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ASPECTS OF KANNADA GRAMMAR

by

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of the requirements for the degree of

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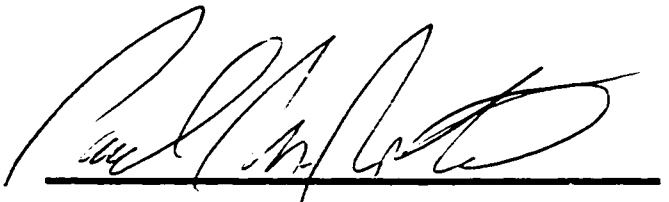

Dissertation Advisor

For Shree

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TABLE OF CONTENTS

ABBREVIATIONS

1 First Person
2 Second Person
3 Third Person

acc.	accusative
AUX	auxiliary
COMP	complementizer
dat.	dative
emph.	emphatic
f	feminine
fut.	future
gen.	genitive
ger.	gerund
imp.	imperative
inc.	inclusive
inf.	infinitive
m	masculine
n	neuter
nom	nominative
npst.	non-past
opt.	optative
pl.	plural
pp.	past participle
prt.	present
prt.p	present participle
pst.	past
rp.	relative participle
Q	question marker
REF.	reflexive
sg.	singular
subj.	subjunctive

ABSTRACT

This dissertation investigates several key aspects of Kannada grammar within Government-Binding (GB) theory.

Chapter 1 argues for a configurational analysis for Kannada and for the existence of functional categories C, Agr, NEG, and TNS. It is shown that the functional category C is obligatorily present in sentences containing sentential operators, and TNS assigns Nominative Case. The role of the functional categories, Agr and NEG, is made clear in Chapters 2&3.

Chapter 2 discusses Kannada null subjects from the perspective of its contribution to the general understanding of Null Subject Parameter, and argues for a null AGR hypothesis. The findings of Chapter 2 reveal that Kannada exhibits both *pro*-drop and non-*pro*-drop language characteristics in different constructions.

Chapter 3 investigates an unusual control phenomenon, and proposes an anaphoric Agr/AGR hypothesis to achieve a unified analysis of Kannada control effects. It is shown that an overall GB approach to control based on certain assumptions fails badly in the context of Kannada data. This study recognizes the role of non-semantic verbal agreement in bringing about control effects. Differing from other analyses, this study distinguishes control structures involving subject control verbs from those involving non-control verbs, and considers control effects in multi-tiered structures as well.

It is shown that the peculiar control phenomenon is essentially a matter of the nature of Agr. It is also shown that a movement analysis of Kannada control is incompatible with a *Barriers* approach. In the non-movement analysis proposed here, the anaphoric Agr/AGR mediates an anaphoric relation between two linguistic elements resulting in control effects. A brief discussion about control in dative subject constructions distinguishes control structures involving rich or null agreement from those involving neuter agreement. It is shown that a neuter Agr, unlike rich and null Agr/AGR, fails to mediate an anaphoric relation between two NPs.

Chapter 4 offers a detailed analysis of the Kannada reflexive auxiliary and long-distance reflexive pronoun. It is shown that the appearance of the Kannada reflexive auxiliary is governed by subtle semantic conditions, which are not handled in the existing GB theory.

CHAPTER 1

INTRODUCTION:

This dissertation offers within the Government-Binding (GB) framework an analysis of key aspects of the grammar of Kannada, of which I am a native speaker. In many ways, Kannada meets the tenets of GB theory, but in many ways, it does not. Very little research has been done on Kannada syntax, especially, in this framework. The present study attempts to fill this gap. This study assumes the tenets of GB model expounded and elaborated in Chomsky (1981,1986a), and Chomsky & Lasnik (1993).

The thesis will be structured as follows; Chapter 1 gives a descriptive overview of Kannada, focusing on two issues: (i) a syntactic VP, and (ii) the functional categories in Kannada. Within the GB model, these two issues play a significant role in arriving at language-specific generalizations. I show that Kannada is a configurational language, and has several functional categories in its grammar. Before examining the functional clause structure, I claim that Tense assigns Nominative Case in Kannada. Then, I examine the ordering of functional categories. The interaction of functional categories with one another results in a particular hierarchical representation of a given language. Such representation in turn may satisfy some other predictions

made by the theory. In Chapter 2, I investigate Kannada data from the following perspective; what does Kannada contribute to the understanding of the Null Subject Parameter, and the projection of rich, weak and null AGR. I show that Kannada exemplifies all three types of AGR projection; rich, weak, and null and, displays lack of AGR projection as well. Chapter 3 investigates an unusual control structure which does not conform to the basic assumptions of GB control theory. I propose an anaphoric AGR hypothesis to account for the data. Further, I show that the anaphoric AGR hypothesis can be extended to nonfinite clauses so that control and non-control effects are accounted for in a unified way. Chapter 4 is devoted to reflexive constructions, which are challenging to any extant version of binding theory. Chapter 5 is the conclusion.

1.1. *A sketch of Kannada*

Kannada is a Dravidian language spoken by over 25 million people in the state of Karnataka, in southern India. It is the official language of that state, and one of the four major literary languages of the Dravidian family, the others being Tamil, Telugu, and Malayalam.

Kannada has a very complex range of regional, social, and stylistic variation. It has three major regional varieties, namely, the Old Mysore dialect, the Mangalore

dialect, and the Dharwar dialect. These dialects have sub-dialects. In addition to these regional varieties, Kannada also has a number of social varieties, characterized by class or caste.

Kannada is a diglossic language. The formal variety differs in several respects from the spoken variety in phonology, morphology, lexicon and syntax (Sridhar 1991). The data in this study come from the colloquial variety spoken in Bangalore, the state capital. This spoken variety is one of the sub-dialects of the Old Mysore dialect.

Kannada is a SOV language, verbs being marked for agreement with their subjects in number, gender, and person. It is agglutinating, like Turkish. Kannada nouns are marked both for Case and for number, and its verbs for tense, mood, person, number and gender. Kannada distinguishes two numbers, singular and plural, and seven Cases namely, nominative (unmarked), accusative, dative, instrumental, ablative, locative, genitive, and the vocative. Case suffixes in general are obligatory. Word order is fairly free in main clauses. The presence of a subject agreement marker indicates the finiteness of a sentence. A finite verb cannot be negated. Gerunds, infinitives, and participial forms of verbs are used for negation.

A basic principle of the syntax is that all modifiers precede the modified entities.

Subordinate clauses are marked by the verbal participle, relative participle, gerund, or the infinitive. Syntactic functions such as subject, object, etc., in nonfinite constructions are expressed in the same manner as in finite constructions, except for those in genitive nominalized sentences. *Wh*-elements are not fronted in *Wh*-questions, but occur *in-situ*. Spoken Kannada has no 'personal passive' construction. Kannada lacks a unique topic marker. The function of topicalization is expressed by one of the following devices; scrambling, left dislocation, or clefting. In contrastive circumstances, inclusive or question clitics mark the topic. Multiple topics are not allowed.

Kannada lacks object agreement, and the omissibility of object NPs is more constrained than that of subject NPs. This shows that the recoverability/identification condition on missing arguments operates in this language. Postpositions cannot be stranded. These are the salient characteristics of Kannada relevant for the present study.

1.2. *The Configurational Hypothesis*

In this section, I show that Kannada is a configurational language. The subject-object asymmetry with respect to binding condition C, cross-over effects, the adjacency requirement for Case drop, the position of sentential adverbs, and VP-deletion all

argue for a syntactic VP in Kannada.

1.2.1. *Pronominal Coreference*

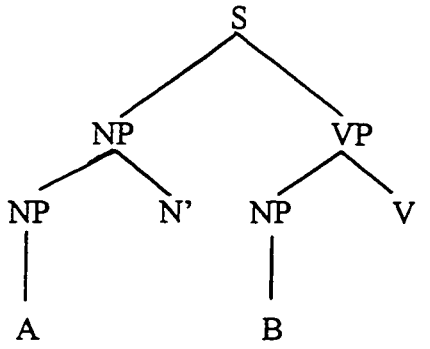
Kannada shows a subject-object asymmetry with respect to binding condition C, as shown in (1).

1a. Gopiya$_i$ taŋi awanannu$_i$ pri:tisutta:Le.
-gen. sister-nom. he-acc. love-3sg.f.
'Gopi's$_i$ sister loves him$_i$ '

b.*awanu$_i$ Gopiya$_i$ taŋiyannu pri:tisutta:ne.
he-nom. -gen. sister-acc. love-3sg.m.
*He$_i$ loves Gopi's$_i$ sister'

Sentence (1b) violates binding condition C. The sentences in (1) have the structure shown in (2):

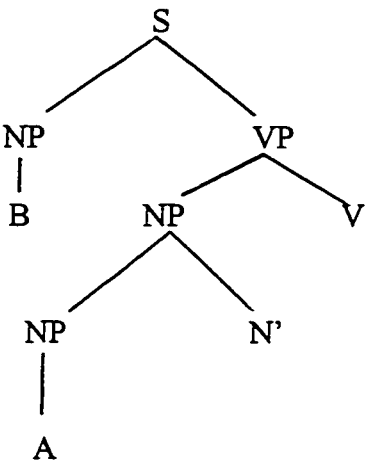
2a.



Gopi's$_i$ sister loves him$_i$

B does not c-command A

b.



*He$_i$ loves Gopi's$_i$ sister

B c-commands A

Since the binding conditions depend on the asymmetrical configurational relation between subject and object, if there were no VP node separating the subject position from the object position, Principle C of the binding theory would provide no account the contrast between the (a) and (b) sentences in (1).[2]

1.2.2. *Weak Crossover (WCO)*

Another argument for configurationality in Kannada can be developed based on the facts of weak crossover (WCO). Consider:

3a. ya:ru$_i$ awana$_i$ ta:yiyannu pri:tisutta:ne?
who-nom. he-gen. mother-acc. love- 3sg.m.
'who$_i$ loves his$_i$ mother?'

b.*awana$_i$ ta:yi ya:rannu$_i$ pri:tisutta:Le?
he-gen. mother-nom. who-acc. love-3sg.f.
'Who$_i$ does his$_i$ mother love t_i ?'

The ungrammaticality of (3b) is a result of the violation of the Bijection Principle (BP) (Koopman and Sportiche 1982), because the LF moved *wh*-word binds two variables (its own trace and the possessive pronoun).[3] The contrast in (3) is not predicted if we assume a nonconfigurational structure for Kannada. Under a nonconfigurational analysis, both (3a) and (3b) should be grammatical and no WCO effects should be noticed since the *t* in (3b) could c-command and therefore bind the pronoun *his*, which would then not lead to a BP violation. One can explain the ungrammaticality of the Kannada sentence by assuming that *wh*-elements move at LF, and that there is a

[4,5]
syntactic VP in this language.

1.2.3. *Adjacency and Case Marker Drop*

In Kannada, the accusative Case marker on the object NP can be dropped, if the noun
[6]
is [-human, -plural], but only if it is adjacent to the verb:

4a. Gopi -nom. kallininda stone-inst. maDike(yannu) pot-(acc.) oDeda. break-3sg.m.
'Gopi broke the pot with a stone'

b. maDike*(yannu) Gopi kallininda oDeda.
=(4a)

(4b) is unacceptable without the Case marker on the object NP. The strict adjacency for 'Case dropping' suggests that the object NP in question forms a constituent with the verb, and if it has to be scrambled away from the verb for pragmatic reasons, it has
[7]
to have an overt Case-marker to signal that constituent relationship.

1.2.4. *The Behavior of Adverbial Phrases*

Certain sentential adverbs, like *bahushah*, 'most probably', cannot be inserted between an object NP and a verb. This can be explained by a constituent VP. To account for the ungrammatical (5), Radford (1981), postulates a condition stated in (6):

5.*The cat will eat his, almost certainly, dinner.

6. Parenthetical adverbial expressions like *almost certainly* can be inserted only immediately under an S, not a VP, NP, PP, etc.

(6) also predicts that such expressions may be positioned either at the beginning or at the end of the whole S. The resultant sentences are indeed well-formed.

7a. Almost certainly, the cat will eat his dinner.
b. The cat will eat his dinner, almost certainly.

Radford treats such behavior of adverbial elements as one piece of evidence to argue that sentences are hierarchically structured into constituents and categories.

Now consider:

8a. bahushaha na:nu awanige haNavannu kaLisutte:ne.
most probably I he-dat. money-acc. send-1sg.
'Most probably, I will send the money to him'

b. na:nu bahushaha awanige haNavannu kaLisutte:ne.
I most probably he-dat. money
'I will, most probably, send the money to him'

c. na:nu awanige haNavannu kaLisutte:ne, bahushaha.
he-dat. money send most probably
'I will send the money to him, most probably'

d.*na:nu awanige haNavannu bahushaha kaLisutte:ne.
he-dat. money most probably send
'I will money, most probably, send to him'

A non-configurational approach fails to account for the unacceptable (8d), since it does not impose restrictions on the placement of adverbial elements. Since Kannada observes such restrictions, one can conclude that object and verb form a constituent in this language.

1.2.5. *VP-deletion*

English *do so* pronominalization requires that the object be replaced along with the rest of the VP, which constitutes an argument for the existence of a VP constituent in this language, see (9) (taken from Whitman 1987). In Kannada, *ha:ge: ma:Du* 'do so', and *ashTe* 'thus' constructions correspond to so-called *do so* pronominalization in English. In Kannada (10&11), *ha:ge: ma:Du* and *ashTe* replace the object NPs along with the rest of the VP, arguing for a constituent VP.

9a. Mary smashed the TV with a hammer; John did so too.

b.*Mary smashed the TV with a hammer; John did so the stereo.

10a. Raju suttigeyinda TVyannu jajjida; Balunu: ha:ge: ma:Dida.
-nom. hammer-inst. -acc. smashed; -nom.inc. thus did
'Raju smashed the TV with a hammer, Raju did so too'

b.*Raju suttigeyinda TVyannu jajjida; Balunu: stereovannu ha:ge: ma:Dida.
*Raju smashed the TV with a hammer, Raju did so the stereo.

11. Gopi dinavella TV noDta:ne, awana tamma:nu: ashTe.
day whole see-3sg.m. he-gen. brother-acc.inc. thus
'Gopi watches TV the whole day, and his brother does so too'

Whitman shows that the Japanese analog of sentences (9&10b) is grammatical, which argues against the existence of a constituent VP in this language, see (12).

12. Mary-wa kozuti-de TV-a butikowasi-ta; John-wa
THEME mallet with ACC smash PAST THEME
stereo-mo soo si-ta
also thus do PAST
'Mary smashed the TV with a hammer, and John did so the stereo'

The contrast between Kananda (10b) and Japanese (12) supports the configurational hypothesis for Kannada.

To summarize, binding theoretic data, WCO effects, the adjacency requirement for Case drop, the position of sentential adverbs, and VP-deletion all argue for a syntactic VP in Kannada.[8]

1.3. *Functional Categories*

Within recent syntactic study in the Principles and Parameters framework, functional categories are involved in a crucial way in determining parametric variation among languages. Functional categories are elements like D, I, and COMP ---closed-class items which have little semantic content; lexical categories are open-class items and typically have a rich semantic content. Further, such functional categories are analyzed as heading their own projections. Ouhalla (1991) derives clausal structures of languages with SOV, SVO, and VOS word orders in a principled way based on the assumption that functional and inflectional elements project their own syntactic categories. He shows that the assumption is both empirically and theoretically motivated. The primary concern of this section will be to show that Kannada TNS, and Agr head their own projections.[9] I also argue for a Negative Functional

Projection. But first I show that Kannada has the category C (complementizer) in its grammar.[10]

1.3.1. *The category C*

My arguments to show that Kannada has the functional element C are based on Fukui (1986). Fukui argues that Japanese lacks the functional element C, and supports his claim in the following way. On a traditional analysis, the question marker *ka* 'Q' and the subordinate clause marker *to* 'that' are treated as complementizers. When a *wh*-element appears in a matrix or embedded sentence, the sentence must end in the particle *ka*. Also, the occurrence of *ka* is necessary not only for *wh*-questions but for so-called yes/no questions. These were the arguments for treating the particle *ka* as a complementizer.

Fukui analyzes *ka* as a noun bearing the feature [+Q]. To support his analysis, he shows that Case particles such as *-ga* and *-o* can be attached to a clause accompanied by *ka*. And sentences with factive verbs such as *sir* 'know', which require noun phrase complements, are ungrammatical, if not followed by this nominal element. See, for example, (Fukui's 33c&d);

13a. Bill-wa [John-ga sore-a-katta ka] sirnai
not know
'Bill does not know whether John bought it or not'

b.*Bill-wa [John-ga sore-a katta] siranai

Fukui treats the subordinate marker *to* `that' as a postposition. He shows that the topic marker *-wa* can be attached to a noun phrase or to a postpositional phrase, but can never be attached to a sentence. However, clauses accompanied by *to* freely occur with the topic marker *-wa*. Further, he presents an even stronger argument to show that these two elements cannot constitute a single syntactic category C based on the evidence that it is possible to combine them and attach the topic marker *-wa* to them.

Kannada has a traditional complementizer *anta*, and every finite clause must be
followed by it. For example, [11,12]

14. nanage [Gopi na:Le barta:ne] *(anta) gottu.
I-dat. -nom. tomorrow come-3sg.m. COMP know
`I know that Gopi is coming tomorrow'

Another way of expressing (14) is to use a gerundive complement, as in (15). With the complementizer, (15b) has to have a focused element depending on the speaker. In this case, the focused element (focus is expressed by intonation) may be *Gopi* or *na:Le* (see also (16b)). The focused interpretation is unavailable in (15a), which does not contain the complementizer.

15a. nanage [Gopi na:Le baruvudu] gottu.
come-ger.npst.
=(14)

b. nanage [Gopi na:Le baruvudu] anta gottu.
COMP
'I know that Gopi is coming tomorrow'

Now consider sentences (16a)-(16d), which are ungrammatical without the complementizer *anta*. (16a)-(16d) contain a *wh*-element with narrow-scope, a focused element ((15b) is repeated as (16b)), a negation and a *wh*-element with a wide-scope, respectively. All these elements appear in the gerundive complement.

16a. nanage [Gopi ya:va:ga baruvudu] *(anta) gottu.
when come-ger.npst.
'I know when Gopi is coming'

b. nanage [Gopi NA:LE baruvudu] *(anta) gottu.
tomorrow
'I know that Gopi is coming TOMORROW'

c. nanage [Gopi na:Le baruvudilla] *(anta) gottu.
tomorrow come-ger.npst.NEG
'I know that Gopi is not coming tomorrow'

d. ninage [Gopi ya:va:ga baruvudu] *(anta) gotta:?
you-dat. when know-2sg.Q
'Do you know when Gopi is coming?'

The above data suggest that the syntactic function of the complementizer in Kannada is not restricted to nominalizing a clause.[13,14] It is generally assumed that clauses basically have a verbal character determined by the TNS category. Since Kannada gerunds are marked for tense, we expect (15a) to be ungrammatical without the complementizer on a par with the ungrammatical (13b). The grammatical (15a) suggests, instead, that the subcategorization requirement of the verb *gottu* 'know' is satisfied by having a

gerundive phrase as its noun phrase complement. The absence of complementizer follows from that.

But subsequent sentences show that the gerundive complement must be followed by the complementizer *anta*, if it contains sentential operators.[15] And also, unlike the parallel cases in Japanese, Case particles cannot be attached to the complementizer *anta*. Therefore, one can conclude that Kannada has the functional category C.

1.3.2. *TNS, Agr, and NEG*

In this section, I show that in Kannada, TNS, Agr, and NEG head their own projections. Before doing so, a note on Kannada negation: sentence negation is expressed by one of the two negative particles, *alla* or *illa* in final position. *Alla* is used to negate predicate nominals, and *illa* occurs with verbal predicates:

17. Gopi kavi alla.
-nom. -nom. NEG
'Gopi is not a poet'

18. Gopi baruvudilla.
-nom. come-ger.npst.NEG
'Gopi will not come'

Kannada also has negative modals and participles. In the ensuing discussion, only the NEG element *illa* is considered.

A significant feature of Kannada negation is that finite verbs are nonnegatable. Gerunds, infinitives, and participial forms of verbs all of which lack Agr, are used for negation. Consider:

19. Gopi na:Le barta:ne.
-nom. tomorrow come-3sg.m.
'Gopi will come tomorrow'

20.*Gopi na:Le barta:ne illa.
come-3sg.m. NEG
'Gopi will not come tomorrow'

21. Gopi na:Le baruvudilla.
come-ger.npst.NEG
'Gopi will not come tomorrow'

The fact that Agr is missing, but not TNS, when the NEG element appears itself constitutes an argument for having TNS and Agr, NEG and Agr as separate syntactic categories rather than as elements which belong to a single syntactic node. However, it has been noted that Agr behaves differently from other functional heads (see Benmamoun 1992, Ouhalla 1991, Rouveret 1991, and Speas 1991), and I return to this issue later (see section 1.4.). The next question is whether TNS and NEG form a single complex. Below I present evidence to show that they do not.

The first piece of evidence for treating them as separate syntactic categories comes from the fact that the Kannada NEG element is non-affixal. The tense is realized on

the verb and the NEG element appears outside the verbal complex as an independent word, if the relevant morphophonological rule does not apply to the gerundive form. Benmamoun (1992) argues that in Arabic, TNS and Agr, in addition to NEG, must be treated as separate syntactic categories, since in negative clauses, the verb carries agreement, the negation carries tense.

Second, in section 1.5, I show that TNS assigns Nominative Case. The subjects of gerundive, relative, and infinitival clauses, which lack Agr, show up in the Nominative. Therefore, the projection of an abstract tense is forced by Case Theory.

Third, Benmamoun (1992) shows that in Moroccan Arabic, the negative prefix *ma* can have scope over a quantifier, and can license Negative Polarity Items (NPIs). He argues on the basis of this syntactically relevant criterion that the negative morpheme *ma* is syntactically projected, and hence interacts ith QPs and licenses NPIs. One can extend the same analysis to Kannada sentences, such as (22) and (23):

22. Gopi ya:rannu: oLage biDalilla.
-nom. no one-acc.inc. inside let-inf.NEG
'Gopi did not let anyone inside'

23.*Gopi ya:rannu: oLage biTTa.
let-3sg.m.
*Gopi let anyone inside

To summarize, in Kannada, TNS and NEG head their own projections.

1.4. *Agr and the Problem of Projection*

As Benmamoun (cf.) observes, the semantic function of Agr is not entirely clear. Syntactically, the following reasons can be offered for an agreement projection; its role in binding and Case theory, and in the identification of *pro* in null subject languages. However, the role of an agreement projection in the binding module was eliminated by the redefinition of governing category in terms of Complete Functional

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Complex (CFCs) (Chomsky 1986b). The latter two syntactic functions can be explained by generating agreement directly on the predicate, or treating it as just a feature added to the verb. Iatridou (1990) argues for the latter view. I argue that, in Kannada, Agr is syntactically projected for the following reasons.

