḍi '(Gopal) having dined' comes from a subordinate S and that a transformation like the Gerundive tr. is needed to get the verbal participle ūṭa māḍi 'having dined' (from ūṭa māḍu 'to dine'). Other details of this analysis are less important.

Now in the primary predicative adjective construction as in (35.b), we have the verbal participle āgi of the stative copula. So, it is probable that it also comes from a subordinate S in the underlying structure. This would suggest that the underlying structure of (35.b) is approximately the following:

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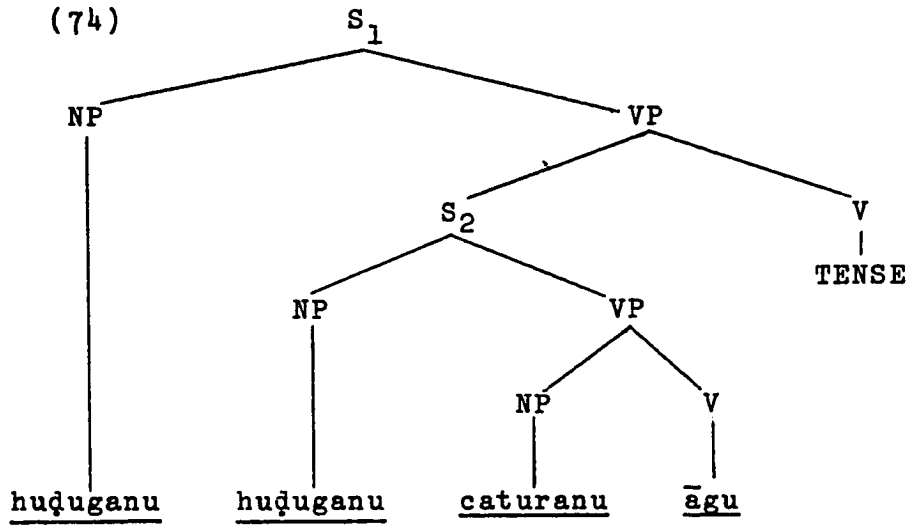
(74)



'boy' 'boy' 'clever' (stative copula)

The Gerundive transformation which applies to the underlying structure represented by (71) also applies to the structure represented by (74).

(75) huḍuganu # huḍuganu caturanu āgu # TENSE ⟹

(76) huḍuganu Ø caturanu āgu TENSE
+ verbal part.

Now depending on what tense we choose for the main clause in (76), we get the appropriate form of the tense carrier iru, the existential copula used here as an auxiliary. If we choose Present as the tense for the main clause in (76), we get the form iddāne, and if we choose Past as the tense, we get the form iddanu. In (35.b), the tense is Present. Thus we replace TENSE in (76) by iddāne, and āgu + verbal participle by āgi to derive (35.b).

(35) b. huḍuganu caturanu āgi iddāne.

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This analysis makes certain nontrivial claims. It claims that predicative adjectives in this language come from subordinate sentences in the deep structure; furthermore, it also claims that an auxiliary such as Tense can occur as the main verb of a sentence in deep structure. This raises the question whether other auxiliaries in the language such as Aspect, Mood, etc. are also main verbs in the underlying structure. Ross (1967b) has argued that auxiliaries belong to the same major category as verbs, and are introduced into deep structure the same way other verbs are. If this is true also of Kannada, then we have some justification for assuming that predicative adjectives in this language come from subordinate sentences in the underlying structure. In any case, I think that it is reasonably clear that there are two verbal elements in (35.b), namely, the verbal participle ā̄gi, and the tense carrier iru (iddā̄ne). The analysis presented above assumes that there is one sentence in deep structure from which each of the two verbal elements comes. An alternative to this would be to assume that VERB, TENSE, ASPECT, etc. are all constituents of a single node MAIN VERB. That is, the underlying structure of (35.b) is approximately the following:

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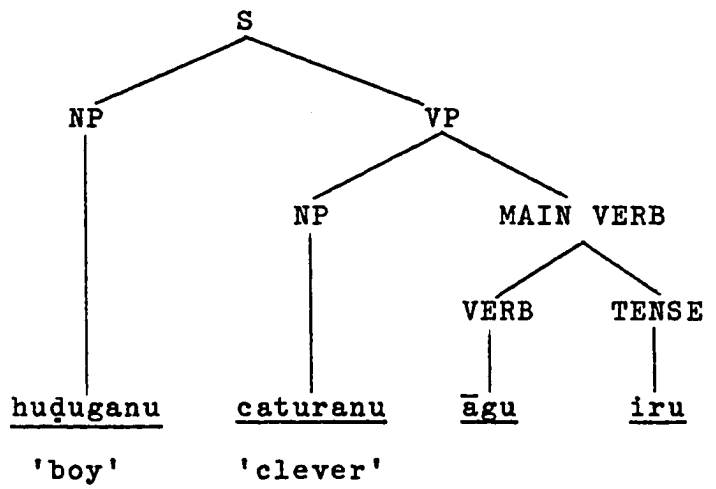
(77)



If (77) is the correct underlying structure for (35.b), then it would follow that predicative adjectives do not originate from subordinate sentences in the underlying structure.

At present, I have no strong arguments which would choose between these two possible analyses. A good description of the syntax of the verb in Kannada is necessary before this question can be resolved, and such a description is not available at the present time. My own preference runs in favor of regarding (74) as the right underlying structure for (35.b) for two reasons. First, with (77) as the underlying structure of (35.b), it would be difficult to explain how we get the verbal participle ā̀gi in the surface structure. Such an explanation is available with (74) as the underlying structure of (35.b); the Gerundive transformation is independently required in the language, and this transformation introduces the feature [+ verbal participle]. Secondly, it is generally true that Kannada uses the feature [+ relative participle] to link sentences embedded in NP,

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and the feature [+ verbal participle] to link sentences embedded in VP. This would suggest that the verbal participle ā̲gi in (35.b) originates in a sentence embedded in VP as in (74).

Therefore, I am going to assume that predicative adjectives in Kannada come from subordinate sentences embedded in VP.

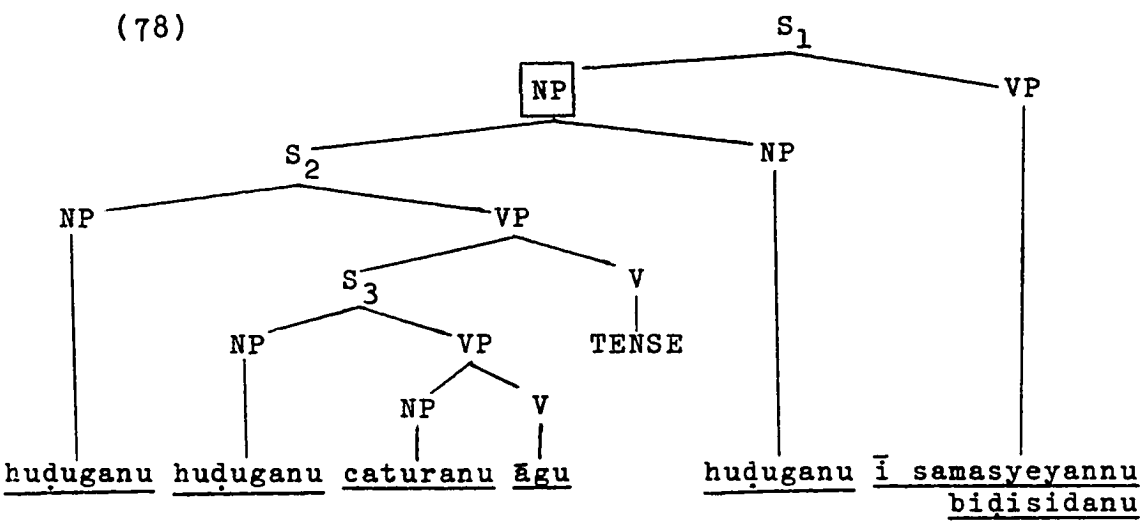
The question I now wish to discuss is how we get the relative participle ā̲da in what I described earlier as the primary attributive construction. Let us reconsider (35.d), which exemplifies such a construction.

(35) d. caturanu ā̲da huḍuganu ī samasyeyannu biḍisidanu.

'The clever boy solved this problem.'

In the light of our discussion so far, it seems reasonable to assume that the underlying structure of this sentence is approximately the following:

(78)



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Apply the Gerundive transformation to embed S_3 into the VP of S_2.

(79) $(_{S_2}$ huḍuganu $(_{VP}$ $(_{S_3}$ huḍuganu caturanu āgu $)_{S_3}$ TENSE $)_{VP})_{S_2}$ ⟹

(80) $(_{S_2}$ huḍuganu # Ø caturanu āgu $)_{S_3}$ # TENSE $)_{S_2}$
+verbal part.

Now if S_2 were an independent structure, we would have to choose TENSE at this point. With Present as the Tense, we would get (81), and if the Tense were past, we would get (82).

(81) huḍuganu caturanu āgi iddāne. = (35.b)
'The boy is clever.'

(82) huḍuganu caturanu āgi iddanu.
'The boy was clever.'

But in (78), S_2 is not an independent structure, it is further embedded in the boxed NP of S_1. So we have now to apply the Part. rel. tr. to S_2 and attach it as a relative clause to the boxed NP of S_1.

(83) $(_{S_1}$ $(_{NP}$ $(_{S_2}$ huḍuganu caturanu āgi TENSE $)_{S_2}$ huḍuganu $)_{NP}$ ī samasyeyannu biḍisidanu $)_{S_1}$ ⟹

(84) $(_{S_1}$ $(_{NP}$ $(_{S_2}$ Ø caturanu āgi TENSE + REL.PRT $)_{S_2}$ huḍuganu $)_{NP}$ ī samasyeyannu biḍisidanu $)_{S_1}$

Recall that the Part. rel. tr. deletes the identical noun from the constituent sentence, and inserts the feature

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[+ Relative participle] at the end of the constituent sentence. This feature is then attached to the verb of the constituent sentence. Now S_1 would be realized as (85) if the Tense in S_2 were Present, or as (86), if the Tense in S_2 were Past. In both the cases, the tense carrier is iru.

(85) caturanu āgi iruva huḍuganu ī samasyeyannu biḍisidanu.

'The boy who is clever solved this problem.

(86) caturanu āgi idda huḍuganu ī samasyeyannu biḍisidanu.

'The boy who was clever solved this problem.'

Notice that neither (85) nor (86) is identical with (35.d), and it was (35.d) that we set out to derive from the underlying structure represented by (78). In (35.d), the relative participle is āda (from the stative copula āgu), while the relative participles in (85) and (86), iruva and idda respectively, come from the tense carrier iru. Since the relative clause in Kannada always occurs to the left of the head noun, caturanu āgi iruva 'who is clever' in (85), and caturanu āgi idda 'who was clever' in (86) are already in the attributive position with respect to the head noun huḍuganu 'boy' modified by these two relative clauses. It should be noted that while the relative clauses in (85) and (86) are full relative clauses, caturanu āda in (35.d) is a reduced relative clause. It is called 'reduced' because it lacks TENSE. In this respect, caturanu āda huḍuganu in

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(35.d) is very much like weighing 120 lbs. in a woman weighing 120 lbs. which can be derived either from a woman who weighs 120 lbs., or from a woman who weighed 120 lbs. Similarly, caturanu āda huḍuganu could mean either caturanu āgi iruva huḍuganu 'the boy who is clever' as in (85), or caturanu āgi idda huḍuganu 'the boy who was clever' as in (86). The difference between the relative clauses of (85) and (86) arises from the difference in Tense. This would suggest that (35.d) is derived from (84) by deleting TENSE. Since Tense is deleted, no form of the tense carrier iru occurs in (35.d). But notice that the feature [+ relative participle] remains in the string (84). This feature is now attracted by the stative copula, and āgi is replaced by the relative participle āda.

TENSE Deletion

(84) $(_{S_1}\ (_{NP}\ (_{S_2}$ Ø caturanu āgi TENSE + REL.PRT. $)_{S_2}$ huḍuganu $)_{NP}$ ī samasyeyannu biḍisidanu ⟹

(87) $(_{S_1}\ (_{NP}\ (_{S_2}$ Ø caturanu āgi Ø + REL.PRT. $)_{S_2}$ huḍuganu $)_{NP}$ ī samasyeyannu biḍisidanu

(88) $(_{S_1}\ (_{NP}\ (_{S_2}$ Ø caturanu āda $)_{S_2}$ huḍuganu ī samasyeyannu biḍisidanu

(35) d. caturanu āda huḍuganu ī samsyeyannu biḍisidanu.

'The clever boy solved this problem.'

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In modern Kannada, there is a further transformation that deletes ādа from (35.d), and also the gender and number morpheme from caturanu to give (35.c). This has been discussed in detail in the preceding section.

(35) c. catura huḍuganu ī samasyeyannu biḍisidanu.

'The clever boy solved this problem.'

It may seem unusual that when TENSE is deleted from (84), the feature [+ relative participle] too is not deleted. But this is not the only situation in which the feature relative participle behaves in this manner. In Kannada, whenever a sentence is embedded in NP, the feature [+ relative participle] is always used as the linking element, and this feature is independent of everything else in the sentence. This trait of the language has been discussed in detail in section 1 of the next chapter (cf. the analysis of S-N complementation in Kannada).

I have now presented an analysis of predicative and attributive adjectives based on the assumption that āgu is the stative copula. Spencer (1950:199) has suggested that the stative copula in Kannada is not āgu but āgiru (āgu + iru). In the analysis presented above, iru is regarded as the tense carrier and not as an integral part of the stative copula. Spencer's proposal gives a much simpler analysis than the one presented above in certain respects. For example, if we regard āgiru as a single lexical item, we do not have to assume that predicative adjectives in this

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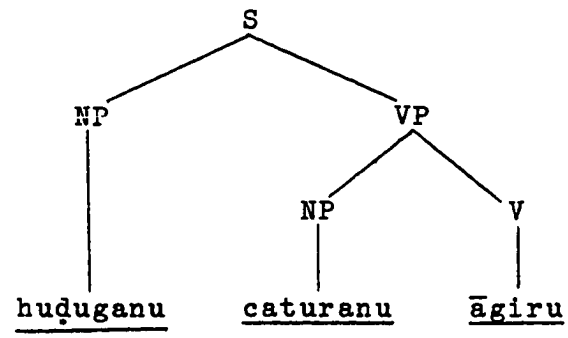
language come from subordinate sentences. In this proposal the underlying structure of (35.b) would be (89), which is much simpler than (74).

(89)



(89) directly gives us (35.b), and we do not have to go through the Gerundive transformation as we had to in the analysis which assumes that āgu is the stative copula. This proposal can also give us

caturanu āgiruva huḍuganu ... (85)

caturanu āgidda huḍuganu ... (86)

āgiruva and āgidda are the present and past relative participles of āgiru. Thus assuming āgiru as the stative copula gives us a much simpler analysis.

The most damaging inadequacy of this proposal is that it fails to explain how we get caturanu āda in (35.d). If āgiru is a single lexical item, we can only get āgiruva, āgidda, etc. when we relativize a sentence containing this verb. To get āda in (35.d), we will have to assume that at some stage in the derivation, the latter part iru of āgiru drops off leaving the truncated part āgi-, and that from that point on, āgi begins to function as an independent

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lexical item to give us the relative participle ādа. This is very much like having in English a derivation which starts out in deep structure with the lexical item become and which at some point drops -come from this item, and goes on to treat the remaining part be- as an independent lexical item, ending up with a form like been. This is avoided in the analysis presented earlier which assumes āgu and iru as two separate lexical items, the former being the stative copula, and the latter merely the Tense carrier. When Tense is deleted, iru too automatically gets deleted.

This concludes our study of adjectives in Kannada. I am under no illusion that I have solved all or even the major problems which concern this area of the syntax of Kannada. As I indicated earlier, most of the problems related to the analysis of predicative adjectives in this language are inextricably bound with the analysis of the verb. A clearer perspective on these problems can be gained only after some progress has been made with the analysis of the verb.

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Footnotes

[1]"... the meaning inherent in some original Dravidian bases (cf. cil- "small", per- "great") which express, originally, a certain quality (adjective) as against a "complex of qualities" (being inherent in a noun). The nouns and verbs denoting "smallness", "being small" seem not to be original, but secondary derivatives. And, what is more, the adjectival bases cannot function as subject, whereas the substantive bases can; thus, the difference between adjectives and substantives is, in Dravidian also, indicated by grammatical viz. syntactic function."

Zvelebil (1956:167)

[2]Hindi has also adjectives such as sundar 'beautiful', buddhimān 'intelligent', dhanī 'rich', kharāb 'bad', etc. which do not vary in form according to the gender, number or case of the noun they accompany. Marathi also has such invariable adjectives.

[3]Cf. footnote 1 above.

[4]Jespersen introduces his discussion of the distinction between adjectives and substantives with the following remark: "Adjectives and substantives have much in common, and there are cases in which it is difficult to tell whether a word belongs to one or other class; therefore it is convenient to have a name that comprises both ...". He suggests the name 'noun' for the larger class of which substantives and adjectives are subdivisions.

Jespersen (1965:72)

[5]Most of the examples cited under (43), (44) and (45) are taken from Kittel (1903:242-51). Kittel points out that his source for adjective + noun phrases which do not contain āda was 'South-Mahratta schoolbooks', i.e. school text books in use in the old Bombay Karnatak, a region geographically very close to an area in which Marathi happens to be the predominant language.

[6]I am assuming here that compounds are formed in the lexicon, and not by rule from free syntactic structure. See in this connection Chomsky (1968).

[7]In classical Sanskrit, formation of compounds became almost a semi-productive process. New compounds could be formed easily, since all that such a compound required was that the characteristic signs of case and number be rejected by all members of the compound except the last. As a result, compounds like janakatanayāsnānapuṇyodakeṣu '(a place) of

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which the waters were sanctified by the bathing of the daughter of Janaka' abound in classical Sanskrit. This was probably because by then Sanskrit had ceased to be a spoken language except of small groups, and had become a highly stylized medium solely of literary expression.

[8]I will suggest in this study that predicative adjectives in Kannada probably come from subordinate sentences. If this is true, then there is a basic difference between Indo-Aryan and Dravidian languages in the way they derive predicative adjectives. There is no evidence at all in Indo-Aryan languages to suggest that predicative adjectives in these languages come from subordinate sentences. There is nothing like a stative copula as distinct from the existential copula in these languages.

Marathi: *gopāl huśār hoūn āhe. 'Gopal is clever.'
Hindi: *sītā sundar hokar hai. 'Sita is beautiful.'

In both these sentences, I have added to the predicative adjective what I consider to be the nearest equivalent in these languages to the stative copula āgu in Kannada (hoūn in Marathi, and hokar in Hindi), and the result is that both these sentences are ungrammatical.

[9](51.c) in fact sounds rather alien to Dravidian structure; it would be normally associated with the Kannada spoken by someone whose mother tongue is not Kannada. It seems to me that Mysore Kannada would entirely avoid this usage, and employ instead (51.b).

[10]Notice that in the corresponding positive sentences, illā would be replaced by a finite form of the existential copula iru, and allā by āgi + a finite form of the tense carrier iru.

(64) ī cīladalli sakkare ide. 'There is sugar in this bag.'

(65) gōpālanu amērikannanu āgi iddāne. 'Gopal is American.'

(66) dēvaru svargadalli iddāne. 'God is in the heaven.'

(67) dēvaru krūranu āgi iddāne. 'God is cruel.'

[11]Cf. Emeneau (1956), Andronov (1964).

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Chapter 5

NOUN COMPLEMENTATION IN KANNADA AND KONKANI

Traditionally, the term 'complement' has been used to refer to any word (other than the verb), phrase or clause which is an obligatory constituent of the predicate. In this study, however, this term has been used to refer to any S which is introduced into the structure as a co-constituent (i.e. either as a left sister or right sister) of some head item. This head item may be any one of the major lexical categories that occur in the deep structure. The scope of this study is limited to sentential complements on nouns primarily in Kannada and Konkani, and more generally, in Dravidian and Indo-Aryan languages.

One of the main objectives of this study is to present an analysis of noun complementation in Kannada, and Kannada is being considered here as a representative of Dravidian languages. Although Konkani belongs genetically to the Indo-Aryan family of languages, with regard to noun complementation it is so close to Kannada and to Dravidian languages in general, that if one were asked to determine its familial affiliations solely on the basis of evidence from noun complementation, he would be more likely to group it with Dravidian languages than with Indo-Aryan. Not that all Indo-Aryan characteristics as pertain to noun complementation

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are lost in Kannada; but they could as easily be explained away as borrowings from Indo-Aryan if one were to maintain that Konkani is a Dravidian language. The striking similarities between Kannada and Konkani will become clear in section 1 of this study where complement structures in both these languages are derived from the same deep structures except for lexical insertion, and by applying the same transformations in the same order:

In this dissertation, as in most transformational studies done in the framework of the syntactic theory outlined by Chomsky in Aspects, relative clauses and complement clauses on nouns are regarded as originating from sentences embedded in NP. In this same area of syntax, there seem to be some differences between Indo-Aryan and Dravidian languages. In section 2, I will examine some of these differences, and show in what respects Konkani is closer to Dravidian than to Indo-Aryan. As in the study on relativization (cf. Ch. 2, sec. 3), I shall also compare the dialect of Konkani described here (Saraswat Konkani of North and South Kanara) with Goan Konkani. The latter, as we have already noted, has not come under the direct impact of Kannada, or for that matter of any other Dravidian language, as the former has, and we would therefore not expect Goan Konkani to show any of the peculiarly Dravidian features which the Konkani of the Kanaras exhibits. It will be seen that this in fact is the case. Thus another important objective of

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this study is to examine the changes that have come about in the syntax of noun complementation in the Konkani of the Kanaras as a result of its close contact with Kannada.

In this study, I have found it necessary to dwell at some length on the distinction between relative clauses and complement clauses, first because this distinction is not made by traditional grammars of Indian languages, and secondly because, in Kannada as well as in Konkani, these two types of NP-embedded clauses look very much alike in their surface form.

Sentences from the various languages used in this study for illustration and exemplification are consecutively numbered from 1 on. The letter D marks Kannada sentences, and N marks Konkani sentences.

Section 1

A. S-COMP-N Complementation

(1D) gōpālanu bīdiyalli kuṇidanu EMBA sangati nijavu ide.

(1N) gopāḷu rastyāri nãclo MHAḶḶI khabbari khəri āssa.

'The fact[1]/news that Gopal danced in the street is true.'

In (1D), gōpālanu bīdiyalli kuṇidanu 'Gopal danced in the street' is a complement clause on the noun sangati 'fact/news', and emba is the complementizer. In (1N), gopāḷu rastyāri nãclo 'Gopal danced in the street' is a complement clause on the noun khabbari 'fact/news', and mhaḶḶi is the complementizer.

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The complementizer emba in Kannada is the reduced form of ennuva which also occurs in the language as the present/future relative participle of the verb ennu 'to say'. The Konkani complementizer mhaḷḷi is the reduced form of mhaḷḷèli which also occurs in the language as the past relative participle of the verb mhəṇā 'to say'. As we have seen earlier in this work, relative participles in both these languages typically serve to link relative clauses to the head noun as in (2D) and (2N).

(2D) gōpālanu ennuva sangati nijavu ide.

'The thing which Gopal says is true.'

(2N) gopāḷāne mhaḷḷi khabbari khəri āssa.

'The thing which Gopal said is true.'

In these sentences, gōpālanu ennuva 'which Gopal says', and gopāḷāne mhaḷḷi 'which Gopal said' are relative clauses on the subject nouns sangati 'fact/thing' and khabbari 'fact/thing' respectively. Notice the striking surface similarities between (1D) and (2D), and between (1N) and (2N). Each of these sentences has an embedded clause linked to the subject noun by what looks like a relative participle, viz. ennuva (emba) in Kannada and mhaḷḷi (mhaḷḷeli) in Konkani. If the embedded clause in (2D) and (2N) is a relative clause, why is a similar clause in (1D) and (1N) not a relative clause but a complement clause?

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The distinction between relative and complement clauses becomes clear when we try to disambiguate an English sentence such as the following:

(3) The report that students were studying amazed me.

The embedded clause in (3) is ambiguous since it can be interpreted as a relative clause and also as a complement clause. This ambiguity can be resolved at the level of deep structure. When we interpret this clause as a relative clause, we are assuming the following to be the deep structure components of (3).

(3) a. i. The report amazed me. (Matrix sentence)

ii. Students were studying the report. (Constituent sentence)

On the other hand, when the same clause is interpreted as a complement clause, the following are assumed to be the deep structure components of (3).

(3) b. i. The report amazed me. (Matrix sentence)

ii. Students were studying. (Constituent sentence)

The crucial difference between (3.a) and (3.b) is that in the former, report occurs in the matrix sentence as well as in the constituent sentence, while in the latter, report occurs only in the matrix sentence but not in the constituent sentence. The relativization transformation in English, which applies in the case of (3.a), depends crucially on there being an identical noun in the matrix as well as in the constituent sentence. In the case of complementation,

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such an identical noun may not occur in the deep structure.

The same criterion serves to distinguish between the clauses embedded in (1D) and (1N) and those embedded in (2D) and (2N). The underlying structure of (2D) and (2N) consists of the following:

(2D) a. (ā) sangati nijavu ide. (Matrix sentence)

'The thing is true.'

b. gōpālanu (ā) sangatiyannu annuvanu.
(Constituent sentence)

'Gopal says the thing.'

(2N) a. (tī) khabbari khəri āssa.(Matrix sentence)

'The thing is true.'

b. gopāḷāne (tī) khabbari mhaḷḷi.
(Constituent sentence)

'Gopal said the thing.'

Notice that sangati and khabbari occur in the matrix as well as in the constituent sentences. The Participial relative transformation which applies to structures like these to give (2D) and (2N) is discussed in detail in Chapter 2.

The clauses embedded in (1D) and (1N) cannot be interpreted as relative clauses, because deep structures which would allow such an interpretation do not exist. Let us consider the case of (1D). To interpret the embedded clause in this sentence as a relative clause, we would need the following as the deep structure constituents of (1D).

(1D) a. (ā) sangati nijavu ide. (Matrix sentence)

'The fact is true.'

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b. *gōpālanu bīdiyalli kuṇidanu sangatiyannu annuvanu. (Constituent S)

As required for any relativization transformation, sangati occurs here in the matrix as well as in the constituent sentence. But the constituent S in this case is completely ungrammatical. When rendered into English, it would read something like the following: '*Gopal danced in the street the fact says'. The verb annuvanu 'says' in this sentence has no subject. It is certainly possible to supply the sentence with a subject. We may say, for example, that yārō 'someone' is the subject of annuvanu 'says', and that the subject gets deleted. This, in fact, is the suggestion made by Spencer (1950:303) in connection with the analysis of sentences like (1D). But notice that even this does not make (1D.b) any better.

(3D) *gōpālanu bīdiyalli kuṇidanu sangatiyannu yārō annuvanu.

The problem with this string is that it consists of two syntactically unconnected sentences. In its English rendering it would read 'Gopal danced in the street, someone says the thing'. To make (3D) grammatical, the complementizer emba will have to be inserted between kuṇidanu and sangatiyannu.

(4D) gōpālanu bīdiyalli kuṇidanu emba sangatiyannu yārō annuvanu.

'Someone tells the news that Gopal danced in the street.'

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Recall that we are now looking for a sentence which can be proposed as the constituent sentence in the place of (1D.b), and which would allow us to interpret the embedded clause in (1D) as a relative clause. But (4D) cannot be this sentence because if it is embedded in (1D.a), the resulting sentence would be:

(5D) gōpālanu bīdiyalli kuṇidanu emba yārō annuva sangati nijavu ide.

'The fact that Gopal danced in the street, which someone said, is true.'

This is an entirely different sentence from (1D). Another problem with this approach is that the putative constituent sentence (4D) is already a complex sentence in that it has in it an embedded clause introduced by emba. How then do we get this complex sentence which in structure is exactly like (1D)?

Yet another approach may be tried to save the relative clause analysis of the embedded clause in (1D). Let us assume that emba is transformationally introduced, as in fact it is. Even then, in order for us to be able to construe the embedded clause in (1D) as relative clause, we will require the following as the constituent sentence.

(6D) *gōpālanu bīdiyalli (ā) sangatiyannu kuṇidanu.

*'Gopal danced the fact in the street.'

But (6D) is semantically anomalous as can be seen from its English rendering. Thus we see that no deep structure

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constituents exist which would allow us to interpret the embedded clause in (1D) as a relative clause.