First, in the presence of NEG, Agr is totally absent. If it were generated directly on the predicate, or treated just as an added feature to the verb, what would prevent it from appearing before NEG? Since NEG is always in the final position, the whole verbal complex can move to it without violating any minimality constraints. Second, in Chapter 3, I show that Agr, not TNS, brings about certain control effects in this language, which cannot be explained in terms of CFCs. Therefore, I conclude that

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Agr head its own projection in Kannada.

1.5. *Nominative Case*

In this section, I claim that Tense assigns Nominative Case in Kannada. Then, I give the hierarchical representation of a finite positive clause, and show that it does not fully conform to the prediction made by the Disjunctive Hypothesis of Zidani-Eroglu (1993).

1.5.1. *Split Infl and Nominative Case Assignment*

A parametric approach to the Split Infl Hypothesis allows languages to select one of the Nominative Case carrying functional projections, namely, TNS or Agr. In Standard Arabic, TNS is responsible for Nominative Case assignment, whereas in Turkish, Agr is responsible for that Case (Zidani-Eroğlu 1993). I will present arguments to support the claim that in Kannada, TNS assigns Nominative Case.

To begin, consider the following examples in which only (24) has a verb marked for both tense and agreement. Sentence (25) is an instance of negation, and marked for nonpast. (26) exemplifies a relative clause construction marked either for past, or nonpast. In all these sentences, the subject *Gopi* has Nominative Case, suggesting the independence of that Case from Agr, but not from TNS.

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24. Gopi haNNannu tindanu.
-nom. fruit-acc. eat-pst.3sg.m.
`Gopi ate the fruit'

25. Gopi haNNannu tinnuvudilla.
-nom. eat-ger.npst.NEG
`Gopi will not eat the fruit'

26. Gopi tinda/tinnuva haNNu.
-nom. eat-pst.rp./eat-npst.rp. fruit-nom.
`The fruit that Gopi ate/ that he is going to eat'

Now consider (27) and (28), which contain, respectively, gerundive and infinitival complements.[21]

27. $Gopi_i$ [$awanu_j$/$na{:}nu_k$ haNNu(annu) tinnuvudannu] noDida.
-nom. he/I-nom. fruit eat-ger.npst.acc. see-npst.3sg.m.
`$Gopi_i$ saw him_j/me_k eating the fruit'

28. $Gopi_i$ [$awanu_j$/$na{:}nu_k$ haNNannu tinnalu oppida.
-nom. he/I-nom. fruit-acc. eat-inf. agree-npst.3sg.m.
`$Gopi_i$ agreed for him_j/me_k to eat the fruit'

The subjects of the subordinate non-finite clauses also have Nominative Case. Contrastingly, the subjects of the English counterparts are assisgned accusative Case by the main verb, and the infinitival complementizer, respectively. The gerundive complement in Kannada (27) gets accusative Case from the main verb. However, the subject of the gerund itself gets Nominative Case from the tense of the gerund. Notice that (28) is problematic for my hypothesis that TNS assigns Nominative Case, since there is no overt tense element in the infinitival complement. Below I show that Kannada infinitives encode tense in a systematic way, which argues for an abstract tense node.

1.5.2. *Nominatives and Infinitives*

It is well-known that certain languages allow Nominative subjects in infinitival clauses, which goes against the predictions made by GB theory (for Malayalam, see Mohanan 1982b, for Italian, Rizzi 1981, for Caribbean Spanish, Suñer 1986, and for West-Flemish, Van Riemsdijik 1978). Explanations of this phenomenon vary and I will not consider them here. To account for the Kananda data, I argue for an abstract tense node in infinitives, which is not a novel idea. Stowell (1982) argued that the COMP in English infinitivals contains an abstract tense position. To account for *mee*-Nominative-cum-Infinitive clauses in Flemish, Haegeman (1986) proposes that they have an abstract INFL in COMP, which is specified for [+Tense], but unspecified for [±Past] and [-AGR]. Pending further evidence, I propose that Kannada infinitives are specified for [+Tense], and further, specified for [+Past] in a particular environment (see below).

As said earlier, finite verbs in Kannada are nonnegatable. Tenses are differentiated in negative sentences by the nature of the verbal form to which the negative element is attached (Sridhar 1991). When the base is an infinitive, the sentence has past meaning, as in (29), and with the gerund as the base, the tense is nonpast, as in (30). Both sentences have Nominative subjects.

29. Gopi haNNannu tinnal-illa.
-nom. fruit-acc. eat-inf.-NEG
'Gopi did not eat the fruit'

30. Gopi haNNannu tinnuvud-illa.
-nom. eat-ger.npst.NEG
'Gopi will not eat the fruit'

This is particularly striking given the fact that Kannada also has past gerunds. The ungrammatical (31) suggests that past gerunds cannot be negated:[23]

31.*Gopi haNNannu tindidd-illa.
eat-ger.pst.NEG
= (29)

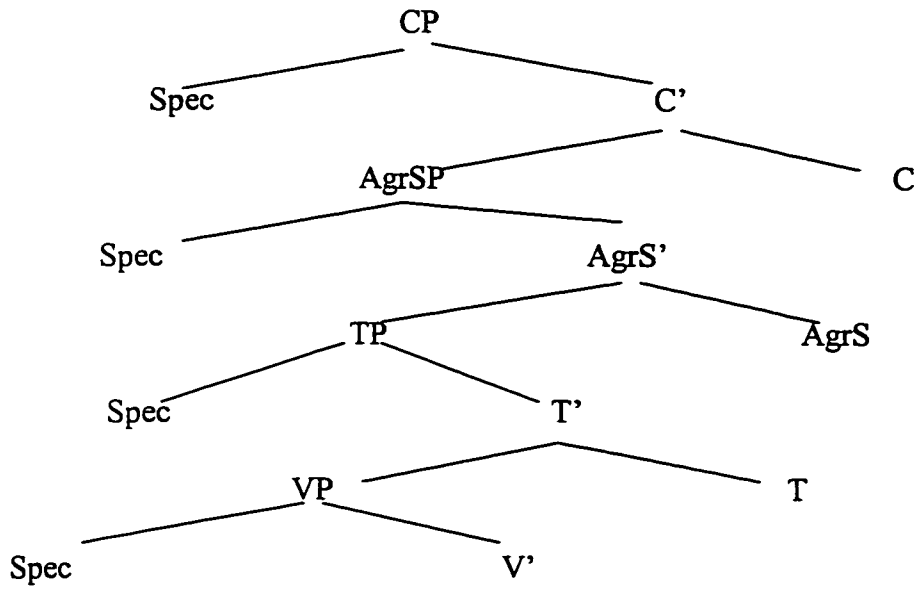
(29) receives a natural explanation, if infinitives are specified for abstract tense, and, more specifically, for [+Past] in negative sentences (as in (29)).[24,25] The negative main clauses constitute a strong evidence for the postulation of an abstract tense in infinitives, which is responsible for infinitival Nominative subjects.

To summarize, in Kannada, TNS assigns Nominative Case to the subjects of finite and non-finite clauses including infinitival ones.

1.6. *The Hierarchical Structure of a finite clause*

I propose the following functional (non-negative) clause structure for Kannada, abstracting away from maximal direct and indirect object AGR projections.[26]

32.



Assuming the VP internal subject hypothesis (Kitagawa 1986, Kuroda 1988, Koopman &Sportiche 1990), the subject raises to Spec of TP to get Nominative Case, or to be Case checked, and further moves up to Spec of AgrSP to enter into a Spec-head relation. The hierarchical order of functional categories in (32) conforms to Ouhalla's (1991) hypothesis that the hierarchical order reflects the morphological order of functional elements, which is similar to Mirror Principle of Baker (1985, 1988). For example, in Arabic, subject agreement shows up between tense and the verb stem, as can be seen in (33) (Ouhalla's (7b)), whereas in Kannada, it is furthest from the verb stem (34):

33. Sa-y-ashtarii Zayd-un daar-an.
will (TNS)-3ms (AGR)-buy Zayd-NOM house-ACC
'Zayd will buy a house'

34. Gopi ha:lannu kuDiyutta:ne.
-nom. milk-acc. drink-(Tns)-3sg.m.(Agr)
'Gopi drinks milk'

However, the above structure does not conform to the prediction made by the Disjunctive Hypothesis (Zidani-Eroğlu 1993) that a Nominative Case assigner occupies the highest maximal projection next to CP. I briefly discuss this issue in the next section.

1.7. *The Hierarchical Structure and The Disjunctive Hypothesis*

The Conjunctive Hypothesis (Chomsky 1992) advocates task splitting between the head of TP and Spec-head of AGRS in assigning Nominative Case. According to this hypothesis, the head of TP carries the feature for Nominative Case but it is checked in Spec-head of [AGRS] to which [T] has djoined. Drawing evidence from Turkish and Arabic, Zidani-Eroğlu shows that the Case assigning process need not hinge on the interaction of TP and AGR-SP, and proposes the Disjunctive Hypothesis. This constrains Nominative Case, its feature specification and execution, to one particular projection: either [T] or [AGRS]. The desirable consequence of this hypothesis is that the Nominative Case feature specification enters into the hierarchical order of functional projections. The Nominative carrying functional projection is the highest in the hierarchical representation of a given language. In Turkish, for instance, AGRSP occupies the highest position after CP, and in Standard Arabic, TP is the highest

functional projection, and these two functional elements assign Nominative Case in these languages, respectively. The Kannada clausal structure shown in (32) falsifies the above prediction. AGR(Agr)SP is the highest functional projection next to CP, but it is not the Nominative Case carrying element.

One further prediction is made by the Disjunctive Hypothesis: the maximal projection of the Nominative Case assigner creates opacity for binding-theoretic purposes. For instance, TP and AGR-SP induce opacity for binding purposes in Arabic, and Turkish, respectively. Unlike Turkish, Kannada lacks Nominative reciprocals, and the third person reflexive pronoun is a long-distance anaphor. Therefore, it is not possible to test Kannada data with reciprocals or reflexive pronouns. However, there is a way to show that, assuming control theory falls under binding theory, finite Agr, but not TNS brings about certain control effects in this language. However, I will not discuss this issue further since finite Agr is the topic of Chapter three. Note that in all of Turkish, Arabic, and Kannada, it is the topmost node (next to CP) which is relevant for binding theory. In the former two languages, the same node is also responsible for assigning Nominative Case. Whether or not the maximal projection of the Nominative Case assigner creates opacity for binding-theoretic purposes needs further cross-linguistic investigation. However, the data from all three languages seem to argue for the view that the highest node is relevant for binding theory.

1.8. *Summary*

In this chapter, I argued for a syntactic VP in Kannada and also that Kannada has the functional categories, C, TNS, Agr, and NEG heading their own projections. I showed that TNS assigns Nominative Case but the hierarchical structure of a Kannada finite clause does not fully conform to the prediction made by Disjunctive Hypothesis. I suggested that the highest node in a clause may be relevant for binding theory.

Footnotes to Chapter 1

1. Christdas (1988) argues for a VP constituent in Tamil and Malayalam, drawing evidence from an external sandhi rule of gemination which is sensitive to the phrase structure configuration in that it applies solely across the constituents contained within a VP at s-structure. No such phonological evidence is known from Kannada, a sister language, to argue for a VP constituent.

2. According to Mohanan (1983-84), pronouns and R-expressions in Malayalam can c-command their antecedents. Hence he argues that Malayalam lacks a syntactic VP.

i. [moohante$_i$ bhaaṟyaye] awan$_i$ nuḷḷi
-gen. wife-acc. he-nom. pinched
literally, Mohan's$_i$ wife he$_i$ pinched.

ii. joonin$_i$ joonine$_i$ iṣṭamaan
-dat. -acc. likes
`John$_i$ likes John$_i$ (himself)'

In Kannada, the judgements are reversed with respect to parallel sentences, which supports the configurational hypothesis for this language.

3. According to the WCO principle of Chomsky (1976), a variable cannot be the antecedent of a pronoun to its left (The Leftness Condition). In other words, if an operator binds a variable across a pronoun, the variable and the pronoun are disjoint in reference. This condition explains the ungrammaticality of (3b). With respest to the issue of Kannada's configurationality or non-configurationality, The Leftness Condition would seem to be irrelevant, since it is formulated in terms of linear order.

4. WCO is a distinguishing property of quantificationally bound pronouns, which motivates the linguistic level of LF. At LF, quantificational and referential pronouns are treated differently, and WCO effects occur on quantificational NPs and pronouns bound to them, because the BP applies to LF mapping rules only. The binding facts in (3) and the Empty Category Principle (ECP) (Lasnik&Saito 1984) effect in adjunct extraction in (i) motivate LF movement for Kannada.

ia. *pro* ya:ke e:nu koNDukoNDe?
(you) why what buy
`Why did you buy what?'

b.*_pro_ e:nu ya:ke koNDukoNDe?
what why
'What did you buy why?'

The unacceptability of (ib) cannot be attributed to word order, as the acceptable (iib) shows.

iia. awanu tinnuvudakka:gi haNNannu koNDukoNDa.
he eat-for fruit buy
'He bought fruit to eat'
b. awanu haNNannu tinnuvudakka:gi koNDukoNDa.

Given that ECP applies at LF, the unacceptable (ib) gets a natural explanation if we assume LF *wh*-movement for Kanada. The LF representations of (ia&b) are (iiia&b), respectively:

iiia. [ya:ke$_1$ e:nu$_2$] [*pro* t_1 t_2 koNDukoNDe]
b.*[e:nu$_2$ ya:ke$_1$] [*pro* t_2 t_1 koNDukoNDe]

When the adjunct moves first, as in (iiia), the sentence is acceptable. The acceptability of (ia) follows from the fact that when the adjunct *ya:ke* moves first, it gives its index to the maximal projection that hosts it, thereby enabling it to antecedent-govern its trace (see Lasnik & Saito (cf.) for more about the Comp-indexing mechanism). The trace of the complement *wh*-phrase in (iiia) is lexically governed by the verb. But in (iiib), the first moved complement *wh*-phrase gives its index to the maximal projection that hosts it preventing the antecedent government of the trace of the adjunct *wh*-phrase. Assuming that an adjunct *wh*-phrase is not lexically governed, the ECP is violated in (iiib). Hence the unacceptability of (ib).

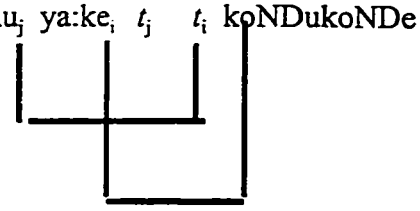
Even if one assumes the current view that multiple *wh-in-situ* adjoins to [Spec, CP] at LF (see Chomsky 1986b; Chomsky&Lasnik 1993; Culicover 1997, among others), the ECP effects are the same as found in the movement of *wh*-elements to COMP. The index of the head of the complex specifier is transmitted to the maximal specifier. On this approach, the LF representations of (ia&b) are (iva&b), respectively:

iva. [$_{CP}$ [$_{Spec}$[$_{Spec}$[ya:ke$_i$] e:nu$_j$]$_i$ [$_{IP}$ *pro* t_i t_j koNDukoNDe]]
b.[$_{CP}$ [$_{Spec}$[$_{Spec}$[e:nu$_j$] ya:ke$_i$]$_j$ [$_{IP}$ *pro* t_j t_i koNDukoNDe]]

In (iva), the trace of first-moved adjunct *wh*-phrase, *ya:ke*, is antecedent- governed by the coindexed specifer, but not in (ivb).

The structures in (iii) and (iv) also illustrate 'a crossing dependency violation' (Pesetsky 1982), an approach that is further developed in May (1985). On this approach, the ECP violation arises when the path from one *wh*-phrase to its trace is not contained entirely within the path from the other *wh*-phrase to its trace. The following illustrates for (ib):

v. e:nu$_j$ ya:ke$_i$ t_j t_i koNDukoNDe



5. Another subject/object asymmetry is observed with quantifier phrases. The unacceptable (ii) is a BP violation.

i. pratiyobbanu:$_i$ awana$_i$ ta:yiyannu pri:tisutta:ne.
everyone he-gen. mother-acc. love-3sg.m.
'Everyone$_i$ loves his$_i$ mother'

ii.*awana$_i$ ta:yi pratiyobbanannu:$_i$ pri:tisutta:Le.
he-gen. mother everyone-acc.inc. love-3sg.f.
*His$_i$ mother loves everyone$_i$'

6. This is rather common in languages rich in inflection. For example, all other Dravidian languages, Japanese, and Turkish exhibit this property.

7. Bhat (1979) cites the following example to show that, without an overt Case marker on the object, scrambling changes the grammatical relations of the constituents.

i. ha:vu kappe (yannu) nuŋitu.
snake-nom. frog-acc. swallow-3sg.neu.
'The snake swallowed the frog'
ii. kappe ha:vu nuŋitu.
'The frog swallowed the snake'

Sentence (ii) supports the universal claim that when morphology fails to distinguish subject from object, the leftmost NP is taken as the subject even in languages like Mohawk where there may be no independent notion of unmarked order (Paul Postal, personal communication). See also Chomsky, 1965, p.126.

8. A prominent argument against a configurational analysis comes from the fact that Kannada allows relatively free word order, as shown below:

ia. Gopi Rajuwige haNa(vannu) koTTa.
-nom. -dat. money-acc. give-3sg.m.
'Gopi gave money to Raju'
b. Rajuwige Gopi haNa(vannu) koTTa.
c. Gopi haNavannu Rajuwige koTTa.
d. haNavannu Gopi Rajuwige koTTa.
e. haNa KoTTa Gopi Rajuwige.
f.*koTTa haNa Gopi Rajuwige.
g.*koTTa Gopi haNavannu Rajuwige.
h.*haNavannu Gopi koTTa Rajuwige.

The acceptable (e) suggests that a verb may not necessarily be in the final position, and the contrast between (e) and (h) suggests that if a verb has to move for pragmatic reasons, its object complement must move along with it. The unacceptability of (f) is due to a general constraint on the appearance of the verb in sentence initial position. (g) is unacceptable for two reasons; it violates this constraint, and the object complement is left behind. Further, note that when the object complement is separated from the verb, it carries an overt Case marker.

However, in (8e), the leftmost NP is taken as object, and hence the sentence is problematic to the above mentioned universal claim that the leftmost NP is taken as subject when morphology fails to distinguish subject NP from object NP. The difference between (7ii) and (8e) is that only in the latter does the verb intervene between its subject and object NPs. (7ii) patterns with (8e); if the verb in (7ii) intervenes between its subject and object NPs, as in (8ii) below, the leftmost NP, *kappe*, is taken as object even without the Case marker on it.

ii. kappe nuŋitu ha:vu.
'The snake swallowed the frog'

The generalization which accounts for the contrast between (8e) and (8h), and the

unacceptable (8g) also explains the contrast between (7ii) and (8ii). That is, when a verb moves, it takes its object complement along with it. Since Kannada is a SOV language, the NP on the left of the verb in (8e) and (8ii) is taken as it's complement after the movement of the whole verbal complex.

Now coming back to the configurationality issue, the freedom of constituent order exhibited in the above (i) sentences need not necessarily be attributed to a non-configurational clause structure. The Kannada "free word order" phenomenon could be analyzed by recognizing "scrambling", as an instance of Move α. On this view, scrambling is a movement to an A'-position, and hence, we should expect it to exhibit strong crossover effects, as in the case of *wh*-movement in English. This prediction is borne out as shown in (iii) (adapted from Saito&Hoji 1983):

iiia.*[$_S$ awanu$_i$ Gopiyannu$_i$ paricayisida]
he-nom. -acc. introduce-3sg.m.
'He$_i$ introduced Gopi$_i$ (to the audience)'

b.*[$_S$ Gopiyannu$_i$[$_S$ awanu$_i$ t_i paricayisida]]

Compare the unacceptable Kannada (iii) to the parallel unacceptable English (iv):

iv.*Who$_i$ does he$_i$ love t_i ?

9. Hereafter, while discussing Kannada data, the terms Agr and AGR are used to distinguish overt and covert agreement morphology, respectively.

10. I have not discussed element D, since it is a large enough topic all by itself for a thesis. However, for completeness, below I show that there is an element D operating in this language.

Fukui arrives at a conclusion that Japanese lacks this functional category for the following reasons:

i. Japanese does not have articles corresponding to *the* or *a* in English.

ii. The demonstratives similar to English 'this' or 'that' do not close off the category projection, as shown by the following examples.

a. John-no ko-no hon
-gen. this-gen. book
*John's this book

b. akai John-no ko-no hon
red
Lit. `red John's this book'

iii. In Japanese, *pro*-forms like *sore* 'it', *kare* 'he', and *zibun* 'self' can be modified.

c. mukasi-no zibun
old days-gen. self
*old days' himself'

d. kinoo-no kare
yesterday-gen. he
*yesterday's he

Comparing Old Turkish (OldT) with Modern Turkish (ModT), Kornfilt (1991) argues that the latter has developed the ability to project the functional category D in its phrase structure. She shows that oldT patterns with Japanese, and ModT patterns with English, and concludes that ModT has the functional category D. Kannada also lacks articles corresponding to *the* or *a* in English, but has demonstratives, *i:* `this' and *a:* `that'. These demonstratives are different from those of Japanese and Turkish in that they are not marked for the genitive, and do not distinguish gender. The Kannada counterparts (f-h) of (b-d) are ungrammatical:

e. Gopi-ya i: pustaka
-gen. this book
*Gopi's this book'

f. *kempu Gopi-ya i: pustaka
red
(=b)

g.*gataka:lada ta:nu
oldtime-gen. self
(=c)

h.*nenne-ya awanu
yesterday-gen. he
(=d)

However, example (f) becomes acceptable if the order is reversed:

i. Gopi-ya i: kempu pustaka
this red book
'Gopi's this red book'

With the exception of demonstrative adjectives, Kannada data pattern with English (and ModT) data. But it seems that the reasons (i&ii) Fukui uses to argue for a lack of functional category D in Japanese cannot be extended to Kannada data. Even though Kannada lacks articles corresponding to *the* or *a* in English, it does have a way of marking an indefinite NP, as shown below (for more about this topic, see Masica 1986):

j. obba huDugi bandaLu.
one girl come-3sg.f.
'A girl came'

Second, the restriction on word order with regard to DP phrases and the lack of a genitive phrase construction parallel to English (k) may constitute arguments against the non-postulation of the functional category D. But I will not pursue that here.

k. This red book of John's

11. The variant of *anta*, *endu*, is used in the literary language. Throughout this thesis, I cite the colloquial form.

12. Like the complementizers in many other languages, *anta* is derived from a verb of saying, *annu* 'say' which still functions as a lexical verb in Kannada. Even though *anta* is considered here to be the only complementizer in this language, there are two other linguistic elements which might ultimately be analyzed as complementizers.