For exactly the same reason, the embedded clause in the Konkani sentence (1N) cannot be interpreted as a relative clause.

We may therefore conclude that (1D) and (1N) contain complement clauses. Syntactically and semantically, this seems to be the only way in which these sentences can be analyzed. The deep structure components of these sentences are (7D) and (7N) respectively.

(7D) a. sangati nijavu ide. (Matrix S)
'The fact is true.'

b. gōpālanu bīdiyalli kuṇidanu. (Constituent S)
'Gopal danced in the street.'

(7N) a. khabbari khəri āssa. (Matrix S)
'The fact/news is true.'

b. gopāḷu rastyāri nãclo. (Constituent S)
'Gopal danced in the street.'

The matrix and constituent sentences in (7D) and (7N) do not share an identical noun. khabbari and sangati occur only in the matrix sentence. These matrix and constituent sentences are related in the underlying structure as shown by the tree diagram (9).[2]

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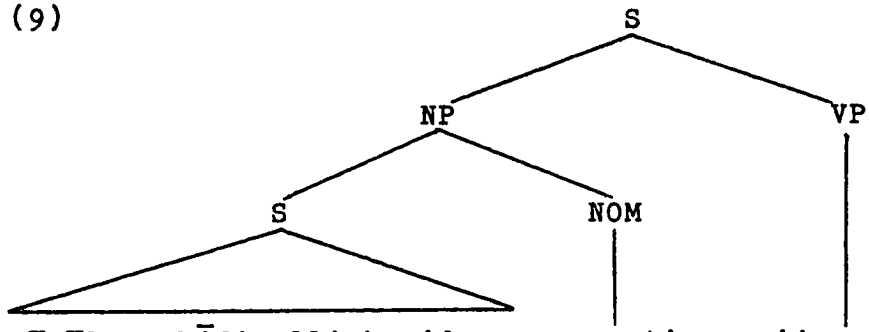
(9)



(1D) gōpālanu bīdiyalli kuṇidanu sangati nijavu ide

(1N) gopāḷu rastyāri nãclo khabbari khəri āssa

'Gopal danced in the street' 'fact' 'is true'

This p-marker gives (10D) and (10N) as the underlying structures of (1D) and (1N) respectively.

(10D) $(_{NP}\ (_{S}$ gōpālanu bīdiyalli kuṇidanu $)_{S}$
$(_{N}$ sangati $)_{N}\ )_{NP}$ nijavu ide.

(10N) $(_{NP}\ (_{S}$ gopāḷu rastyāri nãclo $)_{NP}$
$(_{N}$ khabbari $)_{N}\ )_{NP}$ khəri āssa.

As a first approximation, let us assume that the Complement Insertion transformation (11) applies to these underlying structures. This transformation inserts emba in (10D) and mhaḷḷi in (10N) to give (1D) and (1N) respectively.

(11) Complement Insertion Transformation
(Comp. insert. tr.)

X	$(_{NP}$ S	NOM $)_{NP}$	Y		
1	2	3	4	$\Longrightarrow$	
1	2+ emba / mhaḷḷi	3	4		

Apply Comp. insert. tr. to (10D) and (10N):

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(10D) $(_{NP}\ (_{S}$ gōpālanu bīdiyalli kuṇidanu $)_{S}$
$(_{N}$ sangati $)_{N})_{NP}$ nijavu ide ⟹

(1D) gopalanu bidiyalli kunidanu emba sangati nijavu ide.

(10N) $(_{NP}\ (_{S}$ gopāḷu rastyāri nā̃clo $)_{S}$
$(_{N}$ khabbari $)_{N})_{NP}$ khəri āssa ⟹

(1N) gopāḷu rastyāri nā̃clo mhaḷḷi khabbari khəri āssa.

When emba in Kannada and mhaḷḷi in Konkani are used as complementizers as in (1D) and (1N), there perhaps is no justification in describing them as relative participles. Nonetheless, it is an interesting fact that both these languages employ as a complementizer what is elsewhere in the language a relative participle. The verbs of which these are relative participles, ennu 'to say' in Kannada, and mhaṇa 'to say' in Konkani, are also alike in meaning. The significance of these facts will be examined later in this study.

B. S-N Complementation

(12D) gōpālanu bīdiyalli kuṇida sangati nijavu ide.

(12N) gopāḷāne rastyāri nā̃cilli khabbari khəri āssa.

'The fact that Gopal danced in the street is true.'

In (12D), gōpālanu bīdiyalli kuṇida 'Gopal danced in the street' is a complement on sangati 'fact', and there is no complementizer in the sentence. In (12N), gopāḷāne rastyāri nā̃cilli 'Gopal danced in the street' is a complement on

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khabbari 'fact', and again there is no complementizer in this sentence either. These sentences are synonymous with (1D) and (1N). But notice that the complement clause in (12D) and in (12N) ends with a relative participle, kuṇida (from kuṇi 'to dance'), and nãcilli (from nãc 'to dance'), while that in (1D) and (1N) ends with a finite verb (kuṇidanu and nãclo).

Complements of S-N type look even more like relative clauses than complements of S-Comp-N type. This may be seen by comparing (13D) and (13N), which contain relative clauses, with (12D) and (12N).

(12D) gōpālanu bīdiyalli kuṇida sangati nijavu ide.

(13D) " " hēḷida " " "

(12N) gopāḷāne rastyāri nãcilli khabbari khəri āssa.

(13N) " " sangilli " " "

The English gloss of (13D) and (13N) is 'The fact/thing/news which Gopal told in the street is true'. Observe that all these four sentences begin with an NP-embedded clause which is linked to the head of the NP by means of a relative participle--kuṇida from kuṇi 'to dance' in (12D), hēḷida from hēḷu 'to tell' in (13D), nãcilli from nãc 'to dance' in (12N), and sangilli from sānga 'to tell' in (13N). In spite of this complete surface identity, the clauses embedded in (12D) and (12N) are clearly complement and not relative clauses, because the necessary constituent sentence which would permit the relative interpretation is not possible in either language.

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(14D) *gōpālanu bīdiyalli (ā) sangatiyannu
kuṇidanu = (6D)

(14N) *gopāḷu rastyāri (tī) khabbari nãclo.

*'Gopal danced the fact in the street.'

Since (1D) and (12D), and (1N) and (12N) are semantically identical, it is reasonable to assume in the absence of any evidence to the contrary, that both the sentences in each language are derived from the same deep structure. (10D) and (10N) have already been set up as the underlying structures of (1D) and (1N) respectively. Since there is no complementizer in (12D) and (12N), it might appear that these sentences are derived from (1D) and (1N) respectively by merely deleting the complementizer. But if the complementizer is deleted from (1D) and (1N), we get not (12D) and (12N) but the incorrect sentences (15D) and (15N).

(1D) gōpālanu bīdiyalli kuṇidanu emba sangati nijavu ide. Complement Deletion ⟹

(15D)*gōpālanu bīdiyalli kuṇidanu Ø sangati nijavu ide.

(1N) gopāḷu rastyāri nãclo mhaḷḷi khabbari khəri āssa. Complement Deletion ⟹

(15N)*gopāḷu rastyāri nãclo Ø khabbari khəri āssa.

What makes (15D) and (15N) ungrammatical is that each of them contains two sentences which are syntactically unconnected. Thus in (15D), for example, there are two sentences, gōpālanu bīdiyalli kuṇidanu 'Gopal danced in the street', and sangati nijavu ide 'The fact is true', but these two

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sentences are not syntactically linked. In (1D) and (1N), the complementizer serves as the linking element, and in (12D) and (12N), the relative participle form of the verb of the complement clause serves as the linking element. Thus it is clear that an S-N Complement clause cannot be regarded as an S-Comp-N Complement clause minus the complementizer.

There certainly are many devices that can be employed to introduce the relative participle in these S-N complement clauses. For example, we can still maintain that (12D) and (12N) are derived from (1D) and (1N) by means of a transformation which not only deletes the complementizer from the latter but also introduces at the same time the feature [+ relative participle] into the verb of the embedded clause of (12D) and (12N). The presence of this feature would automatically block the subject-verb concord in the complement clause, and would give us the relative participle of the same verb.

We may even propose a slightly different solution. We may maintain that (12D) and (12N) are derived directly from the underlying structures (10D) and (10N) respectively, without going through the intermediate stage of (1D) and (1N). For this derivation, we may propose a transformation very much like the Participial relative transformation discussed in detail in Chapter 2. The Part. rel. tr. brings about two changes in the structure that meets its structural description; it deletes the identical noun from the constituent S,

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and introduces the feature [+ relative participle] into the verb of this sentence. A transformation very much like this can be said to apply to (10D) and (10N); it will only introduce the feature [+ relative participle] into the verb of the constituent sentence. Since there is no identical noun which the matrix and constituent sentences in (10D) and (10N) share, the question of deleting the identical noun from the constituent sentence does not arise.

(10D) $(_{NP}\ (_{S}$ gōpālanu bīdiyalli kuṇi(danu) $)_{S}$
$(_{N}$ sangati $)_{N}\ )_{NP}$ nijavu ide $\Longrightarrow$

(12'D) gōpālanu bīdiyalli kuṇi(danu) sangati nijavu ide
+rel. prt.

(12D) gōpālanu bīdiyalli kuṇida sangati nijavu ide.

Thus this solution too gives the intended result. But for any of these solutions to be more than just ad-hoc devices that do the job, we would like to have an explanatory account of why the feature relative participle which generally occurs as the linking element in relative clauses also occurs in these complement clauses. I think such an account can be given in this case.

One of the characteristic features of Dravidian languages is that they normally do not allow more than one finite verb per sentence even in the surface structure. In these languages, most kinds of embedded and subordinate clauses end up in the surface with some nonfinite form of the verb. Thus Spencer (1950:4) notes in his Kanarese

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Grammar, "... a Kanarese sentence rarely tolerates more than one finite verb. One verb in the sentence only will be finite in form." The only exceptions to this generalization seem to be the Non-participial relative clause, and a construction such as S-Comp-N complementation discussed earlier in this section. It is not necessary to document this observation in detail here, since it is hardly a new observation. I think that there is sufficient evidence to regard it as a general tendency in Dravidian languages rather than as a rigid constraint on these languages.

We may, however, look at a couple of sentences to note what happens to the verbs of the various embedded and subordinate clauses in the surface structure in these languages. Consider the Kannada sentence (16D) and its English equivalent (16).

(16D) nāvu ninne nōḍida huḍuganu manege hōgi adhika mātreyalli niddeya guḷigegaḷannu tindanu.

(16) The boy whom we saw yesterday went home and took an overdose of sleeping pills.

The English sentence has three finite verbs, while the Kannada sentence has only one, tindanu 'ate'. Where (16) uses the finite forms met and went, (16D) uses the relative participle nōḍida (from nōḍu 'to see') and the verbal participle hōgi (from hōgu 'to go'). Let us look at a much more complex pair of sentences. The English sentence (17) has ten finite verb forms, numbered 1 through 10. In the

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equivalent Kannada sentence (17D), there is only one finite verb (numbered 12) and all the rest (1 through 11) are non-finite forms.

(17D) nīvu mumbāi talpida mēle gavarnararu kareda
1 2

adhivēśanadalli nīvu bheṭṭiyāgaliruva mukhya
3

injiniyararoḍane vicārisi nanage patra baredu
4 5

tapaśīlavār māhiti kaḷuhisidare nānu nīvu
6

tiḷuhisidante munduvaredu nāvu kaikoṇḍa
7 8 9

dinadinda idu varege taleśūli koḍuttiruva ī
10

kelasavannu nanninda ādaṣṭu bēga mugisuttēne.[3]
11 12

(17) When you reach Bombay, if you could write me
1 2

a letter and give me detailed instructions after

you have consulted with the chief engineer whom
3

you are going to meet at the conference which
4

is convened by the Governor, I shall proceed as
5 6

you would instruct me to and finish this job,
7

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which has been such a headache ever since we
8

undertook it, as soon as I can.
9 10

(17) is hardly a model of good English, but it serves to illustrate the point under discussion. Of the eleven nonfinite forms in (17D), seven are relative participles (1, 2, 3, 7, 9, 10 and 11), three are verbal participles or 'gerunds' (4, 5 and 8), and one is a nonfinite conditional form (6). A more detailed comment on these nonfinite forms is not necessary here. These examples show how Dravidian languages depend largely on relative participles and verbal participles to link embedded and subordinate clauses to the main clause.

Now it seems to be generally true that, in Dravidian languages, sentences embedded in NP use the relative participle as the linking element, while sentences embedded in VP (and probably even in S) are linked by other nonfinite forms, the principal among them being the verbal participle. Since a major part of this dissertation is concerned with sentences embedded in NP, I will limit the discussion here only to the first half of this observation.

The two principal kinds of sentences embedded in NP are relative clauses and complement clauses. The principal mode of relativization in Dravidian languages is the Participial mode which uses the relative participle of the embedded clause as the sole linking element. (2D) contains

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such a relative clause. (For details see Chapters 2 and 3.) Relative participles are frequently found also in adverbial clauses in Kannada. Most of these adverbial clauses can be analyzed as relative or complement clauses on some PROnoun of time, place, duration, reason, etc. Spencer (1950:210-216) in fact describes adverbial clauses of time, purpose, manner, degree, comparison, cause, condition, concession, etc. in Kannada as relative clauses on what has been traditionally called avyayas (indeclinable or invariable words).[4]

(18D) nīvu namma manege bandāga nānu śaleyalli idde.

!I was at school when you came to my house.'

In this sentence, the equivalent of the adverbial clause, 'when you came to my house' is the relative clause nīvu namma manege banda on the PROnoun āga 'then/at that time'. Thus the adverbial constituent in (18D) literally means 'at the time at which you came to my house!. Notice banda, which is a rel. prt.

In this chapter, we have now examined two types of complement clauses, S-Comp-N exemplified by (1D) and S-N exemplified by (12D). The latter, as we have seen, follows the general principle and employs the relative participle kuṇida as the linking element. (1D), however, has two finite verbs, one in the complement clause (kuṇidanu 'danced') and the other in the main clause (ide 'is'). This type of complement clause, as we have already noted, is an exception to the general tendency in Dravidian languages to

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use only one finite verb per sentence. The complement clause in (1D) uses emba (ennuva), the complementizer, as the linking element. But notice that even this complementizer happens to be what is elsewhere in the language also a relative participle (of the verb ennu 'to say'). When we consider the fact that the complement clause in (1D) is embedded in NP, this use of the relative participle as the linking element appears to be more than a mere quirk of the language. It in fact supports my hypothesis that, in Kannada, sentences embedded in NP use the relative participle as the linking element.