The word *anno:du* is derived from an archaic relative participle of *annu* 'say' plus *-udu*, a variant of the third singular neuter pronoun (see Ramanujan 1963, and Sridhar 1991). This word is used as a linking element between a noun and its sentential complement. It may also follow a finite complement when the main predicate is a dative verb. For more on the syntactic treatment of *anno:du*, see Nadkarni 1972.

In addition, Kannada has a suffix *-a:gi* , which appears in a variety of constructions with different functions. Sometimes it is used to embed an indirect statement (the suffix is attached to a nonpast gerund lacking agreement markers). The difference

between *anno:du* and *-a:gi* is that the latter never follows a finite complement.

Frajzyngier (1995) develops a functional theory of complementizers, in which they are analyzed as modality markers. In Lele (East Chadic), when the verb *sen* `to know' is followed by the complementizer *go*, it indicates that the source of knowledge is the speaker's personal experience. A similar reading is available with Kannada *anno:du*, as illustrated below:

i. [Gopi suLLu he:Lta:ne] anno:du nannage gottu.
    -nom. lie say-3sg.m. COMP me know
    `I know that Gopi lies'

The function of the complementizer *na* in Lele, which occurs after verbs of `saying' and `thinking', is to transfer the potential reality into the *de dicto* domain. For example, (Fragzyngier's (50)):

ii. jìb-ín-dí ná n-ɗə́dà bá n'é dé béì
    push-1sg-3m COMP 1sg-go:IMPER CONJ 1sg-go NEG ?
    `He told me to go but I didn't'

The Kannada suffix *-a:gi* is also used in similar environments. For example:

iii. Gopi baruvuda:gi he:Lidda, a:dare baralilla.
    -nom. come-ger.npst. say-3sg.m.pst. but come-inf.NEG
    `Gopi had told that he would come, but didn't come'

In the light of the above discussion, the Kannada linguistic elements *anno:du* and *a:gi* might be analyzed as complementizers.

13. Ouhalla (1991) argues that C elements are basically nominalizers, that is, nominal elements whose function is to nominalize verbal argument clauses. The implication of this proposal is that the gerunds do not take C elements, since they are inherently nominal due to the presence of the NOM/ASP element. This line of reasoning explains why English and Turkish gerunds do not take C elements. But this fails for Kannada gerunds. Kannada Nominative gerunds, in which the sentential operators appear, are very similar to finite clauses. This may also be the reason why Kannada gerunds can take a C element. The verification of this observation comes from investigating the behavior of sentential operators (if allowed) in gerundive clauses which are marked for Cases other than Nominative.

14. To my knowledge, the syntactic properties of the Kannada complementizer *anta* have not been analyzed with respect to sentences like (16a-d). Generally, the presence of this complementizer is used as a evidence to show the finiteness of a sentence (Nadkarni 1970, Bhat 1979, and Sridhar 1991). Sentences (16a-d) suggest that, in Kannada, the variable binding operators in COMP have to be lexically absorbed. See Safir 1982 for a proposal that a lexicalized COMP carries a tense operator. But it is not clear why *wh*-operators in certain languages (see footnote below) necessitate the presence of an overt complementizer, if we assume, following Chomsky (1986b) that a *wh*-element moves into the specifier of CP, rather than into the complementizer.

15. The *wh*--phrases and focus-phrases co-occur with complementizers in Berber and Modern Greek (Ouhalla 1991). Based on this and the V_2 phenomenon in some Germanic languages, Ouhalla argues that extending the principles of X-bar theory to C has both empirical and theoretical advantages.

16. This serves as an argument to show that *illa* has to be treated as a finite verb in negative sentences. See Spencer 1950, D.N.S.Bhat 1978, and Amritvalli 1977 for a detailed discussion of Kannada negation.

17. The NEG element in sentences (18&21) appears attached to the verb. The enunciative vowel *-u* after the gerundive morpheme *-udu* is deleted by Apocope. Only a word-final short vowel is deleted by this morphophonological rule. If the preceding final vowel is long, or uttered independently as in the following (i&iib), NEG appears independently.

i. na:nu oduvudu: illa, bareyuvudu: illa.
I-nom. read-ger.npst.inc. NEG write-ger.npst.inc. NEG
'I will neither read nor write'

iia. ni:nu: barti:ya:?
you-inc. come-2sg.Q
'Are you coming too?'

b. illa.
No

18. Chomsky (1986b) redefines the notion of 'governing category' in terms of CFC. A CFC is the domain in which all GFs associated with a head are realized.

19. In Chapter 2, I adopt Speas' (1993) analysis to account for the distribution of null subjects in Kannada. On her analysis, the projection of Agr follows from the Principle of Economy of Projection, which is given below:

i. Project XP only if XP has content.

20. The Nominative marker is ∅ in Kannada. But, as Sridhar (1991) observes, there is a sporadic tendency to mark Nominative nouns with *-u*, mostly in writing.

21. Infinitival constructions with overt subjects are not very common. Generally, the gerundive form is used. There seems to be dialectal variation also in allowing or not allowing overt subjects in infinitival constructions.

22. Mohanan (1982) argues that verbs assign Case to their subjects in both finite and infinitival clauses in Malayalam. To support this claim, Mohanan draws evidence from two sources; the dative-inducing verbs retain their Case in infinitival clauses, and the embedded Nominative subject pronoun can be coreferential with the matrix subject in both finite and non-finite clauses. In his footnote 5, he wrongly claims that the pronominal interpretation in Kannada patterns with Malayalam data. And he further argues that the Kannada facts show that the contrast between English and Malayalam in terms of the interpretation of infinitival subject pronouns cannot be attributed to the presence of some abstract agreement morpheme in Malayalam infinitivals, because, unlike Kannada, Malayalam lacks subject-verb agreement. But the Kannada facts are different.

First, Kannada does not allow a dative-inducing verb as head of an infinitival complement, if the subject of the complement is not coreferential with the matrix subject. Instead, the complement appears in the subjunctive (Malayalam allows an analog of (c)):

ia. magu nidre(yannu) ma:duttide.
child-nom. sleep-(acc.) do-prt.p.3sg.n.
'The child is sleeping'

b. maguwige nidre bandide.
-dat. -nom. come-3sg.n.
'The child is sleepy/the child is sleeping'

c.*amma [magu nidre ma:dalu] bayasidaLu.
mother-nom. child-nom. do-inf. want-3sg.f.
'Mother wanted the child to be asleep'

d. amma [magu nidre ma:Dali] anta bayasidaLu.
-nom. do-subj. COMP
=(c)

e. amma [maguwige nidre barali] anta bayasidaLu.
-dat. come-subj. COMP
Lit. mother wanted sleep to come to the child

f. amma$_i$ [*pro*$_i$ nidre ma:Dalu] bayasidaLu.
do-inf.
'Mother wanted to sleep'

Second, in the following sentences, the embedded subject pronoun is obligatorily disjoint in reference from the matrix subject (Malayalam allows coreferential interpretation in such cases):

iia. Gopi$_i$ [awanige.$_{i/j}$ nidre barabahudu] anta yocisida.
-nom. he-dat. sleep come-fut. COMP think-3sg.m.
'Gopi$_i$ thought that he.$_{i/j}$ would get sleep'

b. Gopi$_i$ [awanige.$_{i/j}$ nidre barali] anta bayasida.
-nom. -dat. come-subj. COMP want-3sg.m.
'Gopi$_i$ wanted him.$_{i/j}$ to get sleep'

c. Gopi$_i$ [awanu.$_{i/j}$ nidrisali] anta bayasida.
-nom. he-nom. sleep-subj. COMP want-3sg.m.
'Gopi$_i$ wanted him.$_{i/j}$ to sleep'

Kannada data do not pattern with English data either. For example, consider the following contrast:

iiia. John$_i$ believes that he$_{i/j}$ is a fool.
b. John$_i$ believes him.$_{i/j}$ to be a fool.

The contrast follows from the fact that the pronoun in sentence (a) is governed by the INFL of the embedded S, while in (b), it is governed by the matrix verb. In

accordance with Principle B, the coreferential possibility is blocked in sentence (b). Now consider the lack of contrast in the Kannada counterparts:

iva. Gopi$_i$ [awanu$_{*i/j}$ mu:rkha] anta nambidda:ne/tiLididda:ne
he-nom. fool COMP believe/think-3sg.m.
'Gopi$_i$ believes/thinks that he$_{*i/j}$ is a fool'

b. Gopi$_i$ [awanannu$_{*i/j}$ mu:rkha] anta nambidda:ne/tiLididda:ne.
he-acc.
'Gopi$_i$ believes/thinks him$_{*i/j}$ to be a fool'

In Chapter 3, I show that the above observed control/non-control effects follow from an anaphoric/non-anaphoric Agr/AGR analysis.

23. Lees (1960) distinguishes two kinds of verbal gerunds: those with expressed subjects and auxiliaries, and those without subjects or auxiliaries. Thompson (1973) calls these two types, 'fact' and 'activity' gerunds, respectively. In Kannada, the tense of the gerund determines which type it belongs to. Past gerunds come under the 'fact' type, whereas, non-past gerunds come under the 'activity' type, as illustrated below.

ia. Gopi salad tindiddu a:scarya.
eat-ger.pst. surprise
'It is a surprise that Gopi ate salad'

b. taraka:rigaLannu tinnuvudu oLLeyadu.
vegetables-acc. eat-ger.npst. good
'It is good to eat vegetables'

Kiparsky&Kiparsky (1970) analyze factive clauses as Complex Noun Phrases. Their analysis predicts that certain rules, like, subject-raising and NEG-raising are not applicable to factive clauses, since those rules are subject to CNPC. For example,

ia. It bothers me that he won't lift a finger until it's too late.
b.*It doesn't bother me that he will lift a finger until it's too late.

As said earlier, Kannada past gerunds belong to 'fact' type. Further, past gerunds cannot be negated. Following Kiparsky&Kiparsky, Kannada factive clauses containing past gerunds may be analyzed as Complex Noun Phrases. Negation would be blocked in a past gerund, assuming that the LF movement of NEG (an instance of

adjunction to the head of C for scope assignment) observes subjacency (Chomsky 1973). If we treat subjacency in terms of *Barriers* (Chomsky 1986b), the NEG crosses a Complex NP node, which is a barrier. For more about LF movement of NEG, see Longobardi 1991, Haegeman & Zanuttini 1991 and Luc Moritz 1994.

24. In non-negative sentences like (28), the tense of infinitives is a 'possible future'. That is, as Stowell (1982) notes, the time frame of the infinitival clause is 'unrealized' with respect to the tense of the matrix in which it appears.

25. Stowell (cf.) observes that English infinitival and finite clauses share two properties, which gerunds lack; a clause internal COMP position and tense operators. Therefore, he concludes that the presence of tense necessitates COMP, and if there is no Tense operator in a clause, there will be no COMP.

Stowell correlates the observations made with respect to English infinitival and finite clauses with the lack of an overt gerundive complementizer. The morpheme in the Kannada complementizer *annodu* (annuva+*udu*) (see footnote 12, above), and the gerundive morpheme *-udu-* have morphologically invariant shape. One can easily

analyze '*annodu*' as a gerundive complementizer, which I will not pursue here. Interestingly, in many instances, English infinitivals can only be rendered in Kannada as gerundives. For example,

iiia.We talked about what to do.
b.*We talked about what doing.

iva. na:vu e:nannu ma:Duvudu annnuvudara bagge ma:tana:Didevu.
we what do-npst.ger. say-gen. about talk
'We talked about what doing'

b.*na:vu e:nannu ma:Dalu annuvudara bagge ma:tana:Didevu.
do-inf.
'We talked about what to do'

These facts suggest that Kannada gerunds behave like English infinitives, and Kannada infinitives behave like English gerunds. In addition, Kannada gerundive clauses pattern with English finite clauses as well, since they can take a complementizer. Kannada infinitives are similar to English infinitives in having an abstract Tense operator. So, Kannada infinitives have a dubious status of both English infinitives and gerunds. Future research should consider how these conflicting

properties can be given a unified account.

26. In negative clauses, NEGP is the topmost maximal projection next to CP.

CHAPTER 2

In this chapter, I investigate what Kannada contributes to an understanding of the Null Subject Parameter and the projection of a rich and weak Agr, and null AGR as well. This chapter is structured as follows; section 2.1 briefly presents the general assumptions made by the GB theory of null subjects, and section 2.2 discusses relevant Kannada data. Section 2.3 considers subject-object asymmetry. Section 2.4 summarizes the findings about null subjects in Kannada. Section 2.5 deals with the projections of Agr/AGR in finite and non-finite clauses. Section 2.6 concludes.

2.1. *Kannada Null Subjects and the Null Subject Parameter*

In the past several years, the relationship between rich agreement and the licensing of null arguments has been much discussed . On Rizzi's (1986b) view, the null pronoun *pro* must be licensed by a designated head, and must be identified by rich agreement. It is well-known that languages like Japanese, Chinese, and Thai pose empirical problems for such a view. Jaeggli and Safir (henceforth J&S) (1989) came up with the generalization stated in (1a), which is based on the Morphological Uniformity Hypothesis given in (1b):

1a. Null subjects are permitted in all and only languages with morphologically uniform inflectional paradigms.

b. An inflectional Paradigm P in a language L is morphologically uniform iff P

has either only underived inflectional forms or only derived inflectional forms. (1989:29-30)

Languages like Spanish are morphologically uniform in that each form in the paradigm includes both a stem and an affix. English is not morphologically uniform, since the paradigm includes forms homophonous with the bare stem. Languages like Chinese and Japanese are morphologically uniform in that all verbal forms lack agreement.

On J&S's view, the 'Morphological Uniformity Principle' (MUP) licenses a null subject, and AGR (Agr) identifies it. In Spanish-type languages, identification is local, whereas in the Chinese-type, identification is non-local. Kannada patterns with Spanish-type languages. However, later in the discussion, it will be made clear that, to explain Kannada data, we need to make a distinction between strong and weak Agr, a concept, abandoned by the MUP. I conclude that Speas' (1993) Hypothesis is basically the correct one. Speas replaces J&S's generalization stated in (1a) by (2a), and the Morphologically Uniformity Hypothesis by (2b):

2a. Null subjects are permitted in languages which lack agreement entirely or in languages with morphologically uniform agreement.

b. An inflectional Paradigm P in a language L is morphologically uniform for Feature F iff P has only derived inflectional forms expressing F.

But first I examine varieties of clauses in Kannada which allow or do not allow null subjects.

2.2. *Null Subjects and Clauses*:

2.2.1. *Finite Clauses*

In Kannada, the pronominal subjects of simple clauses may drop, but only if they do not have an emphatic or contrastive function.[1]

3a. *pro* na:Le barti:ni.
tomorrow come-1sg.
'(I) will come tomorrow'

b.**pro* na:Le barti:ni, ni:nu: na:Le ba:
you-inc. tomorrow come-2sg.
'(I) will come tomorrow, you also come tomorrow'

4a. i: pustaka(vannu) ya:ru harididdu?
this book-acc. who tear-ger.npst.
'Who tore this book?'

b.**pro* haride.
tear-1sg.
'(I) tore it'

The subject of a finite subordinate clause may also be null. Consider:

5. Gopi$_i$ [*pro*$_i$ barti:ni] anta he:Lida.
-nom. come-1sg. COMP say-3sg.m.
'Gopi$_i$ said that he$_i$ will come'

In (6), the complement null subject has to have a specific discourse antecedent:

6. Gopi [*pro* barta:re] anta he:Lida.
come-3pl.
'Gopi said that they will come'

Spanish allows *pro* in the subject position of tensed clauses,which are ambiguous between a definite reading involving specific reference and a reading involving

arbirtrary reference. Consider (example from Jaeggli 1986):

7. *pro* illaman a la puerta.
They are knocking at the door, or
arb is knocking at the door.

Unlike Spanish, Kannada does not allow arbitrary *pro*.

8. *pro* ba:gilu taTTutta: idda:re.
door knock-prt.p. be-3pl.
. 'They are knocking at the door' (with specific reference), but not *arb* is knocking at the door'

Neither the finite main clause in (8) nor the complement clause in (6) allow pro_{arb}.[2]

With the exception of generic *pro* in non-past gerundive clauses, pro_{arb} is also banned in non-finite clauses (see below). A null subject is not allowed despite the presence of subject-verb agreement, if it leads to an ambiguity.[3] By way of illustration, consider (9a-c) (these sentences are adapted from Erguvanli-Taylan 1986):

9a. $Gopi_i$ $Rajuvannu_j$ [$awanu_j$ hoguva kaDe] karedukoNDu hoda.
-nom. -acc. he-nom. go-rp. towards take-go-3sg.m.
'$Gopi_i$ took $Raju_j$ to the place he_j was going to'

b. $Gopi_i$ $Rajuvannu_j$ [$ta:nu_i$ hoguva kaDe] karedukoNDu hoda.
self-nom.
'$Gopi_i$ took $Raju_j$ to the place he_i was going to'

c.*$Gopi_i$ $Rajuvannu_j$ [$pro_{i/j}$ hoguva kaDe] karedukoNDu hoda.
'$Gopi_i$ took $Raju_j$ to the place $he_{i/j}$ was going to'

The ungrammatical (9c) is unexpected, since the null subject can be coreferential with *Gopi*, as in (5) (see also (23b) below), or *Raju*, (as in (12) below), respectively.[4] The unacceptable (9c) may also be taken as indirect evidence to argue why the arbitrary

reading of *pro* is unavailable in (8). If it were to allow an arbitrary reading, analogous to (9c), (8) would also be ambiguous between a definite reading involving specific reference and an indefinite reading involving arbitrary reference. The unavailability of an arbitrary reading in (8), and the unacceptable (9c) both may be explained under a disambiguity principle.

2.2.2. *Participial Clauses*

Participial clauses are used to express the coordination of two or more sentences. The main verbs of all coordinated sentences except the last one are past or nonpast participles.[5] The subject NP is obligatorily deleted from all but the first conjunct which can also be dropped in a discourse. The null complement subjects can only be coreferential with the matrix subject.

10. Gopi$_i$ [*pro*$_i$ paper odi] [*pro*$_i$ sna:na ma:Di] [*pro*$_i$ u:Ta ma:Di]
    -nom. paper read-pp. bath do-pp. lunch do-pp.
    malagida.
    sleep-3sg.m.
    'Gopi read paper, took a shower, ate lunch and went to sleep'

2.2.3. *Infinitival Clauses*

The subjects of infinitival clauses may or may not be overt.[6] If the matrix verb is a subject control verb, the null complement subject obligatorily refers to the matrix subject, as in (11). If the matrix verb is an object control verb, or a non-control verb,

the null complement subject is coreferential with the higher object, as in (12a), or (12b), respectively:

11. Gopi$_i$ [*pro*$_i$ odalu] prayatnisida.
-nom. read-inf. try-3sg.m.
'Gopi tried to read'

12a. Gopi$_i$ Rajuwannu$_j$ [*pro*$_j$ hogalu] oppisida.
-nom. -acc. go-inf. persuade-3sg.m.
'Gopi persuaded Raju to go'

b. Gopi Rajuwige$_i$ [*pro*$_i$ baralu] he:Lida.
-nom. -dat. come-inf. say-3sg.m.
'Gopi told Raju to come'

The verb *oppu* 'agree' subcategorizes for an infinitival clause which may allow an overt subject. If it is not overt, as in (13a), or if the overt NP is a third person reflexive, as in (13b), the complement subject obligatorily corefers with the matrix subject. Otherwise, the complement subject has an interpretation disjoint from the matrix subject, as in (13c).

13a. Gopi$_i$ [*pro*$_i$ hogalu] oppida.
go-inf. agree-3sg.m.
'Gopi agreed to go'

b.Gopi$_i$ [ta:ne:$_i$ hogalu] oppida.
self-emph.
=(13a)

c. Gopi$_i$ [awanu$_j$/na:nu$_k$ hogalu] oppida.
he/I-nom.
'Gopi$_i$ agreed for him$_j$/me$_k$ to go'

2.2.4. *Gerundive Clauses*

Gerundive clauses are used very productively. Kannada gerunds distinguish past and non-past tense, and take a full array of Cases like other nouns (i.e. `book', `tree', etc.). The syntactic distribution of gerunds varies with the morphological Case. The relevant examples are discussed below.

Compare the (a) and (b) sentences in (14-16). Null subjects are not allowed in the (a) sentences, but are allowed in the (b) sentences. Unlike the (a) examples, the (b) ones are marked for subject-verb agreement, and hence can have discourse antecedents. The contrast between these sentences suggests that null subjects are allowed in Kannada only if they are identifiable by Agr.

14a. [Gopi/**pro* ha:Diddu] a:scarya.
-nom. sing-ger.pst.nom. surprise
`It is a surprise that Gopi/(he) sang'

b. [Gopi/*pro* ha:Dida] anno:du a:scarya.
sing-3sg.m. COMP
`It is a surprise that Gopi/(he) sang'

15a. nanage [Gopi/**pro* baruvudu] gottu.
I-dat. come-ger.npst.nom. know
`I know that Gopi/(he) is coming'

b. nanage [Gopi/*pro* barta:ne] anta gottu.
come-3sg.m. COMP
`I know that Gopi/(he) is coming'

16a. na:nu [Gopi/**pro* baruvudannu] nambilla.
I-nom. come-ger.npst.acc. believe-NEG
`I do not believe that Gopi/(he) is coming'

b. na:nu [Gopi/*pro* barta:ne] anta nambilla.
come-3sg.m. COMP
'I don't believe that Gopi/(he) is coming'

Non-past gerunds in a sentential subject clause allow generic *pro*, whereas past gerunds do not, presumably, because of their factive nature.

17. [*pro* taraka:rigaLannu tinnuvudu] a:rogyakara.
vegetable-acc. eat-ger.npst.nom. healthful
'Eating vegetables is healthful'

Dative gerunds and infinitives are mutually replaceable in purpose clauses. The subject of a purpose clause is controlled by the matrix subject.

18. Gopi$_i$ maguwiga:gi ha:l(annu) [*pro*$_i$ taralu/taruvudakke] hoda.
-nom. child-for milk-acc. bring-inf./ger.npst.dat. go-3sg.m.
'Gopi went to bring milk for the child'

2.2.5. *Relative Clauses*

The participial relative clause in Kannada is formed by a null relativized noun phrase, and a relative participle form of the verb, which is unmarked for agreement. Hence, in (19b&c), neither the accusative object of the main S nor the subject of the embedded S can be null.[8]

19a. [Gopi$_i$ noDida] huDugi awanannu$_i$ iSTapaTTaLu.
-nom. see-rp. girl-nom. he-acc. like-3sg.f.
'The girl Gopi$_i$ looked at liked him$_i$'
b.*[Gopi$_i$ noDida] huDugi *pro*$_i$ iSTapaTTaLu.
c.*[*pro*$_i$ noDida] huDugi awanannu$_i$ iSTapaTTaLu.