This principle seems to be so general that it may almost be stated once in the grammar of the language as the property of all transformations that embed sentences in NP, and need not be repeated as a part of each such transformation. But the generality of this principle has been impaired by the effects of linguistic acculturation. There is another mode of relativization in Kannada and in Dravidian languages, the Non-participial mode, which does not use the relative participle as the linking element but uses instead a relative pronoun and a co-relative. In Chapter 2, I indicated that there is reason to believe that the Non-part. rel. clause was not native to Dravidian languages, and that it probably must have come into Dravidian from Indo-Aryan languages. Even now, the Non-part. rel. clause is used rather infrequently in Dravidian languages. (19D) contains such a Non-part. rel. clause.

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(19D) nīnu ninne yāva huḍugiyannu nōḍideyō

{avaḷu / a huḍugiyu} kivudaḷu iddāḷe.

'The girl whom you saw yesterday is deaf.'

Notice the relative pronoun yāva 'whom' and the co-relative avaḷu 'she', and also the two finite verbs, nōḍide(yō) 'saw' and iddāḷe 'is'. If the native, Participial mode of relativization were used in this sentence, we would get (20D).

(20D) nīnu ninne nōḍida huḍugiyu kivuḍaḷu iddāḷe.

There is only one finite verb in (20D), iddāḷe 'is', and the relative clause is linked to the main clause by means of the relative participle nōḍida (from nōḍu 'to see').

The Non-part. rel. clause is obviously an exception to the general principle that, in Kannada, sentences embedded in NP employ the relative participle as the linking element. Consequently, the principle loses its generality and may have to be stated as a part of each individual transformation of which it is true. It is surmised that the Non-part. rel. clause began to be used in Kannada around 900 A.D.[5] This would mean that what was a general property of a certain group of transformations in the language until 900 A.D. has since lost its generality as a consequence of syntactic borrowing.

I think we have now an explanation why the complement clause in (12D) uses the relative participle as the linking element, and also why in (1D), even when a complementizer is

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used, this complementizer emba resembles a relative participle derivable from ennu 'to say'. Common to both these types of complementation is the feature 'relative participle', which, as we have now seen, marks most types of sentential embedding in NP. Therefore, it seems to me reasonable to analyze the complementizer emba in (1D) as a complementizing element X plus the feature relative participle. I suggest that this complementizing element X is ennu. That is, there are two formatives ennu in Kannada, one, the familiar verb meaning 'to say', and the other, the complementizer. When used as a complementizer, ennu, of course, is not a verb, and therefore, we would not expect it to have the various derived forms such as the relative participle, which a regular verb in the language has. But it seems to me that analogy is at work here, and because of the phonological identity between the complementizer ennu and the verb ennu, we get the surface form emba (ennuva) when either of them is conjoined with the feature 'relative participle'. This explanation may seem a bit fanciful but it seems to me entirely plausible in the light of our discussion so far.

endu is another formative in the language which is also used as a linking element and which is identical in form with the verbal participle of the verb ennu. endu is generally used as a linking element to embed sentences in VP.

(21D) gōpālanu sītege spardheyalli bhāgavahisa bēku endu ottāya paḍisidanu.

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'Gopal urged Sita to take part in the competition.'

(22D) gōpālanu ōḍi hōga bēku endu prayatnisidanu.

'Gopal tried to run away.'

In (21D), spardheyalli bhāgavahisa bēku '(Sita) should take part in the competition' may be considered as a sentence embedded in VP. Similarly, ōḍi hōga bēku '(he) should run away' in (22D) also comes from a sentence embedded in VP. Notice that both these are linked to the main clause by means of endu. It is not clear whether these embedded sentences are instances of VP complementation or of nominalization. In any case, they originate as sentences embedded in VP. We may therefore analyze endu which occurs in (21D) and (22D) as the complementizer or linking element ennu plus the feature 'verbal participle'. This is exactly like treating emba which occurs in some types of nominal complementation as the verbal complementizer ennu plus the feature 'relative participle'.

Let us now return to the derivation of (1D) and (12D), which are repeated here for convenience of reference.

(1D) gōpālanu bīdiyalli kuṇidanu emba sangati nijavu ide.

(12D) gōpālanu bīdiyalli kuṇida sangati nijavu ide.

'The fact that Gopal danced in the street is true.'

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We may assume that both these sentences come from the same underlying structure since they are semantically identical and also very close in surface structure. We have already formulated (10D) as the underlying structure of (1D).

(10D) $(_{NP}\ (_{S}$ gōpālanu bīdiyalli kuṇidanu $)_{S}$
$(_{N}$ sangati $)_{N}\ )_{NP}$ nijavu ide.

Earlier in this section, we derived (1D) from this underlying structure by applying the Comp. insert. tr. (11). I now suggest a revision in that transformation. Let us assume that the complementizer introduced by this transformation is not emba but ennu. Further let us also stipulate that this transformation is optional. Following this, is an obligatory transformation which merely introduces the feature [+ relative participle]. In the derivation of (1D), both these transformations apply. The optional Comp. insert. tr. applies first, and introduces the formative ennu. Then the Relative participle insertion transformation applies and introduces the feature [+ relative participle]. Now this feature is attracted by or attached to the complementizer ennu, and owing to the operation of analogy, as suggested earlier, we get the surface form emba in (1D). In the derivation of (12D), the optional Comp. insert. tr. does not apply, but the obligatory Rel. prt. insert. tr. applies. In this case, the feature [+ relative participle] is attracted by the verb of the embedded complement clause, and we get the relative participle kuṇida from kuṇi 'to dance' in (12D).

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Derivation of (1D)

(10D) $(_{NP}\ (_{S}$ gōpālanu bīdiyalli kuṇidanu $)_{S}$
$(_{N}$ sangati $)_{N}\ (_{NP}$ nijavu ide

Comp. insert. tr. ⟹

(1'D) gōpālanu bīdiyalli kuṇidanu ennu sangati nijavu ide

Rel. prt. insert. tr. ⟹

(1''D) gōpālanu bīdiyalli kuṇidanu ennu + rel. prt. sangati nijavu ide

(1D) gōpālanu bīdiyalli kuṇidanu emba sangati nijavu ide.

Derivation of (12D)

(10D) $(_{NP}\ (_{S}$ gōpālanu bīdiyalli kuṇidanu $)_{S}$
$(_{N}$ sangati$)_{N}\ )_{NP}$ nijavu ide

Rel. prt. insert. tr. ⟹

(12'D) gōpālanu bīdiyalli kuṇidanu + rel. prt. sangati nijavu ide.

(12D) gōpālanu bīdiyalli kuṇida sangati nijavu ide.

It is interesting that the Konkani sentences (1N) and (12N) can also be derived exactly the same way. We have already seen that (1N) and (12N) have the underlying structure (10N) which is represented by the tree diagram (9), which also represents the underlying structure of the Kannada sentences (1D) and (12D).

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Derivation of (1N)

(10N) $(_{NP}\ (_{S}$ gopāḷu rastyāri nãclo $)_{S}$
$(_{N}$ khabbari $)_{N})_{NP}$ khəri āssa

Comp. insert. tr. ⟹

(1'N) gopāḷu rastyāri nãclo mhəṇa khabbari khəri āssa.

Rel. prt. insert. tr. ⟹

(1''N) gopāḷu rastyāri nãclo mhəṇa + rel. prt. khəri āssa

(1N) gopāḷu rastyāri nãclo mhaḷḷi khabbari khəri āssa.

I am suggesting here that, in Konkani, the complementizer is mhaṇa (which is identical in form with the verb mhəna 'to say'), and that, just as in Kannada, the feature [+ relative participle] is attracted by this complementizer in the derivation of S-Comp-N complementation as shown above.

Derivation of (12N)

(10N) $(_{NP}$ gopāḷu rastyāri nãclo $)_{S}$ $(_{N}$ khabbari $)_{N}$
khəri āssa

Rel. prt. insert. tr. ⟹

(1'2N) gopāḷu rastyāri nãclo + rel. prt. khabbari khəri āssa

(12N) gopāḷāne rastyāri nãcilli khabbari khəri āssa.

Thus we see here that the derivation of (1N) and (12N) matches in every respect the derivation of (1D) and (12D).

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The change from gopāḷu in (12N) to gopāḷāne (gopāl + instrumental) is a peculiar Indo-Aryan feature which Konkani has retained. The past relative participle in these languages has the significance of the passive, and this explains the instrumental case in gopāḷāne. The complement clause in (12N) is gopāḷāne rastyāri nãcilli, and formally, this clause is identical with a Participial relative clause in the language. This shows that the Participial relative clause and the S-N complement clause in Konkani are identical in their surface form. We have already seen that this is true of Kannada as well.

The analysis of the two kinds of complement structures suggested here enables us to make a significant prediction. In the derivation of (1D), the complementizer ennu attracts the feature [+ relative participle]. Since ennu in this context is not a regular verb, it does not have the feature composition of a regular verb, i.e. it does not have features such as tense, aspect, mood, etc. Therefore, we would not expect in (1D) all the different kinds of relative participles that are derivable from the verb ennu, such as past continuous, present perfect, past negative, etc. In (1D), it should be possible to get at best only one, the most neutral, type of relative participle. On the other hand, in the case of (12D), the element that attracts the feature [+ relative participle] is the regular verb kuṇi 'to dance', and since it is a verb, kuṇi has all the features of a

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règular verb, viz. tense, aspect, mood, etc. Depending upon its feature composition, we should be able to get in (12D) all the different types of relative participles. And this is exactly what we find. In (1D), only the present relative participle of ennu (emba) can occur, while in (12D), every possible type of relative participle derivable from kuṇi can occur. I consider this as a significant fact that goes in favor of the analysis of complement clauses suggested here.

(1D) gōpālanu bīdiyalli kuṇidanu { emba / *ennuttiruva / *ennadidda / *enda }
(rel. prt.: present cont.)
(" " : past negative)
(" " : past)

sangati nijavu ide.

(12D) gōpālanu bīdiyalli { kuṇida / kuṇiyuva / kuṇiyadidda / kuṇiyuttiruva }
(rel. prt.: present)
(" " : past neg.)
(" " : present cont.)

sangati nijavu ide.

C. S-COMP-It Complementation

(23D) gōpālanu bīdiyalli kuṇidanu EMBUDU nijavu ide.

(23N) gopāḷu rastyāri nãclo MHAḶḶE khərẽ āssa.

'That Gopal danced in the street is true.'

In these sentences, the complement clause is not on a regular noun but on a PROnoun. Otherwise (23D) and (23N) are exactly like (1D) and (1N) respectively.

In (23D), gōpālanu bīdiyalli kuṇidanu is a complement clause on the PROnoun adu 'it', and emba is the

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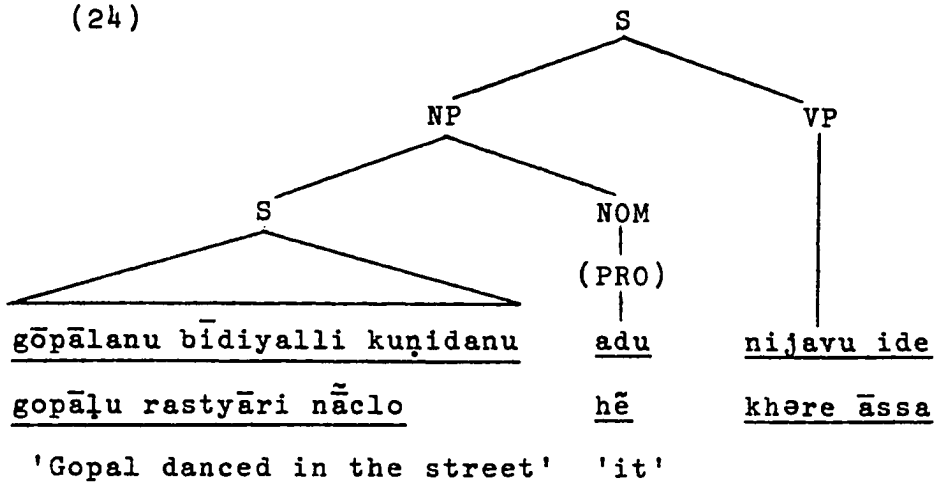
complementizer (emba + adu = embudu). In (23N), gopāḷu rastyāri nãclo is a complement on the PROnoun hẽ 'it', and mhaḷḷẽ is the complementizer. Observe that the PROnoun hẽ does not occur in the surface structure of (23N). Furthermore, mhaḷḷi which occurs as the linking element in (1N) does not occur in (23N). We have instead mhaḷḷẽ in (23N). Before we proceed to explain these and other related issues arising out of the analysis proposed here, we may take a brief look at the derivation of (23D) and (23N).

The underlying structure of (23D) and (23N), which is identical with that of (1D) and (1N) respectively except for the head noun to which the complement is attached, may be represented by the following tree diagram.

(24)



To this underlying structure, we apply the same two transformations which were applied to derive (1D) and (1N), viz. the Comp. insert. tr. and the Rel. prt. insert. tr.

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(24D) $(_{NP}\ (_{S}$ gōpālanu bīdiyalli kuṇidanu $)_{S}$
$(_{N}$ adu $)_{N})_{NP}$ nijavu ide

Comp. insert. tr. ⟹

(24'D) gōpālanu bīdiyalli kuṇidanu ENNU adu nijavu ide.

Rel. prt. insert. tr. ⟹

(24''D) gōpālanu bīdiyalli kuṇidanu <u>ENNU + rel. prt. adu</u> nijavu ide

(24'''D) gōpālanu bīdiyalli kuṇidanu <u>EMBA + adu</u> nijavu ide.

(23D) gōpālanu bīdiyalli kuṇidanu <u>embudu</u> nijavu ide.

Surface evidence in (23D) supports our analysis of the embedded clause in the sentence as a complement on the PROnoun <u>adu</u> 'it'. Observe the form <u>embudu</u> (<u>emba</u> + <u>udu</u>) in (23D). <u>udu</u> is a variant of <u>adu</u> 'it' frequently occurring in Old and Medieval Kannada but now found only in combination with the relative participle as in <u>māḍidudu</u> (<u>māḍida</u> + <u>udu</u>), <u>baredudu</u> (<u>bareda</u> + <u>udu</u>), etc. Thus the PROnoun <u>adu</u> (<u>udu</u>) is actually present in the surface structure of (23D). In Kannada, <u>adu</u> is also the neuter, singular, third person pronoun. I have called the head noun of the subject NP in (23D) a PROnoun because the semantic features associated with the neuter, singular, third person pronoun do not seem to be relevant to this head noun.

It must be pointed out that <u>māḍidudu</u> and <u>baredudu</u> have also the meaning 'that which is done/that which someone does'

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and 'that which is written/that which someone writes' respectively. Since like these two forms, embudu can also be analyzed as the relative participle emba followed by adu, embudu can also have the meaning 'that which is said/that which someone says'. If this interpretation of embudu were possible in (23D), it would mean that the clause embedded in the sentence is a relative clause and not a complement clause. But such an interpretation is not possible in (25D) for the same reason that the clause embedded in (1D) cannot be interpreted as a relative clause; there is no appropriate deep structure constituent sentence which would allow us to interpret the embedded clause in (23D) as a relative clause.

There is adequate evidence for the S-It analysis of the complement clause in (23D) because adu (udu) 'it' actually occurs in the surface form of the sentence. But the equivalent PROnoun hẽ 'it' does not occur in the Konkani sentence (23N). What then is the justification for the S-It analysis of the complement clause in this sentence?

The subject constituent of (23N) is gopāḷu rastyāri nãclo mhaḷḷẽ. This constituent is therefore an NP, and the head of this NP must be mhaḷḷẽ because the rest of this constituent, i.e. gopāḷu rastyāri nãclo 'Gopal danced in the street' is the full complement clause. Since the head of an NP can only be a noun or a nominal, mhaḷḷẽ here must be a noun. Now according to our analysis so far, mhaḷḷẽ is the linking element and consists of the complementizer mhəṇa

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plus the feature 'relative participle'. That is, in form, mhaḷḷẽ is a relative participle. But it must also be a noun because it is also the head of the NP.

Now in most Indo-Aryan languages, relative participles also function as substantives and even as participial nouns, although the term 'participial noun' is not generally used in grammars of these languages. 'Participial noun' is a term generally used in grammars of Dravidian languages, and in these languages, participial nouns and relative participles are generally distinct in form. I wish to suggest that participial nouns also occur in Konkani where they are identical in form with the corresponding relative partici ples. Let us take the verb ōḍu 'to run' in Kannada, and dhãvã 'to run' in Konkani, and let us examine the present relative participles and participial nouns derivable from them in each language. In Kannada, the relative participle has no concord with the following noun in gender and number, but such concord exists in Konkani.

(25D) present relative participle of the verb õḍu 'to run' followed by a noun in Kannada:

i. ōḍuva huḍuga 'the boy who runs'

ii. ōḍuva huḍugi 'the girl who runs'

iii. ōḍuva nāyi 'the dog which runs'

(26D) present participial nouns from the relative participle ōḍuva:

i. ōḍuva + avanu = ōḍuvavanu 'the one (masc.) who runs'

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ii. ōḍuva + avaḷu = ōḍuvavaḷu 'the one (fem.) who runs'

iii. ōḍuva + adu = ōḍuvudu 'the one which runs'

(25N) present relative participle of dhãvã 'to run' followed by a noun in Konkani:

i. dhãvtalo callo 'the boy who runs'

ii. dhãvtali calli 'the girl who runs'

iii. dhãvtalẽ sūṇẽ 'the dog which runs'

(26N) present participial nouns from the relative participle of dhãvã in Konkani:

i. dhãvtalo + ∅ = dhãvtalo 'the one (masc.) who runs'

ii. dhãvtali + ∅ = dhãvtali 'the one (fem.) who runs'

iii. dhãvtalẽ + ∅ = dhãvtalẽ 'the one which runs'

Notice that the participial nouns in (26N) are identical in form with the relative participles in (25N). dhãvtalẽ, for example, is the neuter participial noun in Konkani (26N.iii), and it is also the neuter relative participle (25N.iii). Observe that, in Kannada, participial nouns and the corresponding relative participles are distinct in form.

This suggests that mhaḷḷẽ in (23N) is not mhəṇa + relative participle, but a participial noun derived from the relative participle of mhəṇa. mhəḷḷẽ in (23N) performs exactly the same function that embudu performs in (23D). We have analyzed embudu as ennu + relative participle + the PROnoun adu 'it'. mhəḷḷẽ in (23N) has also the same analysis, viz. the complementizer mhəṇa + relative participle + the PROnoun 'it'. The PROnoun in Konkani is hẽ.

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Notice also the forms of the adjective 'true' in (1N) and (23N). In the former, we have khəri, while in (23N), we have khərẽ. Konkani, like most Indo-Aryan languages (and also like most Dravidian languages), has subject noun--predicative adjective concord. (1N) has khəri, the feminine singular form of the adjective 'true', because the subject of this sentence is khabbari 'news/fact', which is feminine and singular. khərẽ, which occurs in (23N), is the neuter singular form of the adjective 'true'. This confirms our conclusion that the subject noun of this sentence has to be hẽ, which is neuter and singular.

We can now see how (23N) is derived. The underlying structure of this sentence is represented by (24).

(24N) $(_{NP}\ (_{S}$ gopāḷu rastyāri nãclo $)_{S}\ (_{N}$ hẽ $)_{N}\ )_{NP}$
khərẽ āssa

Comp. insert. tr. ⟹

(24'N) gopāḷu rastyāri nãclo MHĀṆA hẽ khərẽ āssa.

Rel. prt. insert. tr. ⟹

(24''N) gopāḷu rastyāri nãclo MHĀṆA + rel. prt. + hẽ
khərẽ āssa.

At this stage, from mhəṇa + rel. prt. + hẽ we get mhaḷḷẽ. I wish to emphasize here that this does not mean that the PROnoun he 'it' is deleted syntactically. It happens to be the case that, in Konkani, mhəṇa + rel. prt., and mhəṇa + rel. prt. + hẽ have the same morphological realization, viz. mhaḷḷẽ. Thus from (24''N), we get (23N).

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(23N) gopāḷu rastyāri nãclo mhaḷḷẽ khərẽ āssa.

D. S-It Complementation

(27D) gōpālanu bīdiyalli kuṇidudu nijavu ide.

(27N) gopāḷāne rastyāri nãcillẽ khərẽ āssa.

'That Gopal danced in the street is true.'

These sentences are exactly like (23D) and (23N) except that there is no complementizer in them.

In (27D), gōpālanu bīdiyalli kuṇida is the complement clause on the PROnoun adu 'it', and in (29N), gopāḷāne rastyāri nãcillẽ is the complement clause on the PROnoun hẽ 'it'. As in S-N Complementation ((12D) and (12N)), the relative participle of the verb of the embedded clause itself is used as the linking element in (27D) and (27N).

Since these sentences are identical in every respect with (23D) and (23N) except in the linking device used, they may be assumed to have been derived from the same underlying structures from which (23D) and (23N) are derived, viz. (24D) and (24N).

Derivation of (27D)

(24D) $(_{NP}\ (_{S}$ gōpālanu bīdiyalli kuṇidanu $)_{S}$
$(_{N}$ adu $)_{N}\ )_{NP}$ nijavu ide

Rel. prt. insert. tr. ⟹

(27'D) gōpālanu bīdiyalli kuṇidanu + rel. prt. adu nijavu ide

(27''D) gōpālanu bīdiyalli kuṇida + adu nijavu ide.

(27D) gōpālanu bīdiyalli kuṇidudu nijavu ide.

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The only difference between the derivation of this sentence and of (23D) is that the optional Comp. insert. tr. which applies in the case of the latter does not apply here.

Before we proceed to the derivation of the Konkani sentence (27N), it is necessary to make some observations regarding the form kuṇidudu which occurs in (27D). Now a form like kuṇidudu of kuṇidaddu can come from three different sources; from complementation as in (27D), from relativization and from nominalization. It is therefore necessary to show that kuṇidudu in (27D) in fact comes from complementation as I have assumed and not from any of the other two possible sources.

This ambiguity and its nature have so far not been recognized fully. Students of Kannada such as Spencer (1950) have noted that a form like māḍuvadu or māḍuvudu can be either a nominalization, meaning 'doing', or a relative participle māḍuva (from the verb māḍu 'to do') on the pronoun adu, meaning 'that which someone does'. It is my contention that such a form can also originate from complementation. Consider the form hāḍuvadu from hāḍu 'to sing'.

(28D) avanu hāḍuvadu bēndreyavara bhāvagīta.
(Relativization)

'That which he sings is Bendre's lyric.'

(29D) avanu hāḍuvadu suśrāvyavāgi iruttade.
(Nominalization/Relativization)

'His singing is pleasant to listen to.'
(Nominal.)

'That which he sings is pleasant to listen to.'
(Rel.)

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(30D) avanu dakṣinādi hāḍuvadu suḷḷu.
(Complementation)

'That he sings Karnatak style is untrue.'

avanu hāḍuvadu occurs in all these three sentences; its source in each sentence is indicated in parentheses. (29D) is ambiguous as indicated. In (28D), avanu hāḍuvadu consists of the relative clause avanu hāḍuva on the pronoun adu 'it/that'. In (30D), avanu dakṣinādi hāḍuva is an S-It type of complementation on the PROnoun adu.

Traditionally, only two analyses of a form like hāḍuvadu have been recognized. A grammarian such as Spencer would agree with my analysis of hāḍuvadu in (28D). This construction is traditionally described as "the neuter demonstrative pronoun adu (udu) ... qualified by the relative participle attached to it" (Spencer 1950:221). Spencer would recognize hāḍuvadu in (29D) as a kridanta bhāva nāma (verbal noun). But since traditional grammars do not recognize the distinction between complementation and relativization, they do not recognize the syntactically distinct status of hāḍuvadu in (30D).

Let us briefly consider how these three sentences are derived. At the present time, it is not clear to me whether the nominalized formative hāḍuvadu in (29D) is lexically derived or transformationally derived. If it is lexically derived, then it is syntactically distinct from hāḍuvadu in (30D), since the latter is transformationally derived. Even if we assume that the nominalized formative hāḍuvadu in (29D)

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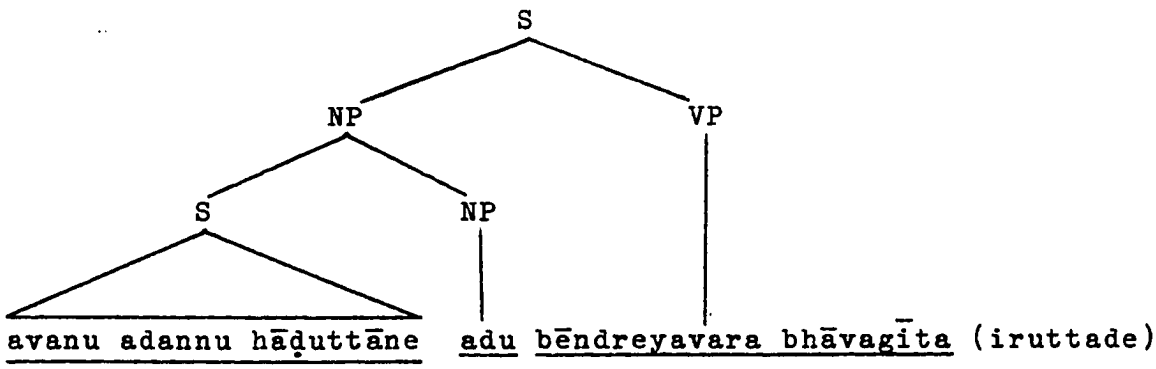
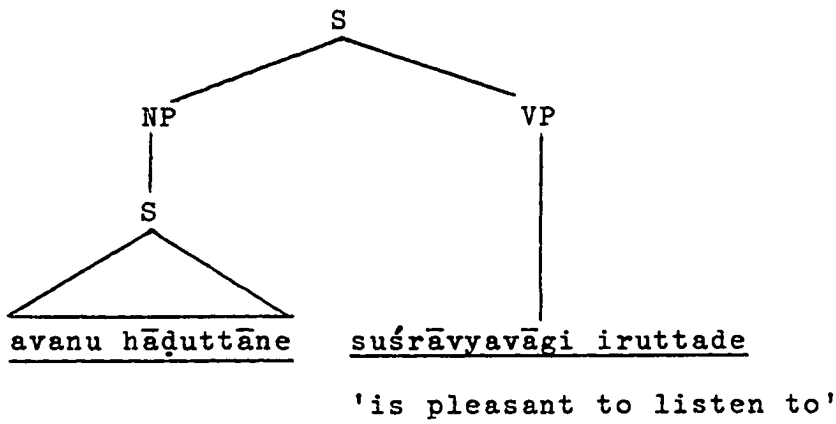
is transformationally derived, it can be shown that it comes from a different underlying source from that from which hāḍuvadu in (30D) is derived. The underlying structures of (28D), (29D) and (30D) are represented by the tree diagrams (31D), (32D) and (33D) respectively.

(31D) Relativization



(32D) Nominalization[6]



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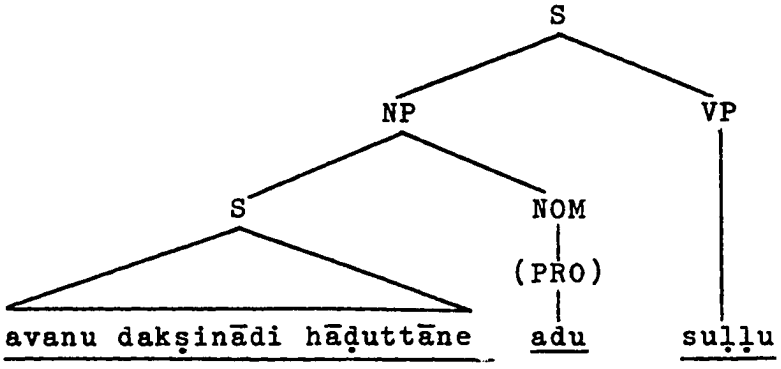
(33D) Complementation



'He sings Karnatak music' 'it' 'is untrue'

Now it is necessary to show that (30D) could not have come from an underlying structure such as (31D) or (33D).