2.2.6. *Adjunct Clauses*

Participial relative or dative gerundive clauses function as adjunct clauses. In examples (20a&b), the null subject of the adverbial clause is coreferential with the subject of the main clause. Note that the main clause subject in (20b) has a dicourse antecedent. If the subject of the main or subordinate clause is an overt pronoun, the subjects are distinct in reference, as in (c&d), (these sentences are adapted from Erğuvanli-Taylan 1986).

20a. [*pro*$_i$ kelasa ma:Duva:ga] Gopi$_i$ sangeetha ke:Lta:ne.
work do-prt.p.rp.while -nom. music listen-3sg.m.
'While he$_i$ works, Gopi$_i$ listens to music'

b. [*pro*$_i$ kelasa ma:Duva:ga] *pro*$_i$ sangeetha ke:Lta:ne.
'While he$_i$ works, he$_i$ listens to music'

c. [awanu$_{\bullet i/j}$ kelasa ma:Duva:ga] Gopi$_i$ sangeetha ke:Lta:ne.
he-nom.
'While he$_{\bullet i/j}$ works, Gopi$_i$ listens to music'

d. [Gopi$_i$ kelasa ma:Duva:ga] awanu$_{\bullet i/j}$/*pro*$_i$ sangeetha ke:Lta:ne.
he-nom.
'While Gopi$_i$ works, he$_{\bullet i/j}$/(he)$_i$ listens to music'

2.2.7. *Negative Clauses*

Since the NEG element is unmarked for agreement, negative clauses pattern with other Agrless clauses as far as allowing or not allowing null subjects. Compare (21b) with (22b):

21a. na:nu barti:ni.
I-nom. come-1sg.
'I will come'

b. *pro* barti:ni.
=(21a)

22a. na:nu baruvudilla.
come-ger.npst.-NEG
'I will not come'
b. **pro* baruvudilla.
=(22a)

9

The unacceptable (22b) favors the identification hypothesis. In the following example, negative clauses appear as complements. Once again, the presence of a pronoun signals distinct reference, as in (23c), and a null subject is obligatorily coreferential with the matrix subject, as in (23b).

23a. Gopi$_i$ [na:nu/ta:nu$_i$ baruvudilla] anta he:Lida.
-nom. I/self-nom. come-ger.npst. COMP say-3sg.m.
'Gopi$_i$ said that he$_i$ is not coming'

b. Gopi$_i$ [*pro*$_i$ baruvudilla] anta he:Lida.
=(23a)

c. Gopi$_i$ [awanu$_j$ baruvudilla] anta he:Lidə.
he-nom.
'Gopi$_i$ said that he$_{*i/j}$ is not coming'

2.2.8. *Copular Clauses*

A strong argument to distinguish strong and weak Agr in Kannada comes from

copular sentences, which contain no overt verb. In (24), the agreement between the subject and the predicate shows only in number and gender, not in person. The ungrammatical (25) shows that the gender and number features of Agr are incapable of licensing a *pro* in subject position. The fact that *pro* is licensed in the absence of gender, as in (3a), but not in the absence of a person feature, as in (25), suggests that the latter is the relevant feature in Agr for licensing a *pro*. It further suggests that the feature person constitues rich or strong Agr in Kannada.[10]

24. awanu/na:nu/ni:nu buddhivanta.
he I you intelligent-sg.m.
'He/I/you are intelligent'

25.*Gopi$_i$ [*pro*$_{i/j}$ buddhivanta] anta tiLididda:ne.
intelligent COMP think-3sg.m.
'Gopi$_i$ thinks (he)$_{i/j}$ is intelligent'

2.3. *Subject-Object Asymmetry*

In Chinese, the following paradigm obtains (Huang 1989):

26a. Zhangsan shuo [*e* hen xihuan Lisi]
say very like
'Zhangsan said that [he] liked Lisi'

b. Zhangsan shuo [Lisi hen xihuan *e*]
say Lisi very like
'Zhangsan said that Lisi liked [him]'

In (26a), the null subject may refer to the matrix subject *Zhangsan* or to a discourse topic. In (26b), however, the null object must refer to a discourse topic, and not to the

matrix subject. On the basis of this evidence, Huang treats the null subject as a pronominal and the null object as a variable. Now consider the Kannada counterparts of (26):

27a. Gopi$_i$ [*pro* $_{i/*j}$ Janakiyannu pri:tisti:ni] anta he:Lida.
-nom. -acc. love-1sg. COMP say-3sg.m.
`Gopi$_i$ said that (he)$_{i/*j}$ loves Janaki'

b.*Gopi$_i$ [Janaki *pro*$_{i/j}$ pri:tista:Le] anta he:Lida.
-nom. -nom. love-3sg.f. COMP say-3sg.m.
`Gopi$_i$ said that Janaki loves (him)$_{i/j}$'

The contrast between (26) and (27) suggests that the null subject in (27a) is not a pronominal, and that null objects are not allowed in Kannada.[11] Note that the null subject in (27a) exhibits control characterstics, since it is obligatorily coreferential with the matrix subject. In Chapter three, I characterize *pro* in (27a) as having the features [+marked anaphor, +pronominal].

2.4. *Summary*

To summarize, the following observations were made with regard to null subjects in Kannada:

a. A null subject is allowed either in the context of rich agreement or no agreement at all, but not in the context of weak agreement.

b. An arbitrary *pro* is not allowed in subject position despite the presence of subject-verb agreement, which suggests the following:

i. Subject NPs in Kannada cannot always be expressed by a null element. Especially, a null non-specific NP is not allowed. If

Kannada allowed arbitrary *pro*, sentence (8) would have two readings similar to Spanish (7). And Kannada (9c) would be acceptable on par with the Turkish analog given in footnote 4. A non-specific NP must be overt (see footnote 2).

ii. Licensing of *pro* is subject to a disambiguity principle. The argument made in (i) may be extended to arrive at this language-specific generalization. That is, the fact that Kannada does not allow arbitrary *pro*, as in (8) and (9c), may be attributed to this principle.

c. In Agrless embedded clauses, the presence of an overt pronoun signals distinct reference, whereas *pro* corefers with the matrix subject or higher object depending on the matrix verb.

d. A finite clause null subject exhibits control characteristics.

The implications of (a-d) for the existing theory of the Null Subject Parameter can be viewed from two perspectives. First, are (a-d) consistent with the existing theory? Second, if not, in what way do they conflict with that theory and in what way do they enrich the theory? (bi) is language-specific. The conclusion reached in (bii) is based on (8)and (9c). Future research should reveal whether or not (bii) is language-specific. The observation made in (c) with regard to the coreferential possibilities of null subjects in the embedded clauses depending on the main predicate is consistent with the received view on the nature of *pro* in such contexts. From the first perspective, (a) is consistent with the general principle that null subjects are allowed in the context of rich Agr or no Agr at all, as in Spanish and Italian, Chinese and Japanese, respectively, and inconsistent with the theory that a given language can be

neatly characterized as a *pro* or *non-pro* drop language. Similarly, (d) is not consistent with the received view on the nature of *pro*. Kannada null subjects, unlike those of Chinese, cannot be characterized as pure pronominals. That is, a null subject cannot have ambiguously matrix and discourse antecedents. However, to show in what way both (a) and (d) differ, two things need to be examined; the projection of Agr and null AGR, and control/non-control effects in Kannada. In the next section, I take up the first issue; Chapter 3 will address the second. Therefore, the implications of (a) and (d) are not fully treated until Chapter 3.

2.5. *Null Subjects and the Projection of Agr/AGR*

This section argues that in Kannada, finite non-negative root and embedded clauses project rich Agr, whereas, weak Agr projects in copular sentences. Further, I show that, in interrogative contexts, neither Agr nor null AGR projects, but in non-interrogative contexts, null AGR projects in negative clauses. I also argue for a null AGR projection in embedded gerundive clauses as well. My arguments are based on the hypothesis advocated by Speas (1993). To appreciate the current analysis, it is necessary to understand Speas' hypothesis, to which I now turn:

2.5.1. *Speas' Hypothesis:*

At the beginning of this chapter, it was noted that Speas replaces J&S's generalization stated in (1a) by (2a), and the Morphological Uniformity Hypothesis by (2b), which are repeated here as (28a&b), respectively.

28a. Null subjects are permitted in languages which lack agreement entirely or in languages with morphologically uniform agreement.

b. An inflectional Paradigm P in a language L is morphologically uniform for Feature F iff P has only derived inflectional forms expressing F.

The purpose of (28b) is to include languages like Swedish, which show residual agreement, but behave like English in not allowing null subjects. The generalization in (28a) is based on the Principle of Economy of Projection, as stated in (29):

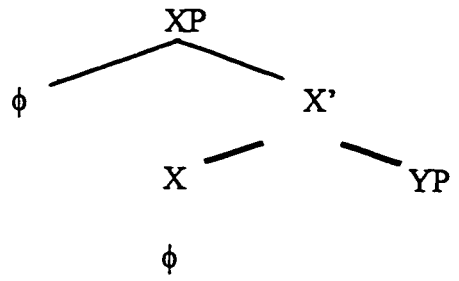
29. Project XP only if XP has content.

The notion of content is as follows:

30. A node X has content if and only if X dominates a distinct phonological matrix or a distinct semantic matrix.

If XP in (31) does not dominate any phonological material except that which is in the complement YP, then XP does not dominate a *distinct* phonological matrix. Similarly, if XP does not dominate any semantic material except that which is in the complement YP, then XP does not dominate a *distinct* semantic content (p.187).

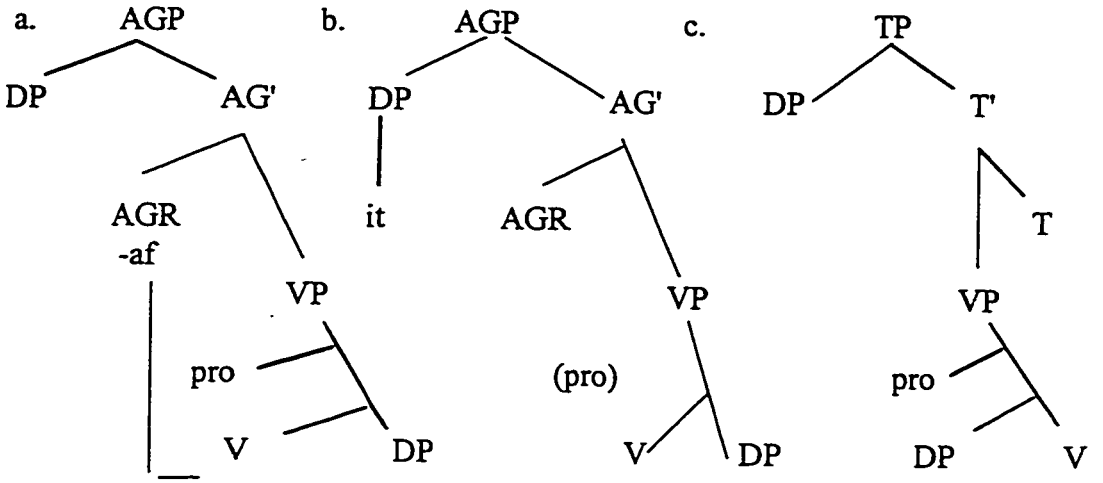
31.



The configuration (31) violates (29) , since both the head and the specifier of XP are empty.

On Speas' analysis, in strong AGR (Agr) languages, the affix is base-generated in the AGR head position, and so AGRP has content. Whereas, in weak AGR languages, the affix is base-generated on the verb, and so something else must give content to the AGRP projection. Hence, either a pleonastic must be inserted in Spec, AGRP, or an NP must move to that position. If the Spec, AGRP remains empty in weak AGR languages, AGRP cannot be projected without violating Economy principles. In a language which lacks AGR altogether, there is no need for an AGR projection at any level; hence, the requirements on licensing that projection never arise. The subject may be null because nothing forces movement into Spec of AGRP, since there is no projection to be made legitimate. On Speas' analysis, a given language comes under one of the three types:

Type a: Morpheme heads AGRP, Spec may be empty
b: Morpheme is attached to V, Spec must be filled
c: No AGR projection



According to Speas, some languages may lack the AGR head, but not the agreement relation. For example, in English, following Chomsky (1992), Speas proposes that structural Case must be represented at LF in terms of a Spec-head relation in which the Spec and head are coindexed and hence abstractly agree. However, she takes the position that in languages which have AGR features, the relevant head is AGR, while in languages which lack AGR, the relevant head may be Tense, Aspect, or perhaps the verb. Speas rejects the idea that the lexicon contains bundles of unpronounced features of the category AGR. In other words, she rejects the null AGR hypothesis.

The underlying generalization which follows from Speas' and J&S's analyses is that a given language can be neatly classified as either a *pro*-drop or non-*pro* drop language. Under Speas' analysis, a given language exhibits one of the salient

features, that is, there is an AGR (Agr) projection or not. Contrary to this generalization, I show below that Kannada exhibits the salient features of both types of languages. And, I also show that Kannda exemplifies Type-b (under Speas' analysis), as well. Further, extending her analysis to embedded clauses, I argue for an abstract AGR projection, which is Type-d on my analysis, thereby differing from Speas.

2.5.2. *Strong and Weak Agr, and Null AGR*

Type a: Strong AGR projects in finite non-negative root and embedded clauses; the main verb in (32a), and both the main and complement verbs in (32b) are marked for agreement; hence AGRP has content. Therefore, in accord with (29), a strong Agr projects in these clauses.

32a. Gopi /*pro* haNNannu tinda.
-nom. fruit-acc. eat-pst.3sg.m.
`Gopi/(he) ate the fruit'

b. Gopi$_i$ [*pro*$_i$ haNNannu tinde] anta he:Lida.
eat-1sg. COMP say-3sg.m.
`Gopi$_i$ said that (he)$_i$ ate the fruit'

Type b: Weak Agr (no person feature) projects in copular sentences:

33a. Gopi /**pro* buddhivanta.
-nom. intelligent-sg.m.
`Gopi is intelligent'

b.Gopi$_i$ [ta:nu$_i$/awanu$_j$/na:nu$_k$/**pro*$_{i/j/k}$ buddhivanta]anta tiLididda:ne.
self he I intelligent COMP think-3sg.m.
`Gopi$_i$ thinks that self$_i$ /he$_{*i/j}$/I$_{*i/k}$ is intelligent'

On Speas' analysis, in weak AGR languages, the affix is base-generated on the verb, and so something else must give content to the AGRP projection. Because, if the Spec of AGRP remains empty, AGRP cannot be projected without violating Economy principles. In (33), the number and gender features are generated on adjectives, and hence the (a&b) sentences are ungrammatical with a null subject. The presence of an overt NP renders them grammatical, thereby justifying the projection of weak Agr.

Type c: No Agr projection in negative clauses.

Consider (34b), which is fine, as an answer to (34a).

34a. ni:nu barti:ya:?
you-nom. come-2sg.Q
`Are you coming?'

b. *pro* baruvudilla.
come-ger.npst.NEG
`(I) am not coming'

According to the Principle of Economy of Projection, stated in (29), there is no need for an Agr projection in (34b), since AgrP has no content. However, the conclusion reached here contradicts the observation made with regard to (22b), above. Uttered in a non-interrogative context, (34b) is unacceptable. Compare (35) with (36):

35. *pro* barta:ne. *pro* swalpa hottu ka:yti:ni.
come-3sg.m. a little while wait-1sg.
`(He) will come. (I) will wait for a while'

36. awanu/**pro* baruvudilla. na:nu/**pro* ka:yuvudilla.
he come-npst.ger.NEG wait-npst.ger.NEG
*(He) will not come. I/(I) will not wait'

The unacceptable (36) with a null subject is problematic for Speas' hypothesis, which allows null subjects in languages which lack AGR (Agr). To account for this data, we need to distinguish between interrogative and non-interrtogative contexts in matrix sentences. In interrogative contexts, there is no Agr projection in negative clauses. But, obviously, there is no Agr projection in non-interrogative contexts either, since NEG is unmarked for agreement. This leads to a null AGR hypothesis, which comes under Type-d on my analysis. Since Speas' hypothesis allows null subjects in (34b), there is no need for the postulation of null AGR in interrogative contexts. And also, there is no need of any null AGR postulation in sentences which have generic *pro* as their subject.

Type d: (i) Null AGR projects in negative (non-interrogative) clauses. It is not surprising that unlike the case of matrix negative sentences, null subjects are possible in embedded contexts, since they may be coreferential with the subject of the superordinate clause. Sentence (37) illustrates this point:

37a. Gopi$_i$ [*pro*$_i$ baruvudilla] anta he:Lida.
come-ger.npst.NEG COMP say-3sg.m.
`Gopi$_i$ said that (he)$_i$ will not come'

b.Gopi$_i$ [awanu$_{*i/j}$ baruvudilla] anta he:Lida.
he-nom. come-ger.npst.NEG
`Gopi$_i$ said that he$_{*i/j}$ will not come'

(ii) Null AGR projects in embedded gerundive clauses:

The sentences in (38) have gerundive clauses as their complements.

38a. Gopi$_i$ [*pro*$_i$ T.V. no:Duvudannu] nillisida.
-nom. see-gern.npst.acc. stop-3sg.m.
'Gopi stopped watching T.V.'

b. Gopi$_i$ [awanu$_{*i/j}$ T.V. noDuvudannu] nillisida.
-nom. he-nom. stop-3sg.m.
'Gopi stopped him from watching T.V.'

The embedded clauses in (37a) and (38a) behave like Type-a and Type-c languages in allowing *pro* in subject position. Since the embedded verb is not marked for agreement, there is no Agr projection in accordance with the economy principle stated in (29). However, the embedded clauses in (37b) and (38b) behave like Type-b languages in having Spec position filled. Note that overt subjects in these clauses are obligatorily disjoint in intepretation from the matrix subject.[12]

Under Speas' analysis, the Spec position of an Agr type (that is, Type-a on her analysis) language need not be filled. The underlying assumption is that, whether it is filled or not, the subject is coreferential with the matrix subject. This state of affairs holds in Italian, Korean, and Saramaccan. Borer (1989) illustrates the following paradigms to support her anaphoric AGR analysis. In Italian and Korean, only in untensed subordinate clauses must Nominative subjects (null subjects or overt pronominals) be referential with the matrix subject, whereas in Saramaccan, they must

be coreferential with the matrix subject in both tensed and untensed clauses.

Sentences (39-41) illustrate Korean, Italian, and Saramaccan, respectively (Borer's 32, 35, and 62&65, respectively):

39a. John$_i$-ka [$_{CP}$ e_i ttena-lye-ko] nolyek ha-ess-ta
-nom. leave-will-COMP try do-PAST
'John tried to leave'

b. John$_i$-ka [$_{CP}$ ku$_i$ ttena-lye-ko] nolyek ha-ess-ta
he
=(39a)

40. Gianni$_i$ dice di essere stato lui$_i$
*Maria$_j$ *Mario$_k$
Gianni says of be been him/*Mario
[*pro* a rubare le mele]
to steal the apples
'Gianni says that it was him/*Mario who stole the apples'

41a. Samo$_i$ tei di pau e_i naki di sindeki
Samo take the stick hit the snake

b. Samo$_i$ tei di pau a$_i$ naki di sindeki
Samo take the stick hit the snake

In Kannada, the opposite state of affairs holds both in finite and non-finite clauses. That is, if the Nominative subject of either type of clause is a third person pronoun, it

can never be coreferential with the matrix subject. If Spec position is obligatorily filled to get a disjoint interpretation, then the AGRP projection must exist prior to spellout, since spellout is the point at which the derivation has no further access to the Lexicon and no new heads can be added to a phrase marker after spellout. Thus, if

AGR is needed at LF, the AGRP projection must exist prior to spellout. But what type of Agr exists in these embedded clauses (that is, embedded negative and non-interrogative gerundive clauses)? It is neither Strong nor Weak AGR (Agr). Therefore, I conclude that an abstract AGR projects in these clauses. Below I show that there is an advantage to such a postulation in these clauses. And also, on Speas' account, the Spec and head abstractly agree at LF. In languages which have AGR (Agr) features, the relevant head is AGR (Agr), while in languages which lack AGR (Agr), the relevant head is Tense, Aspect, or verb. To extend this view to Kannada, one needs to distinguish two heads; Agr in non-negative sentences, and Tense in negative sentences, which is conceptually, not an attractive solution.[15]

In Chapter 3, I propose an anaphoric Agr analysis to account for control effects in finite complement clauses. If the anaphoric and non-anaphoric Agr distinction is extended to infinitival and gerundive complement clauses, one arrives at a unified account of control and non-control effects in this language. I have ommitted participial clauses in the discussion, because of their obvious anaphoric nature.

2.6. The following table summarizes the findings of this section:

Clause	Agr	AGR	No Agr/AGR
a. Finite root & embedded	+		
b. Matrix (+interr) negative, & Sentential subject with generic *pro*			+
c. Matrix (-interr), & embedded negative, and gerundive		+	
d. Participial		+	
e. Copular	+		

Footnotes to Chapter 2:

1. Kannada makes a gender distinction only in the third person singular.

2. With non-specific reference, (8) would be expressed as (i).

i. ya:ro: ba:gilu taTTutta: idda:re
someone door knock be
'Someone is knocking at the door'

3. This leads to an interesting issue about the licensing of *pro* in Kannada. According to Rizzi (1986b), a designated head licenses *pro* and rich Agr identifies it. Speas (1993) notes that on Rizzi's theory, INFL would be a designated head for licensing *pro* in languages that lack agreement, and the richness of Agr has nothing to do with whether INFL is designated as a licensing head or not. Further, Speas rightly observes that the question of why INFL seems to be a designated head in languages with rich agreement or no agreement, but not in languages with weak agreement, remains unanswered. Kannada data support Speas' observation, since *pro* is allowed in the context of rich Agr or no Agr at all, but not in the context of weak Agr.

Further, Speas argues that the distribution of null arguments follows directly from the way in which principles of economy constrain the projection of syntactic categories. She claims that null arguments are found in all and only those languages in which the specifier of AGR-P is not needed to satisfy any condition of the Grammar.

On J&S's analysis, MUP licenses *pro*, and identification of *pro* may be local or non-local depending on the presence or lack of rich Agr. On this analysis, the presence or lack of agreement features is incorporated in MUP as well.

The above discussion reveals that licensing of *pro* is analyzed in terms of properties of a governor (Nominative Case-assigner or Agr), or in terms of projection principles. Along with these licensers, the ungrammatical Kannada (9c) suggests that language-specific constraints may be involved in licensing *pro*.

Kannada has two options for licensing *pro*; the head of TP licenses *pro*, and the rich Agr in the embedded clause or in the superordinate clause identifies it, that is, identification is achieved through a local or non-local mechanism. Or, MUP licenses *pro*, but identification is achieved in the same way. On either account, nothing stops the subject from being null in (9c). Its ungrammaticality seems to suggest that licensing of *pro* is subject to a disambiguity principle, which is language-specific.

However, more data needs to be examined to come to a firm conclusion, which I leave it for future research.

4. In the following Turkish example (taken from Erguvanli-Taylan), the null subject may be coreferential either with the subject (*Erol*) or the direct object (*Ahmat*).

i. $Erol_i$ $Ahmed\text{-}i_j$ [$\varnothing_{i/j}$ gid-eceğ-i] yer-e götür-dü.
Erol Ahmet-ACC go NOM:FUT 3S:POSS place DAT take PAST
'$Erol_i$ took $Ahmet_j$ to the place $he_{i/j}$ was going to'

5. Kannada has four modes of coordination: juxtaposition,cliticization, participialization, and lexical conjunction. The discussion in the text is limited to the participialization mode of coordination. This mode of coordination has a controversial status between coordination and subordination. Despite having an identical syntactic structure several arguments may be presented to distinguish coordination from subordination. Among several arguments, the availability of reversing the order of conjunct clauses constitutes a major one to distinguish coordination from subordination. For example, (i), an instance of coordination, allows the order of the conjunct to be reversed, but (ii), an instance of subordination, does not allow it.

ia. $Gopi_i$ [pro_i sna:na ma:Di] tiNDi tinda.
-nom. shower-do-pp. breakfast ate-3sg.m.
'Gopi took a shower and ate breakfast'

b. $Gopi_i$ [pro_i tiNDi tindu] sna:na ma:Dida.
'Gopi ate breakfast and took a shower'

iia. $Gopi_i$ [pro_i sna:na ma:Di] thaNDi barisikoNDa.
shower-do-pp. cold come-cause-ref.aux.3sg.m.
'Gopi took a shower and caught a cold'

b.* $Gopi_i$ [pro_i thaNDi barisikoNDu] sna:na ma:Dida.
'Gopi caught a cold and took a shower'

However, the status of participial clauses is not relevant for the present discussion as it concerns *pro* subject of these clauses.

For completeness, I briefly discuss other modes of coordination. The lexical conjunction allows coordination of finite and infinitival clauses; finite and finite, non-finite and finite. In both types of coordinated clauses, as in participial clauses, the *pro*

subject of the second conjunct is obligatorily coreferential with the subject of the first conjunct. But unlike in participial clauses, the subject of the second conjunct need not be null in these two types of coordinated clauses in which case it is obligatorily disjoint in reference from the subject of the first conjunct. Consider:

iiia. na:nu$_i$ pe:Tege ho:de mattu *pro*$_i$ aDige ma:Dide.
I-nom. market-dat. go-1sg. and lunch do-1sg.
'I went to market and (I) cooked'

b. na:nu pe:Tege ho:de mattu Rama sha:lege hodaLu.
-nom. market-dat. go-1sg. and -nom. school-dat. go-3sg.f.
'I went to market and Rama went to school'

iva. na:nu$_i$ [*pro*$_i$ odalu] (mattu) [*pro*$_i$ bareyalu] kuLite.
I-nom. read-inf. and write-inf. sit-1sg.
'I sat down to read and write'

b. na:nu$_i$ [*pro*$_i$ odalu:] (mattu) [awanu bareyalu:] kuLitevu.
I-nom. read-inf.inc. he-nom. write-inf.inc. sit-1pl.

'I sat down to read and he sat down to write'

Note that main verb agreement is first person plural in (ivb), in which the subject of the second conjunct is a third person.

Juxtaposition and cliticization modes of coordination do not differ significantly from lexical conjunction. *mattu* 'and' may or may not be present in cliticization mode of coordination. Compare (ivb) with (vi).

va. na:nu$_i$ pe:Tege ho:de, *pro*$_i$ aDige ma:Dide.
I-nom. market-dat. go-1sg. lunch do-1sg.
'I went to market, (I) cooked'

b. na:nu pe:Tege ho:de, Rama sha:lege hodaLu.
-nom. market-dat. go-1sg. -nom. school-dat. go-3sg.f.
'I went to market, Rama went to school'

vi. na:nu pe:Tegu: Rama sha:legu: hodevu.
-nom. market-dat.inc. -nom. school-dat.inc. go-1pl.
'I went to market and Rama went to school'

6. For overt infinitival subjects, see footnote 21, Chapter 1.

7. The complementizer in the (14b) is *anno:du* not *anta*. See footnote 12 of Chapter 1.

8. In Turkish, the embedded subject can be null, since the embedded verb is marked for agreement. Consider Erguvanli-Taylan's 15a &15a', respectively:

ia. [Ahmed-in$_i$ iş-e al-dığ-i] kiz-lar
Ahmet GEN work DAT take NOM 3s:POSS girl PL
on-u$_i$ sev-er-ler.
he ACC like AOR 3PL
'The girls that Ahmet$_i$ hired like him$_i$'

b. [∅$_i$ işe aldiği] kizlar Ahmed-i$_i$ severler.
Ahmet ACC
'The girls that he$_i$ hired like Ahmet$_i$ '

9. (22b) is unacceptable only on the intended interpretation. It is acceptable if it has a discourse antecedent. The contrast between (21) and (22) is subtle, as sentences (i) and (ii) show:

i. *pro* hogu, *pro* barti:ni.
go-2sg.imp. come-1sg.
'(You) go, (I) will come' (you go ahead I will join you)

ii. * *pro* hogu, *pro* baruvudilla.
come-npst.ger.NEG
'(You) go (I) will not come'

10. Mohammad (1988), drawing evidence from copular sentences, shows that the feature person is the crucial factor in allowing an empty subject in Arabic.

ia. huwa/?anaa/?anta tawiil-un
he/I/you (sm) tall-NOM sm
'He/I/you is/am/are tall'

b.*tawiil-un
tall-NOM sm
**pro* is tall

11. Kannada does allow null objects in interrogative answer contexts:

ia. *pro* pustaka(vannu) elli iTTe?
book-acc. where keep-2sg.Q
'Where did you keep the book?'

b. na:nu *pro* iDalilla.
I-nom. keep-inf.NEG
'I did not keep (it)'

In Spanish, null objects cannot be definite (Suner 1988). Contrastingly, in Kinanade, they have to be definite (Authier 1988). Null objects have to be definite in Kannada as well.

12. The behavior of third person reflexives and pronouns exhibits a systematic pattern in all types of non-finite, negative and copular clauses; the former is always obligatorily coreferential with the matrix subject, whereas the latter always creates an obviative effect. But, the behavior of first person pronouns, unlike third person pronouns, is not straightforward in negative and copular clauses. The possible coreference between first person subjects of negative and copular complement clauses and matrix subject depends on the matrix predicate. For instance, if the matrix predicates in (33b) and (37b) are replaced by the verb *he:Lu* 'say', the complement first person subject can be coreferential with the matrix subject, *Gopi*:

i.Gopi$_i$ [na:nu$_i$ buddhivanta] anta he:Lida.
I-nom. intelligent COMP say-3sg.m.
'Gopi$_i$ said that he$_i$ is intelligent'

ii. Gopi$_i$ [na:nu$_i$ baruvudilla] anta he:Lida.
I-nom. come-ger.npst.NEG
'Gopi$_i$ said that he$_i$ will not come'

Contrast these two sentences with (iii), in which, the matrix predicate is *nillisu* 'stop'and the complement predicate is gerundive *noDu* 'see', (also see (38) in the text)). The complement first person subject is obligatorily disjoint from the matrix subject:

iii. Gopi$_i$ [na:nu$_{*i/j}$ T.V. noDuvudannu] nillisida.
I-nom. see-npst.ger.acc. stop-3sg.m.
'Gopi stopped me from watching T.V.'

For a detailed discussion of this issue, see section 3.10 in Chapter 3.

13. It was noted in footnote 22 of Chapter 1, that the embedded subject pronoun can be coreferential with the matrix subject both in finite and non-finite clauses in Malayalam. Consider Malayalam sentences (Mohanan's (1982b) 8a&b, respectively):

ia. kuṭṭi$_i$ [awan$_i$ taḻaṟum ennə] wicaariccu.
child-n he-n tire-fut that thought
'The child$_i$ thought that he$_i$ would become tired'
b. kuṭṭi$_i$ [awan$_i$ taḻaṟaan] aagrahiccu.
child-n he-n tire-inf. desired
'The child$_i$ wanted him$_i$ to be tired'

Malayalam data patterns with that of Italian, Korean, and Saramaccan.

14. I will show in Chapter 3 that the coreferentiality/non-coreferentiality of the finite complement subject (overt or null) with the matrix subject depends on the agreement on the complement verb.

15. Speas' generalization that Project XP only if XP has content is similar to the constraint proposed in Holmberg, Nikanne, Oraviita, Reime, & Trosterud (H,N,O,R&T) 1993.

i. A head-chain must have overt morphological realization.

The purpose of both generalizations is to constrain the theory in a principled manner. Nevertheless, H,N,O,R&T note that there are instances of null heads in various languages, including Finnish. Therefore, they allow two interpretations of (i); strong and weak. A strong interpretation of (i) would exclude all phonologically empty heads of head-chains. A weaker interpretation would allow phonologically null instantiations of an X° category, provided the category has overt morphological form in some other instantiation(s) (p.179). The latter interpretation allows a null AGR in Finnish indicative constructions, which, unlike other finite verb forms, lack phonologically overt AGR (Agr). Since Kannada finite verbs are marked for agreement except in negative constructions, the null AGR hypothesis proposed in the text is compatible with H,N,O,R&T's theory.

CHAPTER 3

In this chapter I investigate the properties of a Kannada construction which involves control into a finite complement clause.[1] What makes this construction especially interesting is that the controlled NP has conflicting syntactic and morphological properties. It exhibits the syntactic properties of a third person NP, but has the morphological properties of a first person NP. A first person complement subject corefers with a non-first person subject in the superordinate clause. The complement verb is marked for first person agreement. I propose a Functional Anaphoric Chain hypothesis to account for this control phenomenon.

Saxon (1986) shows that Dogrib, an Athapaskan language, has a similar construction.[2] She proposes a control analysis for the construction and, drawing data from different languages, shows that her analysis accounts for the controlled properties of subject NPs in these languages in a unified way within the existing GB theory of control. On her analysis, this unusual phenomenon is treated on a par with control structures involving subject control verbs. My analysis distinguishes control structures involving subject control verbs from those involving non-control verbs.

Before turning to the organization of this chapter, a note on its scope is in order: the study focuses on finite (inflected for PNG) constructions. The anaphoric Agr/AGR

and control analyses are not extended to Dative constructions, which are also considered finite, but uninflected for PNG. However, a section is devoted to show why the proposed analyses cannot be extended to these constructions. The discussion of non-finite clauses is also limited; the purpose is to show that a unified account of control effects is possible by appealing to the concept of anaphoric and non-anaphoric AGR.

This chapter is structured as follows: Section 3.1 illustrates the control phenomenon, while section 3.2 discusses the nature of control and the properties of control constructions. Section 3.3 discusses the role of first person agreement in inducing the control property. Section 3.4 catalogs the similarities and differences between Kannada and Dogrib. Section 3.5 summarizes Saxon's analysis of the Dogrib data. Section 3.6 distinguishes the control phenomenon for control and non-control verbs and, based on Bok-Bennema's (1985) analysis of Eskimo *pro*, distinguishes the non-overt subjects of the complement clauses of both types of verb by feature specifications. Section 3.7 briefly discusses Borer's (1989) and Finer's (1985) analyses of control structures. Section 3.8, based on their analyses, attempts to account for the Kannada control phenomenon. The discussion shows that the analysis is incompatible with the *Barriers* approach to movement. Section 3.9 proposes a non-movement analysis of the control phenomenon. Section 3.10 extends the anaphoric

Agr analysis to account for the control and non-control effects in non-finite clauses. Section 3.11 discusses dative constructions. Section 3.12 concludes.

Before illustrating the above mentioned phenomena, a few points are in order. First, the Kannada complementizer *anta* is used to embed both direct speech and indirect discourse finite complements. So, if the matrix verb allows both types of complements, a given sentence may be ambiguous between these readings. Second, the interpretation of first person pronouns in direct and indirect complements has the following properties; in direct discourse complements, complement first person pronouns are interpreted as in direct quotations from the perspective of the person whose speech, thoughts, or wishes are being reported. In indirect discourse complements, first person pronouns are interpreted from the viewpoint of the speaker. These facts are exemplified in (1). On the direct discourse interpretation, the complement first person pronoun *na:nu* `I' is understood as referring to the matrix subject whose wish is being described. On the indirect discourse interpretation, the complement first person is understood as referring to the speaker of the sentence:

1. Gopi$_i$ [na:nu:$_{i,j}$ barti:ni] anta he:Lida.
   -nom. I-nom.inc. come-1sg. COMP say-3sg.m.
   `Gopi$_i$ said that he$_{i,j}$ will also come'
   lit. Gopi said, I will also come (the first person pronoun may refer to Gopi or to the speaker of the sentence)

2. *pro*$_i$ [na:nu:$_{i,j}$ barti:ni] anta he:Lide.
   you-nom. I-nom.inc. come-1sg. COMP say-2sg.
   `(you) said you are coming too'

lit. You said I am coming too (the first person pronoun may refer to the second person matrix subject or to the speaker of the sentence)

When the first person pronoun refers to the speaker of the sentence in (2), the sentence would mean something like this: you told ((someone) a specific discourse antecedent) that I am also coming.

3.1. *Kannada Control*

The meanings of (1) can also be expressed as (3a-c).

3a. Gopi$_i$ [awanu:$_i$ barti:ni] anta he:Lida.
he-inc. come-1sg. COMP say-3sg.m.
`Gopi$_i$ said that he$_i$ will also come'

b. Gopi$_i$ [ta:nu:$_i$ barti:ni] anta he:Lida.
self.inc. come-1sg.
`Gopi$_i$ said that self$_i$ will also come'

c. Gopi$_i$ [*ec*$_i$ barti:ni] anta he:Lida.
come-1sg.
`Gopi$_i$ said that (he)$_i$ will come'

In examples (1) and (3a-c), the subject of the complement clause determines first person verbal agreement, although it corefers with the third person matrix subject.[3,4] Sentences (3a-c) differ from (1) in two respects; unlike (1), (3a-c) are not ambiguous. Their complement subjects can only have the matrix subject as their antecedent. Second, only in (1) can the complement clause stand alone as a sentence. (3a) has a

third person pronoun as its complement subject, and the complement clause cannot stand alone. The complement subject in (3b) is a third person reflexive pronoun, and again, the complement clause cannot stand alone. (3c) illustrates the null control structure. The null complement subject in (3c) is invariably understood to be coreferential with the matrix subject.

The meanings of (2) can be expressed only as (4a), but not as 4(b-d):

4 a. ninu$_i$ [*ec*$_i$ barti:ni] anta he:Lide.
come-1sg.
`You said (you) are coming'

b.* ninu$_i$ [awanu:$_j$/awaLu:$_i$ barti:ni] anta he:Lide.
he/she-inc. come-1sg.
`You$_i$ said he/she$_j$ are coming'

c.*ninu$_i$ [ta:nu:$_i$ barti:ni] anta he:Lide.
self-inc. come-1sg.
`You$_i$ said self$_i$ are coming'

d.*ni:nu$_i$ [*ec*$_i$ barti:ye] anta he:Lide
you-nom. come-2sg. COMP say-2sg.
`You said (you) are coming'

In examples (2) and (4a), the first person and null complement subjects, respectively, corefer with the second person matrix subject. But, unlike (2), (4a), analogous to (3c), is not ambiguous. The contrast between the unacceptable (4b&c) and the acceptable (3a&b) shows that the complement third person and reflexive pronouns can have only third person NPs as antecedents. The unacceptable (4d) shows that if the complement

verb is marked for second person agreement, its subject cannot be coreferential with the matrix subject. Similarly, example (5a) shows that if the complement verb is marked for third person agreement, its subject cannot be coreferential with the matrix subject.

5a. $Gopi_i$ [awanu/ $ec_{*i/j}$ barta:ne] anta he:Lida.
he-nom. come-3sg.m. COMP say-3sg.m.
'$Gopi_i$ said that $he_{*i/j}$ will come'

b.*$Gopi_i$ [$ta:nu_{i/j}$ barta:ne] anta he:Lida.
self come-3sg.m. COMP say-3sg.m.
'$Gopi_i$ said that $self_{i/j}$ will come'

(5b) is puzzling. The Kannada anaphor *ta:n* can only take a third person subject as its antecedent. But the third person agreement on the embedded verb blocks coreference despite satisfaction of the anaphor's syntactic requirement. The difference between (5b) and (3b) is that, even though the embedded clause in the latter cannot be independent, the first person agreement does not block the coreference with the matrix subject, hence the anaphor is bound. Therefore, as a whole sentence (that is, with the complement clause), (3b) is fine. In (5b), this option is not available for the anaphor, hence it is left without an antecedent leading to ungrammaticality.

The overt complement subjects in the above examples are affixed with the inclusive clitic, which represents emphasis. Only (1) and (2) with an overt first person pronoun are ambiguous. The complement third person NPs in (3a&b), and the null subjects in

(3c) and (4a) obligatorily corefer with the matrix NP, but the morphological agreement features of the complement verb do not match the relevant morphological features of the controlled NPs.

In the above examples, with the exception of an overt first person pronoun, complement subjects show what I refer to as the control property. We need to answer the following questions; why do these NPs exhibit the control property? What role does first person agreement play in inducing it? And can one account for the data within the existing GB theory of control? In addition, the unacceptable (5b) also should be accounted for.

Before answering these questions, first I discuss first person plural agreement cases, and in the following section, what control is, and properties of control constructions.

The facts about first person agreement do not reveal any singular/plural distinction. The following illustrate first person plural agreement:

6. Raju$_i$ mattu Gopi$_j$ [*ec*/ta:vu:/na:vu:/awaru:$_{i+j}$ barti:vi] anta he:Lidaru.
   and self-pl./we/they-inc. come-1pl. say-3pl.
   ` Raju$_i$ and Gopi$_j$ said that they$_{i+j}$ are coming'

7. ni:vu$_i$ [*ec*/na:vu:$_i$ barti:vi] anta he:Lidiri.
   you-pl. we-inc. come-1pl. say-2pl.
   `You said that you are coming'

On an indirect reading, the first person complement subjects in (6) and (7), may

include the speaker of the sentence also.

3.2. *On Control*

In this section, I discuss what control is and properties of control constructions. I use the term 'control' to signal the obligatory coreference between two NPs. Control is usually defined in context of infinitives or gerunds determined by a governing verb. In Kannada, as in English, 'try', 'expect', 'promise', etc., are 'control verbs'. As in English and many other languages, the controlled NP in Kannada is always a subject NP. However, there are two major differences between Kannada and English control; first, in English, control never operates into finite complement clauses, whereas in Kannada, it does. Second, the controlled NP in English must be an empty category, whereas in Kannada, it need not be. The controlled NP may be a first person or third person pronoun, a third person reflexive, or null. For clarity, I use the following terminology to associate control with each of these NPs.

(a) Null complement NP .....> A-control
(b) Third person reflexive pronoun .....> B-control
(c) Third person pronoun .....> C-control
(d) First person pronoun .....> D-control

With the exception of D-control, all other types of control illustrate obligatory control in the presence of first person agreement in the complement clause. As (1) and (2) illustrate, D-control may be obligatory or non-obligatory.

Control structures can be viewed in terms of a relation between the controller and either the embedded argument NP or the embedded predicate. Kannada control exhibits both aspects; control into finite complements exemplifies the latter relation, and into non-finite clauses the former relation.

3.3. *The Role of First Person Agreement*

In this section, I answer the second question raised above: what role does first person agreement play in inducing the control property? Consider:

8. Gopi$_i$ [awanu$_{\bullet i/j}$ buddhivanta] anta he:Lida.
   he-nom. intelligent-sg.m. COMP say-3sg.m.
   'Gopi$_i$ said that he$_{\bullet i/j}$ is intelligent'

9. Gopi$_i$ [awanu$_{\bullet i/j}$ barta:ne] anta he:Lida.
   he come-3sg.m. COMP say-3sg.m.
   'Gopi$_i$ said that he$_{\bullet i/j}$ will come'

10. Gopi$_i$ [awanu:$_{i/\bullet j}$ barti:ni] anta he:Lida.
    he-inc. come-1sg. COMP say-3sg.m.
    'Gopi$_i$ said that he$_{i/\bullet j}$ will also come'

The complement subjects in (8-10) are overt third person pronouns. In (8) and (9), the complement subjects are obligatorily disjoint from the matrix subject. However, in (10), the complement subject is obligatorily coreferential with the matrix subject. The difference between these sentences is that only (10) has a complement verb marked for first person agreement. The contrast between these sentences follows if it is assumed that first person agreement is the basis of the obligatory coreferential interpretation in

(10).

Now consider sentences with second person matrix subjects, such as (2), (4a), and (4d) repeated as (11a,b) and (12), respectively.

11a. *pro*$_i$ [na:nu:$_{i,j}$ barti:ni] anta he:Lide.
you-nom. I-nom.inc. come-1sg. COMP say-2sg.
`(you) said you are coming too'

b. ni:nu$_i$ [*ec*$_i$ barti:ni] anta he:Lide.
you come-1sg. COMP say-2sg.
`You said (you) are coming'

12.*ni:nu$_i$ [*ec*$_i$ barti:ye] anta he:Lide.
come-2sg. COMP say-2sg.
`You said (you) are coming'

The coreference between main and complement subjects is allowed in (11), but not in (12). The complement predicates in (11) are marked for first person agreement, but in (12), the complement predicate is marked for second person agreement. As (13) shows though, the complement subject can be coreferential with a non-subject NP in the higher clause, if the embedded predicate is marked for second person agreement. The controlled NP in (13) is a second person subject (see below for more discussion about second person agreement).

13. Gopi nanage$_i$ [ni:nu:$_i$ ba:] anta he:Lida.
-nom. I-dat. you-inc. come-imp.2sg. COMP say-3sg.m.
`Gopi asked me to come'
lit.Gopi told me, you also come.

But, the complement subject can never be coreferential with an NP in the higher

clause, if the embedded predicate is marked for third person agreement.[5] Compare (14) with (13):

14. Gopi$_i$ Rajuwige$_j$ [awanu:$_{*i,*j/k}$ barali] anta he:Lida.
-dat. he-nom.inc. come-opt.3 COMP say-3sg.m.
'Gopi$_i$ told Raju$_j$ that he$_{*i,*j/k}$ can also come'

The contrast between (11) and (12), and (12) and (13) suggests that first person agreement is necessary to establish a control relation between subjects of finite clauses.[6]

A different sort of evidence can be presented to support the above observation that first person agreement is necessary to establish a control relation between subjects of finite clauses. Recall the discussion in footnote 12 of Chapter 2 that a complement first person subject behaves differently from a third person reflexive and pronouns in nonfinite clauses; in negative and copular clauses, its ability to be coreferential with the matrix subject depends on the matrix predicate. But coreference is blocked between first person complement subject and matrix subject in gerundive and infinitival clauses.