Relativization requires that there be an identical noun in the matrix and constituent sentences, as is the case in (31D). In (33D), there is no such identical noun. If we were to adapt the deep structure components of (30D) to conform to the deep structure configuration represented by (31D) and to the identity condition required by the relativization transformation, we would need the following matrix and constituent sentences.

(34D) a. avanu adannu dakṣinādi hāḍuttāne.
(Constituent S)

'He sings that (in) the Karnatak style.'

b.*adu suḷḷu. (Matrix S)

'That is untrue.'

The matrix sentence here is semantically anomalous, because adu 'that' can refer here only to a song or a musical composition, and a song cannot be true or untrue. Suppose we

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ignored this anomaly and applied the Part. rel. tr. to these components, then we would get (35D).

(35D) ?avanu dakṣinadi hāḍuvadu suḷḷu.

'That which he sings (in) the Karnatak style is untrue.'

(35D) is only marginally possible. Furthermore, although it is identical in form with (30D), it is not the same sentence as (30D), since they do not have the same semantic interpretation. Therefore, we may conclude that the embedded clause in (30D) is not a relative clause, and hāḍuvadu in that sentence is syntactically different from the identical form in (28D).

I indicated above that (29D) is ambiguous in that avanu hāḍuvadu in that sentence can come either from nominalization or from relativization. Since my purpose here is to show that hāḍuvadu in (30D) could not have come from nominalization, I shall confine myself here to the nominalization interpretation of the embedded clause in (29D).

Since not enough is known about the syntactic properties of nominalization in Kannada, I shall merely show that none of the transformations that apply to the underlying structure represented by (33D) apply to the deep structure from which (29D) is derived, viz. to (32D). I have assumed here that (33D) represents an underlying structure to which the typical complementizing transformations can apply. Thus the Comp. insert. tr. and the Rel. prt. insert. tr. can be

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applied to (33D). If on the other hand, we decide to derive from it an S-It type of complement clause, we may apply to it only the Rel. prt. insert. tr., and the resulting sentence would be (30D). Let us take the former alternative.

(33D) $(_{NP}\ (_{S}$ avanu dakṣināḍi hāḍuttāne $)_{S}$
$(_{N}$ adu $)_{N}$ suḷḷu

Comp. insert. tr. ⟹

(36D) avanu dakṣināḍi hāḍuttāne ENNU adu suḷḷu

Rel. prt. insert. tr. ⟹

(37D) avanu dakṣināḍi hāḍuttāne <u>ENNU + rel. prt. adu</u> suḷḷu.

(38D) avanu dakṣināḍi hāḍuttāne <u>embudu</u> suḷḷu.

'That he sings Karnatak style is untrue.'

I have characterized the underlying structure represented by (32D) as the one in which the embedded clause is nominalized. Now if we adapt this structure to the configuration (33D), and apply to it the two complementizing transformations, we get an ungrammatical sentence, i.e. we do not get (29D).

(32D) $(_{NP}\ (_{S}$ avanu hāḍuttāne $)_{S}\ (_{N}$ adu $)_{N}$
suśrāvyavāgiruttade

Comp. insert. tr. ⟹

(39D) avanu hāḍuttāne ENNU adu suśrāvyavāgiruttade.

⟹

(40D) avanu hāḍuttāne <u>ENNU + rel. prt. adu</u>
suśrāvyavāgiruttade

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(41D) *avanu hāḍuttāne embudu suśrāvyavāgiruttade.

*'That he sings is pleasant to listen to.'

Thus we see that in order to get hāḍuvadu in (28D), (29D) and (30D), we need three different sources; hāḍuvadu in (30D) comes neither from relativization nor from nominalization. It comes from a complement source. What is true of hāḍuvadu in (30D) is also true of kuṇidudu in (27D) for the same reasons.

So far, we have been examining the Kannada sentence (27D). Now we turn to its Konkani counterpart (27N), which is repeated here for convenience of reference.

(27N) gopāḷāne rastyāri nãcillẽ khərẽ āssa.

'That Gopal danced in the street is true.'

Just as in (27D), here too there is a complement clause on the PROnoun 'it' (hẽ). There is no complementizer in this sentence, and the relative participle of the verb of the complement clause itself is used as the linking device. The underlying structure of this sentence is the same as that of (23N), viz. (24N).

(24N) $(_{NP}\ (_{S}$ gopāḷu rastyāri nãclo $)_{S}\ (_{N}$ hẽ $)_{N}$
khərẽ āssa

The PROnoun hẽ, which occurs in the underlying structure, does not show up in the surface form of (27N). This is because, in this language, the relative participle and the participial noun are identical in form. This has been explained at some length earlier in this section. It was

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pointed out that mhaḷḷẽ in (23N) is the complementizer mhəṇa + relative participle + PROnoun hẽ. For exactly the same reason, nãcillẽ in (27N) has to be analyzed as the verb nãca 'dance' + relative participle + the PROnoun hẽ. That means that the PROnoun is there syntactically, but it has been assimilated in the form nãcillẽ. Now this morphological assimilation becomes possible because hẽ is preceded by a relative participle. Now if it were possible to embed the complement clause in (27N) without making use of the feature 'relative participle' as the linking element, the PROnoun hẽ should not undergo assimilation of any sort, and we would expect it to show up in the surface form. It happens to be the case that such an alternative way of embedding the complement clause is available in Konkani.

(42N) hẽ khərẽ ãssa KI gopāḷu rastyāri nãclo.
comp. cl.

'It is true that Gopal danced in the street.'

If we compare (42N) with its underlying structure (24N), we notice that the complement clause is extraposed to the right in (42N). Now this reminds us that Konkani is after all an Indo-Aryan language, because extraposition of relative and complement clauses is possible in Indo-Aryan languages in most cases. Dravidian languages do not allow extraposition of any clause. This topic will be taken up for detailed examination in the next section. Here it is enough to note that, when the complement clause is extraposed, the PROnoun

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hẽ shows up in Konkani as in (42N). This is because it is not preceded by a relative participle as in the non-extraposed case (27N). This evidence strongly supports the S-It analysis proposed here for certain types of complement clauses in Konkani.

Notice that when the complement clause is extraposed as in (42N), the complementizer used is ki. As we shall see in the next section, ki/ke is the complementizer used by most Indo-Aryan languages such as Marathi, Hindi, Gujarati, and by Goan Konkani.

Now we have three sentences in Konkani, (23N), (27N) and (42N), all of which come from the same underlying structure (24N). It has already been shown that (23N) can be derived from this underlying structure by applying the Comp. insert. tr. and the Rel. prt. insert. tr. If we apply the Rel. prt. insert. tr. to (24N), we get (27N).

(24N) $(_{NP}\ (_{S}$ gopāḷu rastyāri nãclo $)_{S}\ (_{N}$ hẽ $)_{N}\ )_{NP}$
khərẽ āssa

Rel. prt. insert. tr. ⟹

(27'N) gopāḷu rastyāri nãclo + rel. prt. + hẽ
khərẽ āssa

(27N) gopāḷāne rastyāri nãcillẽ khərẽ āssa.

Notice that nãcillẽ in (27N) comes from the elements underlined in (27'N).

It is significant that in the derivation of (42N), in which the complement clause is extraposed, neither the Comp.

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insert. tr. nor the Rel. prt. tr. is involved. This is quite natural since both these transformations are typically Dravidian, and extraposition is typically Indo-Aryan and non-Dravidian. Only Dravidian languages use as a complementizer a formative which also occurs in these languages as a verb meaning 'to say', and the use of the feature 'relative participle' to link sentences embedded in NP is also typically Dravidian. So it would seem that Konkani has to turn to the Indo-Aryan part of its grammar to get the extraposed complement clause in (42N). The transformation which extraposes the complement clause must be an optional rule, and it must precede the Comp. insert. tr. and the Rel. prt. insert. tr., both of which Konkani seems to have borrowed from Kannada. The effect of this borrowing has been that the native, Indo-Aryan, extraposition rule has been pushed to a greater depth in the grammar of Konkani. Thus we need three rules in Konkani which are ordered as follows:

(i) Extraposition (optional)

(ii) Comp. insert. (optional)

(iii) Rel. prt. insert. (obligatory)

If the extraposition rule applies, the other two rules cannot apply, because the string meeting the structural description of either of these transformations will not be available. If the extraposition rule is not ordered first, it cannot apply at all. If rule (i) applies to (24N), we get (42N), if rules (ii) and (iii) apply, we get (23N), and if rule (iii) applies, we get (27N). (42N) may be derived as follows:

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(24N) $(_{NP}\ (_{S}$ gopāḷu rastyāri nãclo $)_{S}\ (_{N}$ hẽ $)_{N}$
khərẽ āssa

Extraposition
⟹

(42N) hẽ khərẽ āssa ki gopāḷu rastyāri nãclo.

'It is true that Gopal danced in the street.'

In summary then, Kannada and Konkani both have the following four types of nominal complements:

(A) S-Comp-N exemplified by (1D) and (1N)

(B) S-N exemplified by (12D) and (12N)

(C) S-Comp-It exemplified by (23D) and (23N)

(D) S-It exemplified by (27D) and (27N)

To derive these complement structures, we need the following two transformations:

(i) Comp. insert. (optional)

(ii) Rel. prt. insert. (obligatory)

In Konkani, however, we need in addition the extraposition transformation to derive sentences like (42N).

This over-all scheme can be further simplified. The only difference between S-Comp-N and S-Comp-It complements is that, in the former, the complement clause is attached to a regular noun such as sangati 'fact/news', sūcane 'suggestion', etc., while, in the latter, the complement is attached to the PROnoun. But the PROnoun and a regular noun are both nominals, and in the deep structure, both are dominated by the same node NOM. Therefore these two types of complements may be said to represent the same kind of

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structure. Similarly, S-N and S-It complements represent the same structure, since the PROnoun it is also a noun. Thus we may say that the grammar of nominal complementation in Kannada and Konkani consists essentially of two types of complement structures, one of which uses the complementizer, and the other which does not.

Not all nouns take a complement clause. Only those nouns which have the subcategorization feature [S___] can take a complement. Nouns which have this feature in Kannada include sūcane 'suggestion', suddi 'news', vicāra 'idea', mātu 'statement/fact', tattva 'principle', siddhānta 'proof', and so on. Most of these words also occur in Konkani with the same meaning and with the subcategorization feature [S___].

In all the examples discussed so far, the noun which has the complement clause on it happens to be the subject of the sentence. But NP can also occur in other positions in a sentence, as an object, as an object of a postposition, as part of an adverbial constituent, and so on. NP's in all these positions can have complement clauses embedded in them, if the head noun of the NP has the feature [S___].

Section 2

In the preceding section, I gave an account of nominal complementation in Kannada and Konkani with a single analysis consisting of four types of complement structures and two transformations. Some differences between these two

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languages were also noted. In Konkani, there is concord between the relative participle and the noun it modifies, while no such concord obtains in Kannada. We also noted that, in Konkani, the past relative participle has the passive significance, and consequently, the underlying subject of the complement clause occurs in the surface in the instrumental case in S-N and S-It complementation (cf. (12N) and (27N)). This is an Indo-Aryan feature and is not found in Kannada. In Kannada, the relative participle and the participial noun derived from it are distinct in form, while in Konkani, they are identical in form. I do not wish to minimize the significance of these differences. But it must be pointed out that none of these is special to the area of syntax under consideration, and that they all belong to a rather superficial level of the syntax of these languages. There is, however, one important syntactic difference; Konkani, like most Indo-Aryan languages, allows extraposition of complement clauses, while Kannada, like most Dravidian languages, does not allow extraposition at all.

An adequate analysis of noun complementation in any of the Indo-Aryan languages is not yet available, and therefore, it is difficult to judge how much of the grammar presented in section 1 holds good for other Indo-Aryan languages besides Konkani. It seems to me that, although there are some correspondences between languages of these two families with regard to this area of syntax, there are also some clear

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differences. The interesting thing about Konkani seems to be that, in matters in which Indo-Aryan and Dravidian languages differ, it is often closer to Dravidian than to Indo-Aryan. I am making this claim here with specific reference to the syntax of nominal complementation in this language. We have already seen that this is also true in a large measure of the syntax of relativization in this language.

I shall now present evidence which would substantiate this claim, and which would also bring out some of the major differences between Indo-Aryan and Dravidian languages. The Indo-Aryan languages to be examined here are once again Hindi, Gujarati and Marathi. I shall also examine briefly the relevant evidence from Goan Konkani. Recall that Goan Konkani has not come under the same kind of direct impact of Kannada that the dialect of Konkani described here (Saraswat Konkani of the Kanaras) has. We would therefore not expect Goan Konkani to exhibit some of the characteristic Dravidian features which Konkani (of the Kanaras) exhibits.

We may begin by observing that Konkani (of the Kanaras) is the only Indo-Aryan language which employs what may be justifiably called the Dravidian type of complementizer. Most Dravidian languages use as a complementizer a formative which also occurs in these languages as a verb meaning 'to say'. Thus Kannada uses emba (ennu + relative participle) as the nominal complementizer, and endu (ennu + verbal participle) as the verbal complementizer and ennu in this language

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is also a verb meaning 'to say'. Most Indo-Aryan languages, including Goan Konkani, use ki/ke as the complementizer in nominal as well as in verbal complementation. But Konkani uses mhaḷḷo/mhaḷḷi/mhaḷḷẽ (mhəṇa + relative participle + masc./fem./neut.) as the nominal complementizer, and mhoṇu (mhəṇa + verbal participle) as the verbal complementizer, and mhəṇa also occurs in Konkani as a verb meaning 'to say'. I shall show directly that Konkani has not only borrowed the Dravidian complementizer but also the entire syntax that is associated with this complementizer. Konkani also uses the Indo-Aryan complementizer ki but only when the complement clause is extraposed as in (42N).

I will now examine which of the four types of complement clauses that occur in Kannada and Konkani also occur in Indo-Aryan languages. Each of the following sentences contains a complement clause (underlined) on a regular noun (double underlining) linked by a complementizer (in capitals).

(43) Hindi:

(a) yah bāt vicitra hai KI gopāl saṛak par nāc rahā thā.

(b) yah bāt KI gopāl saṛak par nāc rahā thā vicitra hai.

(c) gopāl saṛak par nāc rahā thā yah bāt vicitra hai

(44) Gujarati:

(a) e vāt vicitra che KE gopāl saṛak par nācī rahyo hato.

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(b) e vāt KE gopāl saṛak par nāc̄ī rahyo hato vicitra che.

(c) gopāl saṛak par nāc̄ī rahyo hato e vāt vicitra che.

(45) Marathi:

(a) hī goṣṭa vicitra āhe KI gopāl rastyāvar nācat hota.

(b) hī goṣṭa KI gopāl rastyāvar nācat hotā vicitra āhe.

(c) gopāl rastyāvar nācat hota hī goṣṭa vicitra āhe.

(46) Goan Konkani:

(a) hī gazāl vicitra āssā KI gopāl rastyār nāctālo.

(b) hī gazāl KI gopāl rastyār nāctālo vicitra āssā.

(c) gopāl rastyār nāctālo hī gazāl vicitra āssā.

(47) Kannada:

(a) -

(b) -

(c) gōpālanu bīdiyalli kuṇiyuttiddanu EMBA sangati vicitravu ide.

(48) Konkani:

(a) hī khabbari vicitra āssa KI gopāḷu rastyāri nãctālo.

(b)*hī khabbari KI gopāḷu rastyāri nãctālo vicitra āssa.

(c) gopāḷu rastyāri nãctālo hī khabbari vicitra āssa.

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(a')*khabbari vicitra āssa MHAḶḶI gopāḷu rastyāri nãctālo.

(b')*khabbari MHAḶḶI gopāḷu rastyāri nãctālo vicitra āssa.

(c') gopāḷu rastyāri nãctālo MHAḶḶI khabbari vicitra āssa.

Gloss of (43) through (48): 'This/the news/fact is strange that Gopal was dancing in the street.'

The structure of these sentences may be represented as follows:

(a) 'the fact strange is--COMP--Gopal in the street was dancing'

(b) 'the fact--COMP--Gopal in the street was dancing--strange is'

(c) 'Gopal in the street was dancing-- $\emptyset_{COMP}$ --the fact strange is'

In the (a) sentences, the complement clause is extraposed; in the (b) sentences, the complement clause immediately follows the head noun; and in the (c) sentences, the complement clause immediately precedes the head noun.

Now if we observe the sentences in Hindi, Gujarati, Marathi and Goan Konkani, we can recognize a single Indo-Aryan pattern. The (a), (b) and (c) sentences are possible in all these languages. This shows that, in Indo-Aryan languages, a complement clause can be extraposed, it can occur immediately to the right of the head noun, and it can occur

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immediately to the left of the head noun. In the only Dravidian language under scrutiny here, i.e. in Kannada, only the (c) sentence, in which the complement clause immediately precedes the head noun, is possible; the (a) sentence in which the complement clause is extraposed, and the (b) sentence, in which it occurs immediately to the right of the head noun, are not possible in this language. This is the basic Dravidian pattern. Thus one of the major differences between Indo-Aryan and Dravidian languages is that, although the complement clause can precede the head noun in languages of both the families, only in the former and not in the latter can it also occur immediately to the right of the head noun, or can it be extraposed.

It must also be noted that Hindi, Gujarati, Marathi and Goan Konkani employ the Indo-Aryan complementizer ki/ke in the (a) and (b) sentences, and that they do not use any complementizer at all in the (c) sentences. Furthermore, none of these languages uses the Dravidian type of complementizer. There are at least two interesting facts about the sentence (c) in these Indo-Aryan languages that deserve to be noted. As I just mentioned, there is no complementizer at all in these (c) sentences, nor is there any other element which links the complement clause to the main clause. That is, each of these (c) sentences can be exhaustively divided into two sentences which are syntactically independent of each other. Thus the Marathi sentence (45.c), for example,

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can be split into (49.a) and (49.b) as shown below.

(49) a. gopāl rastyāvar nācat hota.

'Gopal was dancing in the street.'

b. hī goṣṭa vicitra āhe.

'This fact is strange.'

This is unlike the situation in S-N and S-It types of complementation in Kannada and Konkani that we observed in section 1 (cf. (12D), (12N), (27D) and (27N)). In these types of complementation, Kannada and Konkani do not use a complementizer, but they use the relative participle of the complement clause itself as the device that links the complement clause to the main clause. Here then is a fact in Indo-Aryan languages that needs to be explained; these languages use a complementizer when the complement clause immediately follows the head noun and when it is extraposed, but not when it precedes the head noun. Nor is there any other linking element in the situation mentioned last here. The second interesting fact about the (c) sentence in these Indo-Aryan languages is that in actual usage it occurs much more often than the structure represented by the (b) sentence in these languages. Most native speakers of these languages that I have consulted insist that (b) is grammatical but only that it occurs much less frequently than the corresponding (c) sentence. Recall that the (c) sentence exemplifies a structure in which the complement clause precedes the head noun, and also that this is the only structure

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possible in Dravidian languages. Is it possible that the preference that Indo-Aryan languages show for complement structures of type (c) is due to the influence of Dravidian languages?[7] We noted in Chapter 1 that scholars attribute quite a few features exhibited by modern Indo-Aryan languages to the Dravidian substratum influence. It is quite possible that the preference shown by Indo-Aryan languages for the structure exemplified by the (c) sentences is one more such feature.[8]

Let us now turn to the situation in Konkani. I have listed under Konkani above two sets of sentences. The first set (comprising (48.a), (48.b) and (48.c)) employs the Indo-Aryan complementizer ki in (a) and (b), and Ø in (c). The second set (comprising (48.a'), (48.b') and (48.c')) employs the Dravidian complementizer mhaḷḷi. Notice once again that Konkani is the only Indo-Aryan language in which the Dravidian complementizer occurs. The verb mhaṇa 'to say' occurs in Goan Konkani, but cannot be used as a complementizer in that language. Konkani allows extraposition of complement clauses but only when the Indo-Aryan complementizer ki is employed as in (48.a) but not when the Dravidian complementizer mhaḷḷi is used as in (48.a'). Thus using mhaḷḷi for ki in Konkani is not just a question of using one formative for another. Along with the Dravidian complementizer, Konkani has also borrowed much of the syntax that goes with this complementizer. Notice also that (48.b'), in which the

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complement clause occurs immediately to the right of the head noun, is not a possible sentence in the language. This is only to be expected because this sentence has the Dravidian complementizer mhaḷḷi, and as we have seen, Dravidian languages do not allow sentences in which complement clauses occur immediately to the right of the head noun. What is even more remarkable is that even (48.b) is not a possible sentence in the language. We have already seen that these (b) type structures occur rather infrequently even in Hindi, Gujarati, Marathi and Goan Konkani. This tendency seems to have been carried a few steps further in Konkani, and the structure represented by (b) has entirely disappeared from the language. Finally, (48.c) and (48.ċ) are both grammatical and acceptable. This is only to be expected, since in both these sentences, the complement precedes the head noun, which is a characteristic Dravidian trait. Besides, (48.ċ) also has the Dravidian complementizer mhaḷḷi.

So far we discussed complement clauses on regular nouns and which use a complementizer. (The latter is not strictly true of the (c) sentences in Indo-Aryan languages.) Thus these may be called S-Comp-N complement structures. Corresponding to these are sentences in which the complement clause is attached to a PROnoun, the type of structures which I described in section 1 as S-Comp-It complementation. These occur in all the languages under consideration here. In fact, if we delete the head noun (double underlining)

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from each of the sentences in (43) through (48), we get the corresponding S-Comp-It structures in these languages. The observations I made above regarding the S-Comp-N complement structures ((43) through (48)) above also hold true in every respect of their S-Comp-It counterparts. They also show that Konkani is the only Indo-Aryan language which uses the Dravidian type of complementizer, that Konkani has lost the structure in which the complement occurs immediately to the right of the head noun, and that extraposition of the complement clause is possible in Konkani only when the Indo-Aryan complementizer is used.

Since in Kannada, the complement clause can only occur to the left of the head noun, surface evidence in this language would be entirely in favor of assuming that the complement clause is derived in this language from a sentence embedded to the left of the head noun in the underlying structure. Some of the considerations which support the 'left embedding' hypothesis for restrictive relative clauses (cf. Ch. 2) may also be relevant here. In Indo-Aryan languages, however, surface evidence is less clear on this issue. We have seen that in these languages, a complement clause can occur immediately to the right as well as to the left of the head noun. Therefore, we shall have to seek other relevant evidence to determine whether in these languages complement clauses are derived from sentences embedded to the left or to the right of the head noun. It is

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interesting that in Konkani, the surface evidence is identical with that in Kannada; complement clauses in Konkani cannot occur immediately to the right of the head noun. Therefore, it would not be entirely unreasonable to assume that in Konkani too, the complement clause is derived from sentences embedded to the left of the head noun in the underlying structure.

We may now examine whether S-N type of complement structures exist in Indo-Aryan languages such as Hindi, Gujarati, Marathi and Goan Konkani. Recall that in this type of complementation, Konkani and Kannada both use the relative participle of the complement clause itself as the linking element and do not use a regular complementizer (cf. (12D) and (12N)). Recall that I postulated the Rel. prt. insert. tr. to derive S-N complement structures in Kannada, on the ground that it is typical of Dravidian languages to use the feature 'relative participle' to embed sentences in NP. Now notice that among Indo-Aryan languages, S-N complementation is possible only in Konkani; it is not possible in Hindi, Gujarati, Marathi and even in Goan Konkani.

(49) Hindi: *gopālkī saṛak par nācī huyī bāt vicitra hai.

(50) Gujarati: *gopāle saṛak par nāceli vāt vicitra che.

(51) Marathi: *gopālne rastyāvar nācleli goṣṭa vicitra āhe.

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(52) Goan Konkani: *gopālān rastyār nãcleli gazāl vicitra āssā.

(53) Kannada: gōpālanu bīdiyalli kuṇida sangati vicitravu ide.

(54) Konkani: gopāḷāne rastyāri nãcilli khabbari vicitra āssa.

In each of these sentences, the underlined element is the past relative participle of the verb 'to dance'. The fact that S-N complementation is possible only in Konkani and not in the other languages examined here shows once again how close Konkani is to Kannada and to Dravidian languages in its syntax of noun complementation.

Not only has Konkani acquired a typically Dravidian construction, it has also lost a typically Indo-Aryan construction at the same time. There is in most Indo-Aryan languages, a construction whose structure may be represented by means of the following English sentence.

(55) The fact of Gopal's dancing in the street is strange.

Here we have the underlying sentence Gopal danced in the street nominalized to Gopal's dancing in the street, and then linked to the head noun fact by means of the genitive marker of. A construction essentially similar to (55) is possible in Hindi, Gujarati, Marathi and Goan Konkani, but it is not possible in Kannada and in any of the major Dravidian languages. What is significant is that it is not possible in Konkani either.

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(56) Hindi: gopālkī saṛak par nācne kī bāt vicitra hai.

(57) Gujarati: gopālnī saṛak par nācvānī vāt vicitra che.

(58) Marathi: gopālne rastyāvar nāclyāci goṣṭa vicitra āhe.

(59) Goan Konkani: gopālān rastyār nãcillyāci gazāl vicitra āssa.

(60) Kannada: *gōpālanu bīdiyalli kuṇidaddara sangati vicitravu ide.

(61) Konkani: *gopāḷāne rastyāri nãcillyāci khabbari vicitra āssa.

'The fact of Gopal's dancing in the street is strange.'

In (56), the underlying sentence gopāl saṛak par nācā 'Gopal danced in the street' is nominalized to gopālkā saṛak par nācnā 'Gopal's dancing in the street', and then linked to the head noun bāt 'fact' by means of the genitive marker kī. gopālkā becomes gopālkī, and nācnā becomes nācne because in these cases, oblique forms are required. The other five sentences (57)-(61) can be analyzed in the same manner. Observe that the Kannada sentence (60) and the Konkani sentence (61) are both not possible. Thus we once again see here that Konkani is closer to Dravidian languages than to other Indo-Aryan languages.

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Since S-N complementation is not possible in Hindi, Marathi, Gujarati and Goan Konkani (49)-(52), we would not expect these languages to have S-It complementation either. In S-It complementation, the complement clause is attached to a PROnoun, and the relative participle of the verb of the complement clause is used as the sole linking element.

(62) Hindi:?*gopāl kā saṛak par nācā huā vicitra hai.

(63) Gujarati:?*gopāle saṛak par nācelu vicitra che.

(64) Marathi:?*gopālne rastyāvar nāclela vicitra āhe.

(65) Goan Konkani:?*gopālān rastyār nāclele vicitra āssā.

(66) Kannada: gōpālanu bīdiyalli kuṇidudu vicitravu ide.

(67) Konkani: gopāḷāne rastyāri nãcillẽ vicitra āssa.

'That Gopal danced in the street is strange.'

The fact that (62), (63), (64) and (65) are not possible only confirms our earlier conclusion that Indo-Aryan languages cannot embed complement clauses in NP merely by using the relative participle of the verb of the complement clause as the linking element. This is a Dravidian feature which only Konkani among Indo-Aryan languages shares.

The asterisk before the Hindi, Gujarati, Marathi and Goan Konkani sentences (62)-(65) is intended to indicate that these sentences are syntactically not possible if the clause embedded in them is interpreted as a complement structure. In section 1, it was shown that in Indo-Aryan

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languages relative participles and the participial nouns are identical in form. If the underlined elements in (62), (63), (64), (65) and (67) are interpreted as participial nouns which come from relativization on the PROnoun, these sentences are syntactically admissible. But then, they become semantically anomalous, since their meaning would be something like the following: 'that which Gopal danced is strange'. The question mark (?) before these sentences is intended to indicate this.

I observed in the introductory section to this study that, if one were asked to determine the familial affiliations of Konkani solely on the basis of evidence from nominal complementation, he would be more likely to group it with Dravidian languages than with Indo-Aryan. I believe that I have now given enough evidence to justify that observation.

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Footnotes

[1]Kiparsky and Kiparsky (1968) have pointed out that *true* is a non-factive predicate in English, and that it cannot occur with *fact* as its subject. Indian languages, however, do not have a word which is semantically the exact equivalent of *fact* in English. In Kannada, for example, *mātu*, *sangati* and *viṣaya* can all mean 'fact', but they also have additional semantic connotation. But none of these words seem to have the one crucial semantic feature that *fact* has in English, namely, factivity. Therefore the sentence 'The fact that Gopal danced in the street is true/is not true' is not at all odd in Kannada.