This means that in the absence of first person agreement, even the first person pronoun cannot always be coreferential with the matrix subject. Compare (15) with (16a), and also (16a) with (16b):

15. $Gopi_i$ [na:ne:$_i$ i: kelasa ma:Dti:ni] anta he:Lida.
-nom. I-emph. this work do-1sg. COMP say-3sg.m.
'$Gopi_i$ said that he_i will do this work by $himself_i$', lit. Gopi said, I myself will do this work.

16a. $Gopi_i$ [na:nu$_{*i/j}$ i: kelasa ma:Dalu] oppida.
-nom. I-nom. this work do-inf. agree-3sg.m.
'Gopi agreed for me to do this work'

b. $Gopi_i$ [ta:ne:$_i$ i: kelasa ma:Dalu] oppida.
-nom. self-emph. this work do-inf. agree-3sg.m.
'Gopi agreed to do this work by self'

In (16a), the first person pronoun is obligatorily disjoint from the matrix subject, whereas in (16b), the third person reflexive is obligatorily coreferential with the matrix subject (see below). But in (15), unlike in (16a), the complement first person subject can be coreferential with the matrix subject. The contrast between (15) and (16a) suggests that in the absence of first person agreement, even the first person pronoun cannot (always) be coreferential with the matrix subject, and also suggests that first person agreement is necessary to establish a control relation between subjects of finite clauses.

Contrast (16b) with (3b) and (5b), above. In the absence of third or first person agreement, as in non-finite (16b), the complement third person reflexive must be obligatorily coreferential with a third person matrix subject. The complement third person reflexive must also be obligatorily coreferential with a matrix third person

subject, if the complement verb is marked for first person agreement, as in (3b). But the complement third person reflexive can never be coreferential with the matrix third person subject, if the complement verb is marked for third person agreement, as in (5b). The contrast between (16b) and (3b), and between (16b) and (5b) suggests that first person agreement is necessary to establish a control relation between subjects of finite clauses.

The following descriptive generalization (which will be modified in section 3.6) emerges from the above discussion:

17. When the verb of a complement clause C is marked for first person agreement, C's subject is obligatorily coreferential with the immediately superordinate subject.

Generalization (17) substantiates the observation made in the previous section that Kannada finite complement control structures exemplify a relation between the embedded predicate and the controller.

Having estalished the role of first person agreement in inducing the control property, I turn to Dogrib data.

3.4. *Kannada and Dogrib*

In this section, I catalog the relevant differences and similarities between Kannada and Dogrib.

While both Kannada and Dogrib are SOV languages, Dogrib is morphologically richer than Kannada. Dogrib direct and oblique objects of verbs, the objects of postpositions, and the possessors of nouns are, like verbs, marked for person and number. Dogrib possessed nouns fall into three classes; alienably and inalienably possessed nouns, which require a possessor NP, and alienably possessed nouns which permit only a PP possessor (that is, alienably possessed nouns make a two way distinction regarding the choice of possessor).

Dogrib allows pronominal subjects, direct and oblique objects of verbs, objects of postpositions, and possessors to be dropped.[7] As discussed in Chapter 2, Kannada observes certain restrictions in allowing or not allowing null subjects and objects.[8] All Dogrib clauses are finite, while Kannada has a variety of non-finite clauses. Complementizers rarely appear in Dogrib. The presence of an overt complementizer forces an indirect discourse interpretation. The Kannada complementizer *anta* follows both direct and indirect finite complements. Hence a complement clause can be ambiguously direct or indirect. Dogrib allows double topics, Kannada only one. The Dogrib third person reflexive pronoun can have only a third person subject as its antecedent, and cannot be bound outside its clause. The Kannada third person reflexive pronoun can also have only a third person subject as its antecedent, but can be bound outside its clause.

3.5. *Saxon's Analysis*

In this section, I summarize Saxon's analysis of the Dogrib data. Evidence for control into a finite clause in Dogrib comes chiefly from reflexive facts. As noted above, a Dogrib reflexive pronoun can only have a third person subject as its antecedent. The controlled NP is an empty category. The Dogrib verb *ts'eniwq* 'want' can take both direct and indirect discourse complements, which may have overt subjects; see (18) and (19); these are Saxon's (247a) and (248a), respectively.

18. Mary ?eyi cheko sìhchi ha niwq.
that boy 1s.3.IMP.choose Fut 3.IMP.want
'Mary wants that guy to choose (marry) her'

19. Seqq̀ done ?èya elii ghàlaenda ts'èko
1s.husband person sick 3.IMP.be.Rel 3.IMP.work woman
sets'atla ha niwq.
is.3.IMP.visit Fut 3.IMP.want
'My husband wants the nurse to visit me'

In addition to these two types of complement, the verb *ts'eniwq* can also take a third type, which Saxon calls a 'control complement'. Control complements differ from both direct and indirect discourse complements in barring overt subjects. The contrast between (20) and (21) shows that an overt subject of a control complement leads to ungrammaticality. These are Saxon's (245) and (246).

20. Johnny ?ededè ts'àwehndì niwq.
Refl.sister 1s.OPT.help 3.IMP.want
'Johnny wantsto help his sister'

21.*Johnny sį/?ededį ?ededè ts'àwehndì niwq.
1s/3 Refl.sister 1s.OPT.help 3.IMP.want
(Johnny wants to help his sister)

Since the third person reflexive pronoun is clause bounded in Dogrib, Saxon was led to consider raising and logophorocity analyses. Dogrib allows double topics, hence Saxon was also led to consider a topicalization analysis. However, she shows that none of these three analyses accounts for the Dogrib data. Then she argues convincingly that with some modifications, the existing GB theory of control can account for the data.

Saxon defines 'control', and 'control verb' as in (22) and (23), respectively:

22. The sharing of features between matrix and complement NPs as a result of the lexical specification of a matrix verb.

23. X is a control verb if and only if its sentential complement contains a NP with the features [+anaphor, +pronominal]

In the standard GB approach, the assumption that control is limited to non-finite clauses makes it possible to define the controlled NP as having the features [+anaphor, +pronominal] according to the principle of functional determination. Saxon draws on features from different languages to show that the predictions under this approach are not borne out, and to develop her modified version of control theory:[9]

i. Rumanian, (data from Comorovski 1985) like Dogrib, allows control into a finite complement, and the controlled NP, although empty is governed.[10] From this evidence, Saxon argues that it is necessary to give up the assumption that controlled NPs can be defined as such according

to their (non-finite) syntactic environment.

ii. Data from Saramaccan (Byrne 1985) shows that a governed controlled NP may be overt (see (41b) in Chapter 2).[11]

iii. Data from Chamorro (Chung 1985) shows that controlled NPs cannot be characterized as pure anaphors.

iv. Evidence against a VP analysis comes from Rumanian and Spanish (Comorovski 1985, and Suner 1984, respectively), in which the controlled complement may contain a complementizer.[12]

In the light of the above, Saxon includes the following assumptions in her alternative theory of control:

24a. NPs--both overt and empty are inherently specified for the features [+anaphor, +pronominal]

b. All NPs are subject to the (revised) binding theory.[13]

c. A control verb must have a [+anaphor, +pronominal] NP in its complement.

d. A [+anaphor, +pronominal] NP is coreferential with its binder.

Assumption 24(a) is the hypothesis which replaces the principle of functional determination of empty categories in the standard GB framework. Saxon's account does not make specific predictions about the form of the controlled NP. Language-specific conditions permitting, a controlled NP may be overt or empty.

To summarize, Saxon's theory of control includes the following:

25a. Principles for the selection of controllers.
b. The definition of a control verb.
c. The semantic interpretation of [+anaphor, +pronominal] NPs.

(25a) is needed to provide an account of the difference in controller choice between *promise* and *persuade* in (26) and (27).

26. Frank$_i$ promised Rachel$_j$ [*pro*$_{i/*j}$ to cook the fish].
27. Chris$_i$ persuaded Rachel$_j$ [*pro*$_{*i/j}$ to cook the fish].

3.6. *Properties of Kannada Control*

Returning to Kannada, we find that the data exhibit the following properties:

28a. The subject of a finite control complement clause may be overt or empty.

b. The controlled/uncontrolled overt NP in complement subject position is governed, since it receives Nominative Case. This suggests that the controlled non-overt NP in that position is also governed.

c. Finite control complements contain a complementizer.

d. A complement verb whose subject is controlled is marked for first person agreement.

Kannada shares with Dogrib the peculiarity of having a controlled empty NP determining first person agreement in control complements, which are finite. It is similar to other languages in having controlled and governed overt NPs, and a complementizer in the controlled complement clause. The languages other than

Dogrib discussed by Saxon allow control into finite complements, but their complement verbs are never marked for first person agreement.

Most of the features Saxon draws from different languages to develop her version of control theory to account for the Dogrib data, are also present in Kannada. Because of its explanatory value, one can easily extend her analysis to Kannada. However, Saxon's analysis does not distinguish, at least n Kannada, the control phenomenon associated with subject control verbs from the one associated with non-control verbs. The unusual control phenomenon discussed above, which involves non-control verbs, is treated on a par with control structures which involve subject control verbs. Section 3.6.1 presents Kannada evidence that these two control phenomena should be distinguished.

3.6.1. *Two Control Phenomena*

(i) The first piece of evidence derives from the behavior of complement first person subjects (stressed overt subjects are indicated by bold face). Consider:

29a.Gopi$_i$ Rajuwige [**na:nu**$_i$ saha:ya ma:Dti:ni] anta ma:tukoTTa.
-nom. -dat. I help do-1sg. COMP promise-3sg.m.
'Gopi promised Raju to help him'

b. Gopi$_i$ Rajuwige [**ta:nu**$_i$ sahaya ma:Dti:ni] anta ma:tukoTTa.
self-nom.
=(29a)

c.Gopi$_i$ Rajuwige [*ec*$_i$ saha:ya ma:Dti:ni] anta ma:tukoTTa.
=(29a)

29(b) and (c) are similar to 3(b) and (c), (repeated as 30a&b) whereas, (29a) is not like (1) (repeated as (31)).

30a. Gopi$_i$ [ta:nu:$_i$ barti:ni] anta he:Lida.
self-inc. come-1sg. COMP say-3sg.m.
'Gopi$_i$ said that self$_i$ will also come'

b. Gopi$_i$ [*ec*$_i$ barti:ni] anta he:Lida.
come-1sg.
'Gopi$_i$ said that (he)$_i$ will come'

31. Gopi$_i$ [na:nu:$_{i,j}$ barti:ni] anta he:Lida.
I-inc. come-1sg.
'Gopi$_i$ said that I$_{i,j}$ will also come'

In (29a), the first person pronoun can only be coreferential with the matrix subject, because a subject control verb like, *ma:tukoDu* 'promise' does not allow it to be coreferential with a distinct NP or to be interpreted as denoting the speaker of the sentence. The non-control verb 'say' does allow this, as in (31). In other words, (29a) is an instance of obligatory D-control (i.e., associated with complement first person pronoun), whereas (31) is an instance of optional D-control. But the empty category in (30b) with the same non-control verb picks out the coreferential reading. The ambiguity with an overt pronoun and the lack of ambiguity with an empty category in sentences involving non-control verbs suggests that the control phenomenon in (30b) should be distinguished from that of (29c).

The above discussion supports the observation made in the beginning of this chapter that control phenomenon is dependent on the matrix predicate. Non-control verbs like, *he:lu* `say' do not allow obligatory D-control, whereas with subject-control verbs like *ma:tukoDu* `promise' D-control is obligatory.

Third person pronouns in the complement subject positions of subject control verbs are odd, see (32), which supports the observation made in footnote 3 that the combination of third person pronoun and first person agreement is uncommon and marginal.

32.??? Gopi$_i$ Rajuwige [awane:$_i$ saha:aya ma:Dti:ni] anta ma:tukoTTa.
he-emph.
`Gopi$_i$ promised Raju$_j$ that he$_{i/*k}$ would help him$_j$'

(ii) A second piece of evidence for distinguishing control structures involving control verbs from those involving non-control verbs comes from A-control, when the embedded predicate is not marked for agreement. Recall from the discussion in footnote 12 of Chapter 1 that the suffix *--a:gi* may be analyzed as a complementizer when used to embed an indirect statement (the suffix is attached to a nonpast gerund lacking agreement markers). In such constructions, the subject of an intransitive gerundive complement may be a third person reflexive pronoun, or may be empty; in either case, it is obligatorily coreferential with the matrix subject. There is a contrast between the acceptable (34b) and the doubtful (33b).

33a. Gopi$_i$ [**ta:nu$_i$** baruvuda:gi] he:Lida.
self come-ger.npst.COMP say-3sg.m.
'Gopi$_i$ said that self$_i$ will come'

b.???Gopi$_i$ [*ec*$_i$ baruvuda:gi] he:Lida.
=(33a)

34a. Gopi$_i$ [**ta:nu$_i$** baruvuda:gi] ma:tukoTTa.
promise-3sg.m.
'Gopi$_i$ promised that self$_i$ would come'

b. Gopi$_i$ [*ec*$_i$ baruvuda:gi] ma:tukoTTa.
=(34a)

This contrast shows that first person agreement on the complement verb is needed to establish coreference between matrix and complement NPs under specific conditions, if the matrix verb is a non-control verb like *he:Lu*. However, subject control verbs do not impose such a requirement.[15]

(iii) The third sort of evidence formally distinguishes control from non-control verbs, and helps us understand how control structures are instantiated in Kannada. Given a matrix non-control verb, any resulting control structure depends on the nature of the complement clause. If the latter is finite with first person agreement, a resulting control structure invovles subject control, as in (1-4). If the complement clause is finite with second person agreement, or infinitival, a resulting control structure involves object control, as in (35) and (36), respectively:

35. Gopi$_i$ Rajuwige$_j$ [*ec*$_{i/j}$ ba:] anta he:Lida.
-nom. -dat. come-2sg. COMP say-3g.m.
'Gopi told Raju to come'

36. Gopi$_i$ Rajuwige$_j$ [*ec*$_{i/j}$ baralu] he:Lida.
-nom. -dat. come-inf. say-3sg.m.
'Gopi told Raju to come'

If the complement is copulative, the result is a non-subject control structure, that is, the complement subject can take the higher indirect object as its antecedent or it may have a discourse antecedent, as in (37). However, the complement subject cannot take the matrix subject as its antecedent. It is shown in section 3.10 that except in finite complements with first person agreement, a complement third person pronoun subject is obligatorily disjoint from the matrix subject. A third person reflexive is needed to establish the coreference between the subject of a copular complement and the matrix subject, as in (38). A-control (i.e., associated with null complement subject) is not possible in such cases. Recall the discussion in Chapter 2 that a Weak Agr is projected in copular sentences, and hence null subjects are not allowed there.

37. Gopi$_i$ Rajuwige$_j$ [awanu$_{i/j,k}$ buddhivanta] anta he:Lida.
-nom. -dat. he-nom. intelligent COMP say-3sg.m.
'Gopi$_i$ told Raju$_j$ that he$_{i/j,k}$ is intelligent'

38. Gopi$_i$ Rajuwige [**ta:nu**$_i$ buddhivanta] anta he:Lida.
self
'Gopi$_i$ told Raju that self$_i$ is intelligent'

If a matrix verb is a subject control verb, then, irrespective of the nature of the complement clause, its subject is obligatorily coreferential with the matrix subject, as in (39a&b). For cases like (39a), both B (i.e., associated with third person reflexive) and (only obligatory) D-control (i.e., associated with first person pronoun) are allowed. C-control (i.e., associated with third person pronoun) is odd (see (32)) above.

39a. Gopi$_i$ [*ec*$_i$ munde otti:ni] anta tumba: prayatnapaTTa.
-nom. further study-1sg. COMP much try-3sg.m.
'Gopi tried hard to study further'
Lit. Gopi tried very much, (I) shall study further.

b. Gopi$_i$ [*ec*$_i$ munde odalu] tumba: prayatnapaTTa.
study-inf.
=(39a)

If a matrix contains an object control verb, as in (40), the complement subject is obligatorily coreferential with the higher object.

40. Gopi Rajuwannu$_i$ [*ec*$_i$ baralu] otta:yiisida.
-nom. -acc. come-inf. force-3sg.m.
'Gopi forced Raju to come'

Generally, Kannada object control verbs take infinitival complements. But they may, as in (41), take a finite complement, in which the embedded predicate is marked for second person agreement (see also (13&35)). In that case, either the second person pronoun or the null complement subject is obligatorily coreferential with the higher object.

41. Gopi Rajuwannu$_i$ [ni:nu:/*ec*$_i$ ba:] anta otta:yisida.
you-inc. come-2sg.imp. COMP force-3sg.m.
=(41)
Lit. Gopi forced Raju$_i$, you$_i$ also come.

When the complement verb is marked for second person agreement, as in (41), the complement second person subject can never be coreferential with the higher subject, (see (4d)). The complement second person subject may be coreferential with the matrix subject if the matrix subject is also the indirect object of the superordinate clause, see (42):

42. Gopi$_i$ [Raju nanage$_i$ [ni:nu:$_i$ ba:] anta he:Lida]
-nom. -nom. -dat. you-inc. come-2.imp. COMP say-3sg.m.
anta he:Lida.
COMP say-3sg.m.
`Gopi$_i$ said that Raju told him$_i$ to come'

The facts discussed so far about Kannada first, second and third person agreement suggest that Kannada has a unified way of signalling control and non-control relations in finite clauses, schematized in (43):

16

43a. First person agreement ----------> Subject control
b. Second person agreement ----------> Object control
c. Third person agreement ----------> Obviation

Overall, the above discussion suggests the following:

(a) Non-control verbs allow only optional D-control (i.e., associated with complement first person pronoun), whereas subject-control verbs allow only obligatory D-control.

(b) C-control (i.e., associated with complement third person pronoun) is odd with subject control verbs.

(c) Irrespective of the presence or absence of first person agreement on the complement predicate, A-control (i.e., associated with null complement) is available with control verbs, but not with non-control verbs.

(d) Irrespective of the presence or absence of first person agreement on the complement predicate, B-control (i.e., associated with third person reflexive) is available with both control and non-control verbs, if the matrix subject is a third person NP.

(e) Control structures with non-control verbs depend on the type of the complement clause, whereas those with control verbs do not.

In the light of the above discussion, the descriptive generalization stated in (17) is modified below as (44), (which will be slightly modified in section 3.6.3.):

44. When the verb of a complement clause C is marked for first person agreement, C's subject is obligatorily coreferential with the immediately superordinate subject (except when the matrix predicate is a non-control verb and C's subject is a first person pronoun).

To summarize, on the basis of the data above, two types of finite control complements involving respectively control and non-control verbs should be distinguished although the mechanism used to signal the control relation is the same in both structures.[17] The question is how to represent the empty subjects of these two types of finite control complements. To answer, I turn to Bok-Bennema's (1985) analysis of Eskimo *pro*.

3.6.2. *Bok-Bennema's Analysis*

Bok-Bennema shows that Eskimo (a *pro* drop language) has two distinct types of third person agreement. One involves the normal agreement morphemes, *a ngmat*, and *raku*. When these are used, there is no requirement of coreference for a complement *pro* with the higher subject. With other morphemes, *ni*, g*amik*,, *nimiu* and *rani*, though, the *pro* exhibits certain anaphoric characteristics. It has to be bound by a c-commanding subject NP. (45a&b) illustrate these facts:

45a. *pro* tangell*raku* tuntuvak, angun ayalruuq.
saw-3sg3sgDM moose, man went-away
'When he$_i$ saw the moose, the man$_j$ went away'

b. *pro* tangller*miniu* tuntuvak, angun ayallruup.
'When he$_i$ saw the moose, the man$_{i/*j}$ went away'

This anaphoric *pro* also has something in common with pronominals: when used as a direct object, it can never be coreferent with the subject of its own clause. Sentence (46) cannot mean : 'When the man saw himself, the moose went away'.

46. Anguten tangell*ran*i *pro*, tunvtuvaq ayalruuq.
man saw-3sg3sgDM moose went-away
'When the man saw it$_i$ the moose$_i$ went away'

To account for the anaphoric characteristics of *pro*, Bok-Bennema makes use of ideas from Yang (1983). Yang observed that certain reflexives are bound in the domain of a specific type of inflection, and are always bound by subjects. He calls these "marked

reflexives". The binding domain of Eskimo anaphoric *pro* seems to be that of the indicative mood inflection. Hence Bok-Bennema treats anaphoric *pro*s as marked reflexives.

Thus, Bok-Bennema claims that the *ec* in (45) is *pro* and that the one in (46) is a pronominal anaphor. She argues that the existence of the former type of NP implies both that *pro* cannot be uniquely defined as an empty pronominal and that an empty pronominal anaphor cannot be uniquely defined as PRO. She further argues that the existence of pronominal anaphors other than PRO can be conceptualized via an extension of GB binding theory. What follows is a brief summary of Bok-Bennema's version of binding theory:

Bok-Bennema observes that Yang's generalization that a marked anaphor is bound in some domain entails an extension of the typology of expressions [±anaphor, ±pronominal], as in (47):

47a. [+anaphor, -pronominal]
1. [+unmarked anaphor, -pronominal] NP-trace, *himself* etc.

2. [+marked anaphor, -pronominal] *sig*.....

b. [-anaphor, +pronominal] *pro*, lexical pronominals

c. [+anaphor, +pronominal]
1. [+unmarked anaphor, +pronominal] PRO
2. [+marked anaphor, +pronominal] ....

d. [-anaphor, -pronominal] *wh*-trace, lexical expressions

The *pro*-drop pronominal anaphor that occurs in Eskimo falls under (47.c.2.). Following Bok-Bennema, I characterize *pro* in the complement subject position of a non-control verb as having the features [+marked anaphor, +pronominal], and a *pro* in the complement subject position of a control verb as having the features [+unmarked anaphor, +pronominal]. Even though two types of null complement subjects are theoretically distinguished, their anaphoric domain is strictly local. In this respect, the two types of *pro* share a common feature. The following section examines the syntactic properties of such null complement subjects.

18

3.6.3. *Null Complement Subjects*

In (48), an instance of D-control, the doubly embedded first person complement subject may have the immediately superordinate subject *Raju*, or the matrix subject *Gopi* as its antecedent, or may designate the speaker of the sentence.

48. $Gopi_i$ [[na:nu:$_{i,j,k}$ barti:ni] anta $Raju_j$ he:Lida] anta he:Lida.
-nom.I-nom. come-1sg. COMP -nom. say-3sg.m. COMP say-sg.m.
'$Gopi_i$ said that $Raju_j$ said that $he_{i,j,k}$ will come'

(49) exemplifies B-control, and the third person reflexive pronoun may also have either *Raju* or *Gopi* as its antecedent.