[2]I have assumed here that, in Kannada, sentential complements on nouns originate from sentences embedded as a left sister of the head noun in the underlying structure. That is, I have assumed that the phrase structure rule that provides the source of nominal complements is the following: NP $\longrightarrow$ $\hat{S}$ NOM. I am assuming this for the present entirely on the basis of surface evidence. In this language, like restrictive relative clauses, complement clauses always occur immediately preceding the head noun. I have not come across any evidence which would cast doubt on this assumption. Some of the considerations on the basis of which I proposed the 'left embedding' hypothesis for restrictive relative clauses (cf. Ch. 2, sec. 3) are also relevant here.

[3]This long-winded sentence sounds a bit old fashioned in style, but it is not particularly odd or unnatural. A word by word translation of the sentence is given below:

nīvu mumbāi talpida mēle gavarnararu kareda

you Bombay arrived after Governor called

adhivēśanadalli nīvu bheṭṭiyāgalu iruva mukhya

in the conference you to meet going chief

injiniyarara oḍane vicārisi nanage patra

engineer's with having consulted to me letter

baredu tapaśīlavār māhiti kaḷuhisidare

having written in detail information if sent

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nānu nīvu tiḷuhisida ante munduvaredu nāvu

I you informed accordingly having proceeded we

kaikoṇḍa dinadinda idu varege taleśūli koḍuttiruva

undertaken from the day this until headache giving

ī kelasavannu nannínda ādaṣṭu bēga mugisuttēne.

this task by me as possible quickly shall finish

[4]Spencer's analysis of adverbial clauses in Kannada is full of valuable insights, and can easily be incorporated in a transformational study of the language. His discussion of these adverbial clauses occurs in a chapter devoted to relative clauses. If most types of adverbial clauses in Kannada are relative clauses on avyayas (uninflected or indeclinable words), then this suggests that these avyayas are syntactically nouns. This, I think, is a promising approach to avyayas.

[5]Cf. Narasimhia (1941:179).

[6]This analysis of nominalization is extremely tentative. One of the inadequacies of this study is that it does not deal very clearly with the distinction between nominalization and complementation in Kannada.

[7]There are quite a few cases in which modern Indo-Aryan languages have two patterns representing a single syntactic phenomenon, one of which they share with Dravidian languages, and the other which is unique to them. In such cases, it is generally true that Indo-Aryan languages use the pattern which they share with Dravidian languages much more frequently than the pattern which is unique to them. An example of this is the use of the negative particle in these languages. In Sanskrit, the negative particle had considerable freedom of occurrence, rather as in English. The negative element could occur as a constituent of the subject NP, of the object NP, of the verb, and so on. In Dravidian languages, on the other hand, the negative element can only occur as a constituent of the verb. In modern Indo-Aryan languages, the negative particle is generally placed as close to the verb as possible, although it can also occur elsewhere in the sentence. The former pattern is much more frequently used than the latter.

[8]Furthermore, could it be that the (c) type of complement structure even arose in Indo-Aryan languages owing to

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the substratum influence? Perhaps, we will never know because the evidence in Sanskrit is not particularly helpful in deciding such questions. But if this is in fact the case, then it may explain why the (c) sentences under discussion are syntactically rather unusual in that the main clause and the complement clause in these sentences are merely juxtaposed without being syntactically linked in any way.

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Chapter 6

CONCLUDING REMARKS

The primary concern of this dissertation has been the syntax of NP-embedded structures in Kannada, and Kannada has been regarded here as representative of Dravidian languages in general. The main effort in this work has been directed more towards arriving at an explanatory account of the syntactic facts and processes than towards precisely formulating phrase structure and transformational rules. In the study on relativization, an attempt has been made to determine the respective domains of the Participial and the Non-participial relative structures, and it has been shown that, although the latter is a cumbersome, constraint ridden, and very probably, a borrowed structure in Kannada, it is not entirely superfluous in the language. In the study on adjectives, a hypothesis has been suggested which explains why only predicative and not attributive adjectives in this language have concord with the noun they accompany. In Chapter 5, a comprehensive analysis of the different types of nominal complements has been presented, and the crucial role the feature 'relative participle' plays in linking sentences embedded in NP has been examined. Besides, a few other broader hypotheses have also been suggested. Thus, for example, it has been suggested that probably Dravidian languages do not contain any

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reordering transformation in their grammar, and that relative and complement clauses in Dravidian are 'left embedded' in the underlying structure. In the present state of our knowledge of these languages, some of these explanations and hypotheses can only be considered extremely tentative.

Another important objective of this work has been to examine some of the changes that have taken place in the syntax of NP-embedded structures in Konkani as a result of the very close and direct contact this language has had with Kannada for the last 300 years. In Chapter 2, attention has been drawn to some evidence which suggests that, with respect to relativization, Konkani is probably in a state of transition from a purely Indo-Aryan to a predominantly Dravidian syntax. In Chapter 5, I observed that if one were asked to determine the familial affiliations of Konkani solely on the basis of its syntax of noun complementation, he would be more likely to group it with Dravidian than with Indo-Aryan languages. In order to show that the changes in Konkani must in fact be attributed to its contact with Kannada, I presented supporting evidence from other Indo-Aryan languages such as Hindi, Gujarati and Marathi, and also from a dialect of Konkani which has not come under the direct impact of Kannada, namely, Goan Konkani. Thus one of the important findings of this work is that a language can change in its syntax, and change in nontrivial ways under the impact of another language in certain socio-linguistic situations.

Probably the most crucial aspect of the socio-linguistic

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context in this case is the extensive and intensive bilingualism of Konkani speakers. By 'extensive bilingualism' I mean that an active command of Kannada was very widespread in the Konkani speaking community and was not limited to only a few of its members. By 'intensive bilingualism' I mean that Kannada was actually used by Konkani speakers in their daily lives for a wide variety of purposes. It must also be borne in mind that Konkani and Kannada are not just any two languages in close contact, but that they also happen to be languages which share in common the long historical background which, in the opinion of many scholars, has made India linguistically a unified area. That is, even before the ancestors of the present day Konkani speakers migrated from Goa to the Kanaras, these two languages already had many linguistic traits in common by virtue of the fact that they belong to the Indic linguistic area. Thus the contact between Konkani and Kannada in many ways has been a contact between languages which are more alike each other than they are unlike. Finally, it is also important to note that there has not been a standardizing influence of any kind on Konkani. Konkani has rarely, if ever, been used as a literary language, and very few Konkani speakers ever read Konkani because there is very little in the language to read. I do not wish to imply that if Konkani had a flourishing literature, the language would have remained unaffected by the impact of Kannada. But literary dialects generally tend to be

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conservative, and exert to some extent a standardizing influence on the language as a whole. The lack of such an influence has very probably been a contributory factor in laying Konkani entirely open to the impact of Kannada.

Let us now consider briefly some general features of the syntactic changes we observed in Konkani. It is interesting that in quite a few cases Konkani has borrowed structures from Kannada even when it had perfectly adequate equivalent native structures. Thus, for instance, Konkani has borrowed what I described as the Dravidian version of the Non-participial relative clause, although it already had an equally adequate Indo-Aryan version of it. This is indeed an extraordinary phenomenon because there is reason to believe that the Non-participial relative structure came into Dravidian in the first place from Indo-Aryan. In the study on 'Noun Complementation', it has been shown that Konkani has not only borrowed the Dravidian complementizer, but that it has also borrowed the typically Dravidian S-N and S-It complement structures. None of these structures which have come into Konkani from Kannada was really 'needed' in Konkani.

Quite a few of the syntactic changes which have taken place in Konkani as a result of borrowing have been of a non-trivial nature. This is particularly clear in the study on 'Noun Complementation'. The feature 'relative participle' plays the same crucial role in the syntax of all types of

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nominal complements in Konkani as it does in Kannada. I have also shown that in thus moving towards conformity with Dravidian syntax, Konkani has also lost some typical Indo-Aryan complement structures.

Another fact that deserves to be noted is that many of these changes in Konkani center around certain syntactically crucial formatives. Take, for example, mhaḷḷo/mhaḷḷi/mhaḷḷẽ, which is clearly a Dravidian complementizer, although the lexical material from which it is formed is Konkani. Along with this complementizer, the entire Dravidian syntax of complementation that is associated with it has come into Konkani. This can be seen from the fact that a complement clause that is linked by this complementizer cannot be extraposed, and cannot occur immediately to the right of the head noun. As in Dravidian languages, the only position in which such a complement clause can occur is immediately to the left of the head noun. We saw that exactly the same situation exists with regard to relative clauses in this language. When Konkani, like Dravidian languages, uses its interrogative pronouns as relative formatives, it follows strictly the Dravidian syntax of relativization.

One of the typical Indo-Aryan features which is alien to Dravidian languages, and which Konkani has still retained, is extraposition. This does not, however, mean that Konkani has retained just the Indo-Aryan transformational rule which extraposes relative and complement clauses. The

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extraposition rule can apply in Konkani only when the structure involved follows a strictly Indo-Aryan pattern. That is, if it is a complement clause, the complementizer used should be the Indo-Aryan ki and not its Dravidian equivalent (mhaṇa + relative participle), and if it is a relative clause, the relative formative used should be the Indo-Aryan jo, and not its Dravidian counterpart, which is an interrogative pronoun used as the relative formative. Thus we once again see that the crucial syntactic formatives like the complementizer and the relative formative have associated with them an entire syntactic system.

Recall that the potential for extraposition in Konkani has been impaired by mainly two factors. The language employs its Dravidian version of the complement and relative clauses more often than the corresponding Indo-Aryan versions, and the former by virtue of being Dravidian cannot be extraposed. Secondly, in the case of relative clauses, the language has lost the Accusative/Dative, Genitive and Locative forms of the Indo-Aryan pronoun jo. There can be little doubt that all these forms of jo once existed in the language. The language must have lost these forms as a result of long disuse. This was inevitable after the Dravidian version of the relative clause gained prominence in the language. Thus we find that certain syntactically crucial formatives tend to get lost owing to long disuse, and if the trend continues long enough, the grammatical trait which is

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associated with these formatives can also get lost. This has not quite happened in Konkani, since the nominative form of the Indo-Aryan pronoun is still retained in the language, and with it the extraposition of relative clauses. But it seems very likely that if the language had lost even the nominative form of the Indo-Aryan relative pronoun, extraposition of relative clauses as a grammatical trait would also have disappeared from the language. Thus we see in this study not only how a language acquires new grammatical traits but also how it loses some of its native traits.

Research of the kind reported in this work has certain important implications, particularly to the field of Indic linguistics. This has been for the most part a synchronic study of Kannada, and yet in our study of adjectives in this language, we were able to uncover some significant evidence which sheds valuable light on earlier stages of this language. My interpretation of this evidence may be debatable, but the evidence itself is valuable. Thus we see that a consistent application of the transformational model to a synchronic analysis of Indian languages, often sheds illuminating light on the diachronic syntax of these languages.

In this work I have examined some of the changes that have taken place in Konkani owing to the extensive and intensive bilingualism of the Konkani speaking community. Now this situation is in some respects parallel to the situation that obtained when the Aryan tribes first came into contact

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more than 3000 years ago with Dravidians in the northwestern and western India, and with Munda speakers in the eastern Gangetic plains. The invading Aryan tribes too found themselves in an area that was predominantly Dravidian speaking or Munda speaking. 'Bilingualism of a great portion of the mingling peoples' that Andronov (1964) speaks about must have arisen as a result. Of course, the two situations are not entirely parallel. At that stage of early contact, Aryan and Dravidian languages were not as close to each other as Konkani and Kannada were when their direct contact in the Kanaras began. But there was a very strong compensatory factor in the former case which Emeneau (1965) has referred to as 'gradual abandonment of Dravidian speech in favor of Indo-Aryan over a long period and a great area'. In the latter case, there is no evidence that Kannada speakers ever abandoned their language in favor of Konkani. But even if we ignored these differences in the two situations, and considered them essentially as situations of intensive and extensive bilingualism, the 'Dravidianization' of Konkani that we noted in the present work enables us to understand how similar 'Dravidianization' must have occurred in the early Aryan languages. Some of the changes in Konkani, such as the development of the Dravidian complementizer out of native Konkani lexical material, the gradual loss of most of the inflected forms of the Indo-Aryan pronoun jo, and so on, look almost like instances of pidginization. But we know for certain

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that pidginization did not take place in the case of Konkani. The 'Dravidianization' of Konkani took only 300 years, but in the case of Aryan languages in general we have at least a couple of thousand years, if not more, to account for the preponderance of Dravidian traits in them. Therefore, I do not see any real need for the stronger pidginization hypothesis of the kind suggested by Southworth (1968) to account for the 'Dravidianization' of Indo-Aryan languages, particularly in the absence of conclusive historical evidence which would support such a hypothesis.

The present work also brings out clearly some of the differences between Indo-Aryan and Dravidian languages with respect to their syntax of relativization and complementation, although this issue has not been exhaustively dealt with here. Although there is no doubt that languages of both these families share a large number of syntactic traits in common, it is not entirely true that they show a complete correspondence at the level of surface structure. So far, scholars who have examined languages belonging to these two families have been by and large taken in by the fact that the structure most frequently used by Indo-Aryan languages to represent a given syntactic phenomenon is almost always found also in Dravidian languages. But in quite a few cases, there are less frequently used alternatives to some of these structures in Indo-Aryan languages, and these are often alien to the Dravidian structure, and often exhibit Indo-

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European characteristics. In the small area of syntax examined here, we find at least two such features; in Indo-Aryan languages, relative and complement clauses can be extraposed, and in certain rare situations, these clauses can also occur immediately to the right of the head noun. It is quite possible that similar differences still exist between languages of these two families in other areas of their syntax. Once we determine what the various Indo-European characteristics that still persist in modern Indo-Aryan languages are, we will be in a position to examine what implications these have to the deeper aspects of the syntax of these languages. This will help us to determine whether it is in fact true that modern Indo-Aryan languages have essentially the same syntax. On the issue of the feasibility of arriving at a pan-Indic syntax, we have now two conflicting claims, both made by very competent students of modern Indo-Aryan and Dravidian languages. I have in mind Bloch's remark that "... profound as the local influences have been, they have not driven the Aryan of India actually to separate itself from the Aryan of Iran or to become greatly differentiated from other Indo-European languages" (Bloch, 1965:331), and Chatterji's remark that "It is in syntax that Indian Dravidiandom and Aryandom are one" (Chatterji, 1926:176). Much more research of the kind reported in the present work will be needed before we can confidently accept either of these positions, although for the present, I am inclined to favor Chatterji's position if only because it provides a good working hypothesis.

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