49. $Gopi_i$ [[ta:nu:$_{i,j}$ barti:ni] anta $Raju_j$ he:Lida] anta he:Lida.
self
'$Gopi_i$ said that $Raju_j$ said that $self_{i,j}$ will also come'

Even though (50), an instance of C-control, is odd on either reading, the doubly embedded third person subject may corefer with *Gopi* or *Raju*.

50.??? Gopi$_i$ [[awanu:$_{i,j}$ barti:ni] anta Raju$_j$ he:Lida] anta he:Lida.
he
'Gopi$_i$ said that Raju$_j$ said that he$_{i,j}$ will also come'

Sentences (48-50) are problematic for the descriptive generalization stated in (44) above, which states that the complement subject is obligatorily coreferential with the 'immediately' superordinate subject, if the complement verb is marked for first person agreement. The complement subjects in (48-50) may have either subject of the immediately superordinate clause or subject of the matrix clause as their antecedent.[19] In the light of the above data, (44) is slightly modified, see (51):

51. When the verb of a complement clause C is marked for first person agreement, C's subject is obligatorily coreferential with some superordinate subject (except when the matrix predicate is a non-control verb and C's subject is a first person pronoun).

But in (52), the null complement subject can have only the immediately superordinate subject *Raju* as its antecedent.

52. Gopi$_i$ [[*ec*$_{i/j}$ barti:ni] anta Raju$_j$ he:Lida] anta he:Lida.
'Gopi$_i$ said that Raju$_j$ said that (he)$_{i/j}$ will come'

The contrast between (48), (49) and (50), and (52) suggests that the anaphoric domain of the null complement subject is strictly local. This observation is consistent with the general understanding of the behavior of null elements in control structures found

across languages. That is, a controlled null complement subject must be coreferential with an NP in the immediately superordinate clause. This observation is further supported by sentences, like (53):

53. Gopi$_i$ [*ec*$_{i/j}$ spardheyalli gellalu] [Raju$_j$ prayatnisali] anta
-nom. competition -loc. win-inf. -nom. try-OPT. COMP
bayasida.
like-3sg.m.
'Gopi wanted Raju to try to win the competition'

Sentence (53) can only mean *Gopi* wants *Raju* to win the competition, but not *Gopi* wants *himself* to win the competition. The latter reading is not available in (53), because the multiply embedded null subject can only corefer with *Raju* in the immediately superordinate clause.

Summarizing, the null complement subject in (52) exhibits the following properties. It is:

a. Obligatorily bound.
b. Uniquely controlled (the number of possible antecedents is limited to only one).
c. Locally bound.

These properties have been associated with anaphoric elements, e.g. in Bouchard (1984) and Koster (1984).

There are two other properties claimed to be systematically associated with an anaphoric element; permitting only sloppy readings under ellipsis, and forbidding split- antecedents. And, relevantly, only a sloppy reading is available in (54):

54. Gopi$_i$ [*ec*$_i$ barti:ni] anta he:Lida, Raju:nu ashTe.
come COMP say-3sg.m. -nom-inc. thus
'Gopi$_i$ said that he$_i$ is coming, Raju also said'
' Gopi$_i$ said that he$_i$ is coming and Raju$_j$ said that he$_{*i/j}$ is coming'

However, the null anaphor allows split-antecedents, if the embedded predicate is marked for plural agreement, see (55):

55. Raju$_i$ Gopige$_j$ [*ec*$_{i+j}$ ivattu khanDita Lata manege hogta idivi] anta
-dat. today definitely house-dat. go-prt.pp. be-1pl. COMP
he:Lida.
say-3sg.
' Raju$_i$ told Gopi$_j$ that (they)$_{i+j}$ are definitely going to Lata's house today'

Zec (1987) notes that the null complement subject in Serbo-Croatian allows split-antecedents in obligatory finite control structures, if the embedded predicate is marked for plural agreement and both antecedents are present syntactically. See (56), (Zec's 44):[20]

56. Petar je naterao Mariju da ϕ zajedano pobegnu.
-nom. Aux advised-3sg. -acc. Comp together escape-3pl.
'Peter advised Mary that (they) escape together'

The same state of affairs seems to hold in Kannada. (57) is the Kannada counterpart of (56):[21]

57.Gopi$_i$ Sumage$_j$ [ec_{i+j} oTTige tappisikonDu hogoNa] anta
-nom. -dat. together escape-pp. go-1pl. COMP
salahe koTTa.
suggestion give-3sg.m.
'Gopi$_i$ advised Suma$_j$ that (they)$_{i+j}$ escape together'

To summarize, the Kannada null subject, with the exception of allowing split-antecedents, exhibits properties that have been associated with anaphoric elements.

3.6.4. *A VP Analysis*

Before discussing Borer's (1989) and Finer's (1985) analyses of control structures, I briefly show in this subsection that a VP analysis of Kannada control structures is not tenable.

Chierchia (1984), and Jacobson (1992) advocate a semantic theory of control. The theory derives all the characteristics of control, including the syntactic form of the complement, from the semantic type of the controlled structure. Zec (cf.) shows that the predictions made, particularly under Chierchia's approach, are not borne out in Serbo-Croatian. I will not go into the details. Below I show that Zec's argument against a VP analysis of Serbo-Croatian control structures can easily be extended to Kannada.

In Serbo-Croatian, as in Kannada, the null pronoun alternates with an emphatic pronoun in the subject position of a controlled clausal complement. But, Serbo-Croatian also disallows a non-emphatic overt pronoun. In (58), the Serbo-Croatian emphatic form is indicated by italicization (Zec's 31&30):

58a. Ana je naterala Mariju$_i$ da *ec/ona*$_i$ dodje.
-nom. Aux forced -acc. Comp she come
'Ana forced Marija$_i$ that she$_i$ should come'

b.?*Ana je naterala Mariju$_i$ da ona$_i$ dodje.
=(58a)

On the basis of the above evidence, Zec argues that the controlled complement is clausal in nature. She notes that (footnote 14) a similar phenomenon is observed by Keenan (1975) in Yoruba and Kera, where only the emphatic forms of a pronoun can be bound in the next higher clause, while this option is unavailable for the non-emphatic ones. Keenan also notes that in languages like Finnish, Malagasy, and Polish, this distinction is achieved by contrasting overt and 'null' pronouns.[22] Both Kannada and Serbo-Croatian pattern with these languages. Compare Kannada (59) with Serbo-Croatian (58a&b). 59(a-c) are acceptable only with an inclusive clitic on complement subjects. Note that the unstarred forms of the pronouns and reflexives in (59) carry the inclusive clitic *u:* .

59a. Gopi$_i$ [*ec*/ta:nu:$_i$/*ta:nu$_i$ barti:ni] anta he:Lida.
-nom. self-inc. self come-1sg. COMP say-3sg.m.
' Gopi$_i$ said that self$_i$ will also come'

b. $Gopi_i$ [na:nu:$_{i/j}$/*na:nu$_{i/j}$ barti:ni] anta he:Lida.
-nom. I-inc. I come-1sg. COMP say-3sg.m.
` $Gopi_i$ said that $I_{i/j}$ will also come'

c. $Gopi_i$ [awanu:$_i$/*awanu$_i$ barti:ni] anta he:Lida.
-nom. he-inc. he come-1sg. COMP say-3sg.m.
` $Gopi_i$ said that he_i will also come'

To summarize this section, two types of finite control complements involving control and non-control verbs were distinguished although the mechanism used to signal the control relation is the same in both structures. Null complement subjects in these two structures were theoretically distinguished by feature specifications. A further discussion revealed that both share syntactic properties. And evidence against VP a complement hypothesis for control structures was presented.

3.7. *Analyses*

This section briefly summarizes Borer's (1989) and Finer's (1985) analyses of control structures. The fourth question above, that is, why a Kannada third person reflexive pronoun cannot grammatically occur with third person agreement in the embedded clause, is also answered in this section.

3.7.1. *Borer's Analysis*

Borer (1989) proposes an `Anaphoric AGR' analysis of control structures based on her I-subject hypothesis.[23] She assumes that the AGR element, which is anaphoric, must be

bound by a +N category at S-structure. Once the notion I-subject is assumed, control effects are explained by the binding conditions, assuming that AGR in infinitives and gerunds is anaphoric, and hence must satisfy binding condition A.

Borer's analysis predicts that control effects are not restricted to null elements in non-finite clauses. To show this, she draws evidence from Korean and Italian. Her analysis further predicts the possibility of both null and overt controlled subjects in tensed clauses. Once again, data from Hebrew, Chinese, and Saramaccan conform to this prediction. Her analysis assumes that certain functional (non-NP) elements can be specified for the features +anaphoric, or -anaphoric. Which elements may be overtly specified for those features is language-specific. In Kannada, depending on the control type, the first and second person agreement would be specified as +anaphoric, and third person agreement as -anaphoric (see (43), above).[24]

Borer assumes that AGR can be bound by elements in either A-positions, or A'-positions, and proposes the following principle:

60. Anaphoric AGR must be X-bound by a +N category at S-structure (X= A, A').

However, in Borer's system, AGR is bound by an element in A-position, since the analysis is based on her I-subject hypothesis. According to this hypothesis, all empty categories must be I-identified, that is, they must be coindexed with an I-identifier. An I-identifier is a member of a well-defined set of coindexed antecedents. The

relation between AGR and its I-subject is one of the three types of relations in a well-defined set. Therefore, in her system, an anaphoric AGR is bound by an NP in its specifier position. If the complement subject is *pro*, assuming that anaphors do not have inherent features, the anaphoric AGR fails to I-identify its subject. Therefore, the anaphoric AGR moves to COMP to be bound by the matrix argument. The complementizer cliticizes to IP so that the AGR can move to the empty position to be c-commanded by the matrix argument. Once AGR is bound by a matrix argument, its I-subject is coindexed with that matrix argument as well, hence the control effects. Her analysis crucially hinges on the assumption that the complementizer cliticizes to IP, if the complement subject is overt, as in Korean infinitives. Only then can the movement of anaphoric AGR to empty C position be motivated, that is, AGR must be raised into C to prevent a ECP violation. Once AGR moves to C, the I-subject no longer c-commands the AGR node, and hence cannot bind it. Thus, AGR must be bound by a matrix argument in order to avoid a violation of the binding condition. However, Borer's analysis runs into theoretical problems, which will be discussed later.

3.7.2. *Finer's Analysis*

Borer's insight about anaphoric AGR is rooted in Finer's (1985) analysis, which I discuss briefly. Aoun (1986) argued that A'-elements are subsumed by a generalized

binding theory that covers both A and A' elements. This contrasts with the binding theory of Chomsky (1981), which is relevant only to A-positions. Following Aoun, Finer provided an analysis of Switch Reference phenomena (SR).

Many languages with SR systems have two morphemes, one to signal that the subjects of the matrix and subordinate or adjunct clauses are the same and another to signal that they are different. Finer treats these as A' anaphors, and A' pronominals, respectively. These two markers are specified for the features [+anaphor, -pronominal], and are subject to Principles A and B, respectively. On his analysis, these markers are structurally positioned under COMP, which falls under the domain of the higher clause. When the higher and lower clause subjects are coindexed, by logical transitivity, these markers share an index with the upper Agr. Hence, in accordance with Principle A, the presence of the same subject marker (SS), which is an A'-anaphor, signals coreference between two subjects, whereas, the reverse holds for the different subject marker (DS).

In section 3.8, retaining the insights of these two authors, I attempt to provide an account of the Kannada control phenomenon. But first, I answer the fourth question raised at the beginning of this chapter.

3.7.3. *Third Person Agreement*

It was noted in section 1 that (5b), repeated here as (61), is puzzling.

61.* Gopi$_i$ [ta:nu:$_i$ barta:ne] anta he:Lida.
-nom. self-nom. come-3sg.m. COMP say-3sg.m.
'Gopi$_i$ said that self$_i$ will come'

The third person long-distance reflexive fails to be coreferential with the matrix subject despite satisfaction of the anaphor's NP antecedent requirement. In (61), the complement verb is marked for third person agreement. Sentences (61), and (9) (repeated as (62)), clearly suggest that, in Kannada, third person agreement has an obviative effect.

62. Gopi$_i$ [awanu$_{*i/j}$ barta:ne] anta he:Lida.
-nom. he-nom. come-3sg.m. COMP say-3sg.m.
'Gopi$_i$ said that he$_{*i/j}$ will come'

It is well-known that morphologically rich languages use certain inflectional elements to create an obviative effect (see Simpson & Bresnan (1983) for Warlpiri, Bok-Bennema (1985) for Eskimo and Saxon (1986) for Dogrib, and references cited in these works). I suggest that, in Kannada, third person agreement determines obviation. Hence in (62), the overt subject pronoun, unambiguously, has a discourse antecedent. The question is whether third person agreement should be treated as an A' pronominal (as Finer does for DS markers), or as -anaphoric?

If third person agreement is treated as an A' pronominal, unlike an A' anaphor, it must be A' free. But such an analysis encounters a theoretical problem; the local domain for an A' pronominal is the immediately superordinate clause, in which it must be free. But a still higher clause, if there is one, would not be part of the local domain. Hence an A' pronominal could be bound in that domain. But no matter how deeply embedded, the subject of a third person Agr can never be coreferential with any higher clause subject. Sentence (63) illustrates this observation:

63.*Gopi$_j$ [awanu$_{i,j}$ barta:ne] anta [Raju$_i$ he:Lida] anta he:Lida.
he-nom. come-3sg.m. COMP say-3sg.m. COMP say-3sg.m.
`Gopi$_j$ said that Raju$_i$ said that he$_{i,j}$ will come'

On the basis of this evidence along with an advantage, which I discuss in the next section, I choose the second alternative, that is, third person Agr will be treated as -anaphoric.[25] The feature -anaphoric is used in the sense that the subject of the clause must not be bound by subjects of higher clauses. The following Kannada-specific constraint accounts for the ungrammaticality of (63):

64. A complement non-anaphoric subject Agr cannot be coindexed with a higher subject Agr.

3.8. *Pre-Barriers vs. Post-Barriers Approaches*

In this section, following the spirit of Borer (cf.) and Finer (cf.), I attempt to account for the Kannada control phenomenon. I show that a movement analysis for Kannada

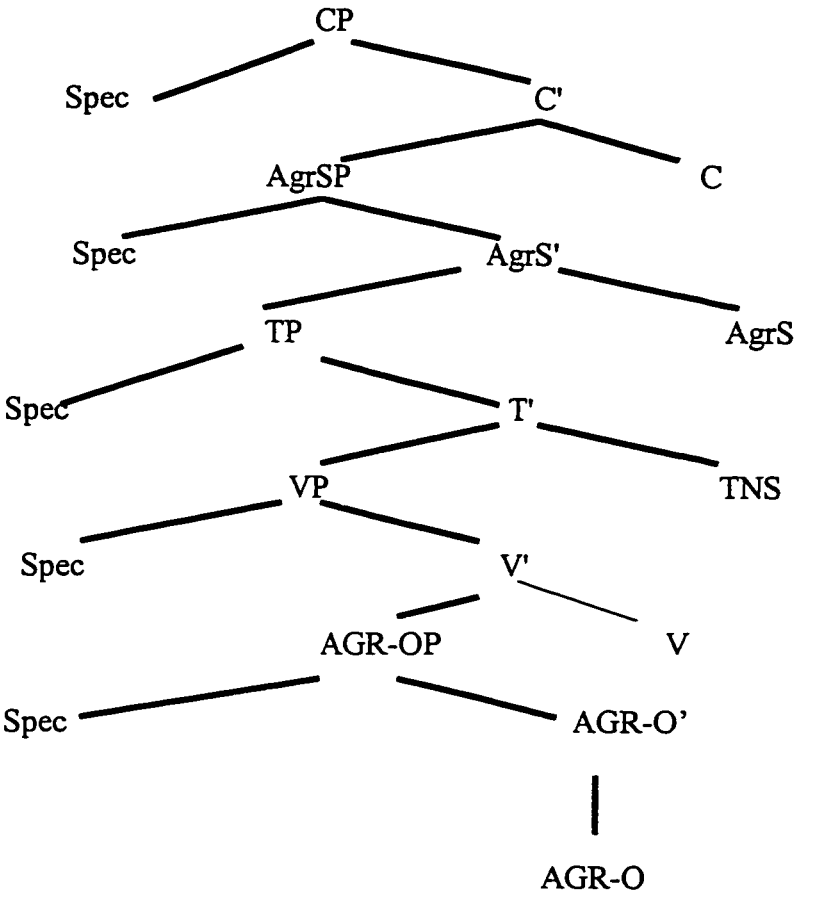
control is compatible with the pre-*Barriers* approach, but incompatible with the (post) *Barriers* (Chomsky 1986b, Rizzi 1990) approach. Alternatively, I propose a non-movement anaphoric Agr hypothesis in section 3.9.

3.8.1. *A Movement Analysis*

As noted earlier, Borer's analysis would allow Kannada first person agreement to be specified for the feature +anaphoric. But I differ from Borer in assuming that anaphoric Agr/AGR in Kannada is an A' anaphor, and must be bound by an A'element, following Finer's approach. In this sub-section, I assume a pre-*Barriers* GB framework (evidently, the following assumptions exclude only cetain aspects of the (post) *Barriers* framework, especially, barriers and Minimality Condition). The relevant assumptions are as follows:

a. Given the autonomy of functional projections (see Ouhalla, 1991, Benedicto & Runner, 1993, and references cited), I assume that both subject Agr/AGR and object (direct and indirect) AGR of a clause head their own projections. The structure of a transitive clause then has the representation (65):

65.



b. The Head Movement Constraint (HMC); `An X^0 may only move into Y^0 which properly governs it' (Baker, 1988:53).

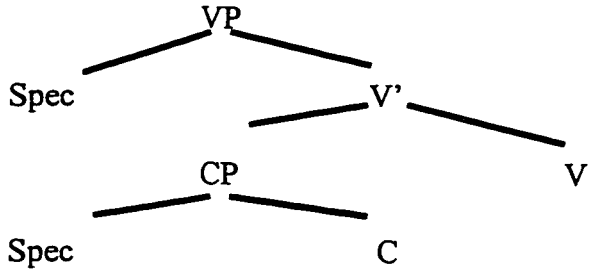
c. Principle A: An anaphor must be bound in a local domain (Chomsky, 1993).

The relevant notions are defined as follows:

i. *Local Domain*: The governing category for α is the minimal Complete Functional Complex (CFC) which contains α and a governor of α and in which α's binding condition could, in principle, be satisfied (Chomsky, cf.)

ii. *Government*: Following Belletti and Rizzi (1981), the head of a category can govern the head of a sister maximal projection as well as the projection itself. Thus, in the configuration (66), V governs both C and CP.

66.



Belletti and Rizzi define government as follows:

a. α governs γ in a configuration like $[_{\beta \ldots \gamma \ldots \alpha \ldots}]$

where: (a) $\alpha = X^0$ (=a lexical element),

(b) where ϕ is a maximal projection, if ϕ dominates γ, then either ϕ dominates α, or ϕ is the maximal projection of γ.

(c) α c-commands γ.

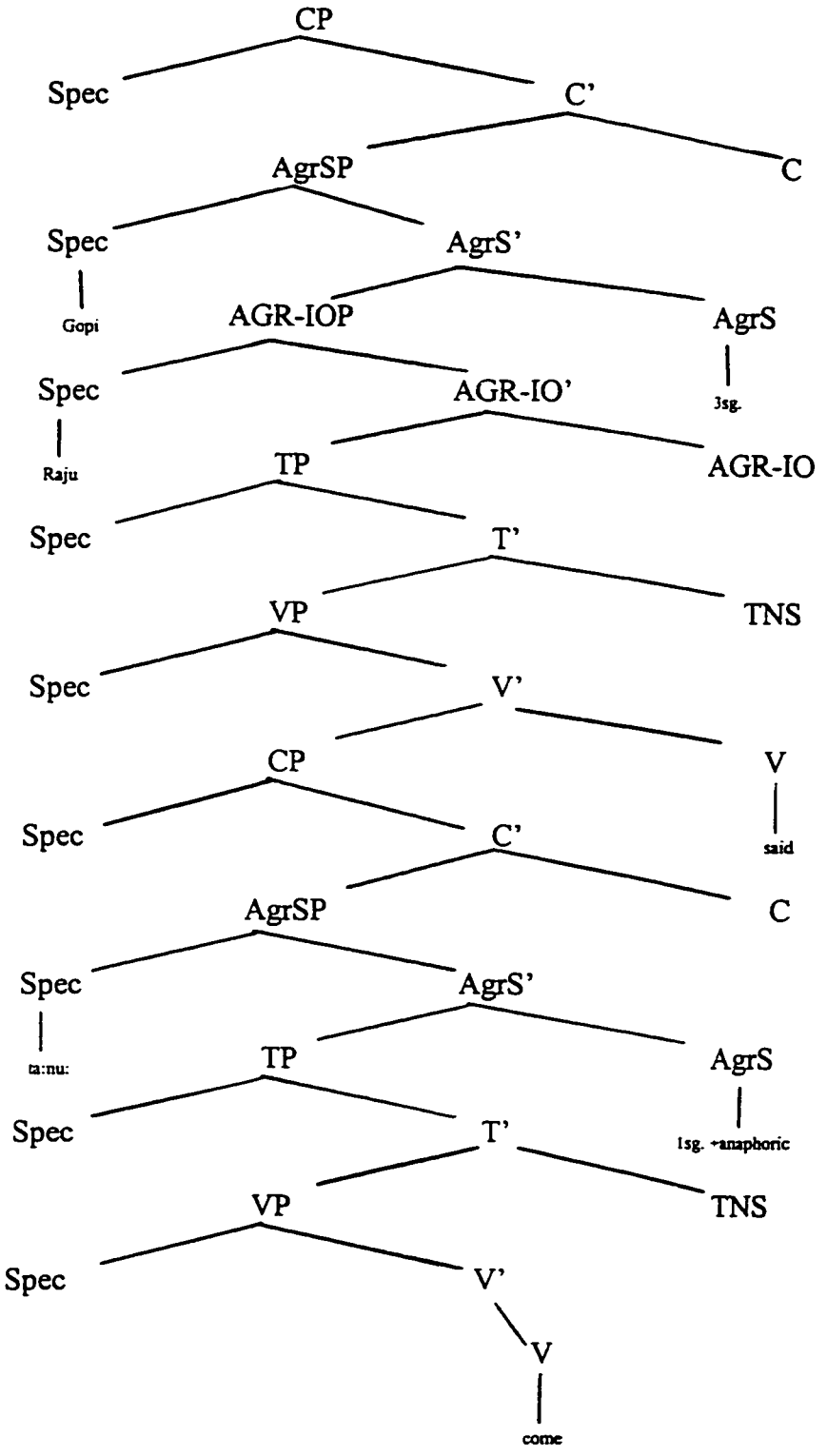
iii. *c-command*: α c-commands β if α does not dominate β and every γ that dominates α dominates β (Chomsky, cf.)

iv. *The definition of binding*: *a* binds *b* iff *a* and *b* are coindexed and *a* c-commands *b* (Reuland & Koster, 1991:2).

Sentence (67) has representation (68):

67. Gopi$_i$ Rajuwige [ta:nu:$_i$ barti:ni] anta he:Lida.
-nom. -dat. self-inc. come-1sg. COMP say-3sg.m.
'Gopi$_i$ told Raju that self$_i$ will also come'

68.


CP
Spec
C'
AgrSP
C
Spec
AgrS'
Gopi
AGR-IOP
AgrS
Spec
AGR-IO'
3sg.
Raju
TP
AGR-IO
Spec
T'
VP
TNS
Spec
V'
CP
V
Spec
C'
said
AgrSP
C
Spec
AgrS'
ta:nu:
TP
AgrS
Spec
T'
1sg. +anaphoric
VP
TNS
Spec
V'
V
come

The complement verb in (68) is marked for first person agreement, hence the lower AgrS is anaphoric. Since it is an anaphor, it is subject to Principle A. It is an A' element and hence it must be bound by an A' element. It's potential A' binder, the upper AgrS, is outside the domain of the lower clause. The anaphoric AgrS moves to the embedded C position without violating HMC. According to the definition of 'government' (above), the matrix verb governs both C and CP. The superordinate clause is the minimal CFC for anaphoric AgrS, since it contains both the governor and the governee, and the latter's binding condition can be satisfied by the c-commanding upper AgrS. Once these two AgrSs are coindexed, as per the definition of binding, by transitivity, the subjects of the clauses must be coindexed, hence the control effects.

However, such a movement analysis encounters three theoretical problems, discussed in turn. First, the movement of the lower AgrS to a C position is barred, since the latter is already filled. I see two ways to circumvent this problem. One is to assume that the complementizer cliticizes to IP (here AgrSP) leaving an empty C so that AgrS can move to it. Such a position is taken by Borer (1989) to account for data from Belfast English, Korean, and Hebrew.

The second alternative is to characterize COMP as a +N category. Ouhalla (1991) shows that complementizers are basically nominalizers. Hence the movement of Agr/AGR, which is a +N category, to C, which is also a +N category, would not pose

a theoretical problem. Once it moves, some kind of amalgamation or absorption similar to that specified by Higginbotham and May's (1981) rule of Absorption could take place. I leave the choice between these two options open.

The second and the third theoretical problems are similar in nature. The head of TP, or the head of AGR-IOP in (68), are potential binders for the moved AgrS, since both are in the c-command domain, and in an A' position. Hence the binding of the moved AgrS by the higher AgrS would produce minimality effects. The idea that an anaphoric TENSE node must be bound by a referential TENSE node is not new. In this sense, the head of TP may be specified for the feature +N. However, the constraint in (69) disqualifies the head of TP as a potential binder of the moved AgrS.

69. Anaphoric AGR must be bound by a +N category with PNG features.

Constraint (69) cannot prevent the head of the AGR-IOP from coindexing with the lower AgrS. One might think to stipulate that the subjects of both AgrSs must agree in Case. This would bar the lower AgrS from being bound by the head of the AGR-IOP, since their specifiers do not agree in Case. However, one would then encounter a problem of different sort. There are Kannada cases where a Dative subject in the embedded clause is coreferential with the Nominative subject of the higher clause, see (70).

70. Gopi$_i$ [tanage$_i$ gottilla] anta he:Lida.
-nom. self-dat. know-NEG COMP say-3sg.m.
'Gopi$_i$ said that self$_i$ doesn't know'

Therefore, a 'Case Matching' mechanism cannot solve the problem. I propose instead constraint (71):

71. An anaphoric Agr A must be coindexed with the Agr of the Controller of A's subject.

In (68), *Gopi* is the controller (which will be defined in section 3.9) of the subject of anaphoric AgrS. Therefore, (71) prevents the Tense and Indirect Object AGR (AGR-IO) in (68) from binding the moved lower AgrS. The above constraint is dealt with in detail in section 3.9. If the control domain of an embedded clause is extended beyond the immediately superordinate clause, as in (48-50), the anaphoric AgrS moves cyclically to the next higher intermediate C to be bound by the matrix AgrS.

3.8.2. *A Problem*

In this sub-section, it will be examined whether the proposed movement analysis is compatible with the (post) *Barriers* approach (Chomsky 1986b, Chomsky&Lasnik 1993, Rizzi 1990). It will be shown that the analysis encounters a serious theoretical problem, once the control domain of an embedded clause is extended beyond the immediately superordinate clause. The following theoretical concepts are relevant for my discussion:

72. *The Empty Category Principle* (ECP)
Traces must be properly governed.

73. Proper Government: α properly governs β iff
α head-governs β or
α antecedent governs β.

74. (i) α head governs β iff α is a head m-commanding β.
(ii) α antecedent governs β iff
α and β are coindexed
α c-commands β

75. Government: α governs β iff α c-commands β and there is no category γ such that γ is a barrier between α and β

76. C-command: α c-commands β iff neither α nor β dominates the other and every γ that dominates α dominates β (where γ is a maximal projection, α m-commands β)

77. Barrier: γ is a barrier for β if γ is the immediate projection of δ, a zero-level category distinct from β.

78. L-Marking: Where α is a lexical category, α L-marks β, iff α θ-marks β or β agrees with the head of γ that is θ-governed by α

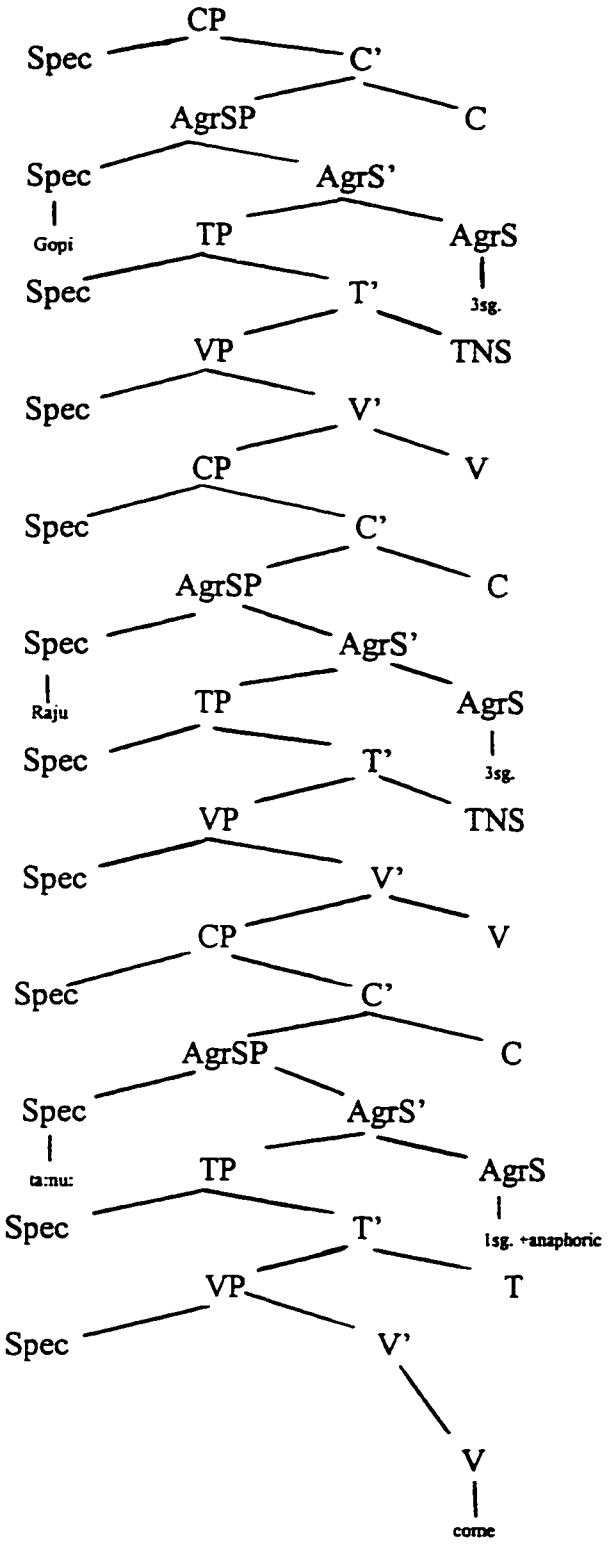
79. Minimality Condition: Given the configuration ..α.. [$_{\gamma}$ ...δ ... β...], α does not govern β if γ is a projection of δ such that it excludes α but immediately dominates β.

Now consider (49), repeated as (80):

80.Gopi$_{i}$ [[ta:nu:$_{i,j}$ barti:ni] anta Raju$_{j}$ he:Lida] anta he:Lida.
-nom. self-inc. come-1sg. COMP -nom. say-3sg.m. COMP say 3sg.m.
`Gopi$_{i}$ said that Raju$_{j}$ said that self$_{i,j}$ will also come'

The S-structure representation of (80) would be (81):

81.


CP
Spec
C'
AgrSP
C
Spec
AgrS'
Gopi
TP
AgrS
Spec
T'
3sg.
VP
TNS
Spec
V'
CP
V
Spec
C'
AgrSP
C
Spec
AgrS'
Raju
TP
AgrS
Spec
T'
3sg.
VP
TNS
Spec
V'
CP
V
Spec
C'
AgrSP
C
Spec
AgrS'
ta:nu:
TP
AgrS
Spec
T'
1sg. +anaphoric
VP
T
Spec
V'
V
come

In (81), the deeply embedded anaphoric AgrS may be bound by the AgrS of the immediately superordinate clause, or the AgrS of the matrix clause. To be bound by the matrix AgrS, the deeply embedded anaphoric AgrS must move to the next higher C, crossing all intervening maximal projections. But, especially, the intermediate clause VP is a barrier for movement. Under a *Barriers* approach, VP is always an inherent barrier because it is not L-marked by a lexical category. Therefore, a direct movement from the deeply embedded AgrS to the matrix C is prohibited because the trace of anaphoric AgrS would fail to be antecedent-governed as per Minimality Condition.

On Rizzi's (1990) view, the notion of antecedent government is a property of chains and so Relativized Minimality, which is defined in terms of antecedent government, is a condition on representation. Chomsky and Lasnik (1993) reinterpret Relativized Minimality as a part of a more general principle, namely the economy principle on derivations. On this view, a sentence is deviant if an element skips a potential landing site in violation of the economy principle *make shortest move*. These different views of Relativized Minimality make different predictions.

Relativized Minimality as a condition on representation predicts that a sentence is deviant if its chain representation violates Relativized Minimality, regardless of the derivation. But, Relativized Minimality as an economy condition on derivation

predicts that a sentence is fine even if the resulting chain representation is ruled out by Relativized Minimality, as long as some derivation of it can avoid the Relativized Minimality effect.

Rizzi's view predicts that (80) should be deviant; but, it is not. If one adopts Chomsky and Lasnik's view, (80) need not be deviant, provided its derivation avoids the Relativized Minimality effect. A language specific-stipulation can avoid the Relativized Minimality effect, but a series of stipulations goes against the spirit of the theory, since several restrictions imposed by the theory seem to be necessary for other languages.

There is another problem encountered by assuming that the moved element creates an A' chain. Assume, for purposes of discussion, that the lower anaphoric AgrS moves to the next higher C. But, by then, it would have already been bound by the intermediate AgrS, which is the head of the chain. A further movement and binding by the matrix AgrS results illegitimately in two chain heads. One cannot resort to some sort of amalgamation of the two heads, since the subjects of these two clauses are not coreferential with each other.

All in all then, a head movement analysis of anaphoric AgrS to account for the Kannada control phenomenon does not seem tenable under a *Barriers* approach. This

leads to an interesting question, raised in Baltin (1991); this is discussed in the following subsection.

3.8.3. *A QUESTION*

Baltin (cf.) shows that the *Like-Attracts-Like Constraint* (LALC) of Baltin (1982) constrains S-structure movement only and not LF movement. The LALC, stated in (82), prevents an X° category from adjoining to a maximal projection.

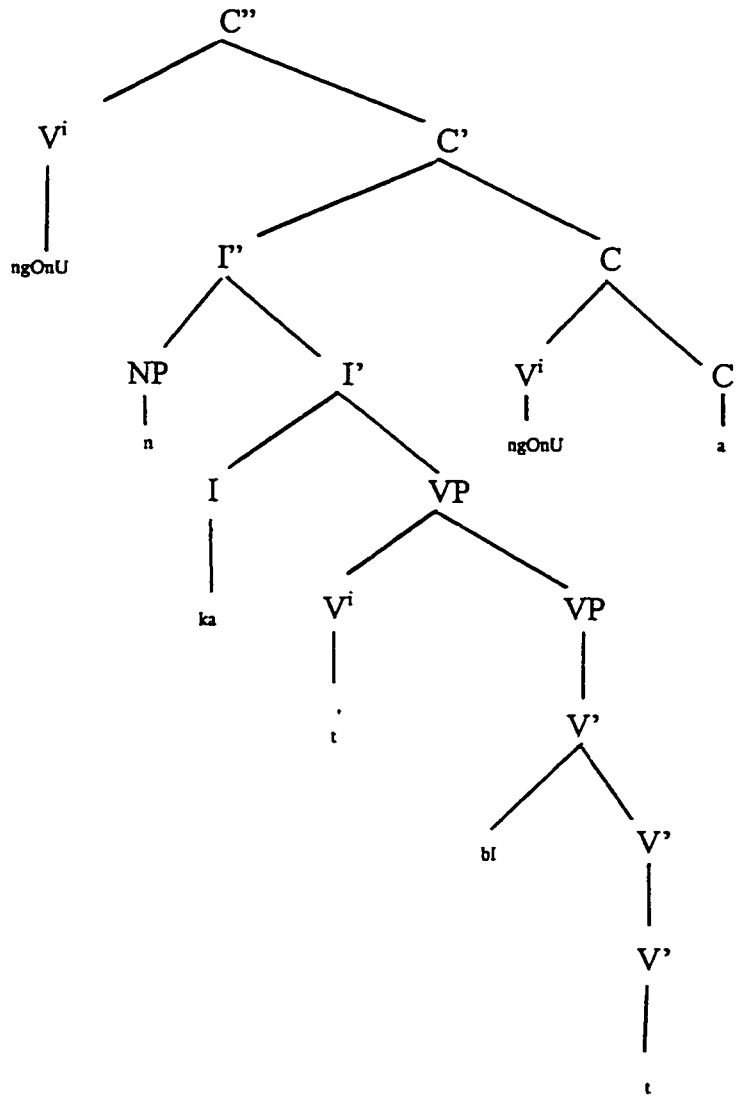
82. When they move, phrasal categories adjoin to phrasal categories, and non-phrasal categories adjoin to nonphrasal categories.

Baltin shows that Koopman's analysis of the Vata predicate cleft construction is incompatible with the *Barriers* approach to movement. Koopman does not assume the LALC, and hence her analysis allows the same movement possiblities for both X° s and adjuncts, not a desired result, since X° movement and adjunct movement contrast. Baltin reanalyzes the Vata predicate cleft construction as an instance of LF movement. For example, the D-structure and LF representations for (83) would be (84) and (85), respectively (Baltin's (24), (33), and (34)):

83. ngOnU n ka bI ngOnU a?
sleep you FUT-ASP now sleep Q
'Are you going to SLEEP now?'

84. $[_{C''}$[ngOnU] $[_{C'}[_{I''}$ $[_{NP}$ n][$_{I'}$ $[_{I}$ ka][$_{V'}$ $[_{A}$ bI][$_{V'}$ $[_{V}$ ngOnU]]]]]][$_{C}$ a]]]

85.



In (85), to be bound by the verb in the specifier of CP, the verb in the adjacent clause must move to that position. The verb has to cross the VP within which it originates, and within the *Barriers* approach, VP is a barrier. Therefore, a direct movement from V to COMP is prohibited because the trace of V would fail to be antecedent-governed.

Baltin circumvents this problem by positing that the verb adjoins to VP. The crucial assumption that LALC does not hold at LF allows the verb to adjoin to its maximal projection.

As to why certain constraints apply in some components of the grammar but not others, Baltin appeals to the following proposed distinction between S-Structure and LF representation:

86. Bar levels are not represented at LF.

But one cannot exploit (86) to accomodate Kannada data, since the movement of
27
anaphoric AgrS, presumably, occurs at S-Structure. So, one is left with a even bigger question: why are certain constraints applicable to the S-Structure of one language but not to that of another.

3.9. *A Non-movement Analysis*

In this section, I propose a non-movement analysis of the Kannada control phenomenon. Everaert (1986) presents a theory of anaphoric binding of Dutch reflexives not using any movement rules. The domain of an anaphor is defined as the set of governors linking the anaphor and its antecedent, which he calls the 'Government Chain' of an anaphor. The Identification, Licensing and Maximality requirements of a chain account for the distribution of Dutch reflexives. This section,

following the spirit of Everaert's treatment, proposes a 'Functional Anaphoric Chain Hypothesis' (FACH) to account for Kannada control structures.

The FACH rests on three relevant assumptions; (i) functional categories enter into binding; (ii) Kannada sentences contain projections of Agr/AGR and Tense; (iii) lexical categories do not participate in the formation of a functional chain. (i) is not an unusual assumption, given the fact that tense is a referential expression. Partee (1973, 1984) notes a number of parallels between temporal and nominal anaphora. Assumption (ii) does not warrant further elaboration. Assumption (iii) is also not unusual, since functional categories are distinguished from lexical categories, in both
28
the lexicon and syntax.

The definition of 'Functional Anaphoric Chain' is given in (87):

87. C = a. $(\alpha_1 \ldots\ldots \alpha_n)$ is a Functional Anaphoric Chain of α_n iff α_n is +anaphoric and F-governed.
    b. For all i $1 <= i > n$, α_i binds α_{i+1}

88. F-government: X F-governs Y iff X and Y are functional heads and X C-commands Y.

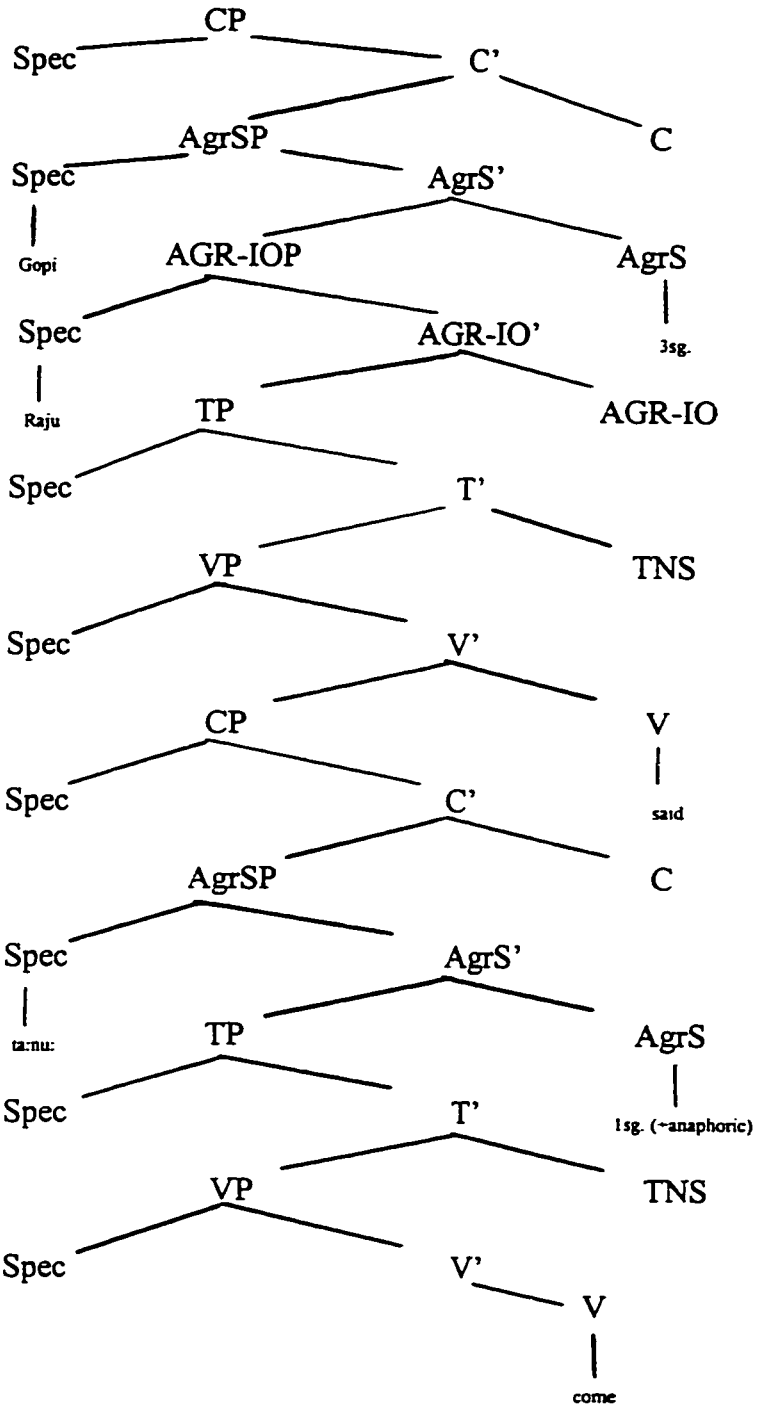
89. *Binding Condition*: An anaphor must be bound.

The F(unctional) anaphoric chain starts from the functional head, which follows the
29
maximal functional head C. As per the definition of c-command (see (76) above), the

F-chain of a given functional head is a subdomain of its c-command domain. It is the C in the matrix clause which first c-commands the subsequent functional head. Therefore, the mechanism involved in the formulation of an F-chain predicts that the functional anaphoric domain of α_n may start from the matrix clause, if α_n is multiply embedded. In other words, the domain of an F-chain is the anaphoric domain of α_n. The syntactic property of α_n is to mediate an anaphoric relation between two linguistic elements within this domain. Such a view is compatible with the concept of an anaphoric chain. The binder α_1 in the functional chain may be a subject or an object of the higher clause depending on the matrix predicate. The bindee α_n may vary across languages. For example, in Hebrew, past and future tenses are anaphoric.

Equipped with these theoretical preliminaries, let us see how the proposal works. The S-Structure representation (68) of (67) is repeated here:

90.



In (90), α_n, here the embedded AgrS is specified for the feature +anaphoric, hence it

must be bound. The matrix C, as per definition above, c-commands all the following functional heads, and hence F-governs them. Since lexical categories do not participate in the formation of an F-chain, the head of VP is not F-governed, and in turn, it does not F-govern the following functional head.

Coindexation is determined by an independent principle of UG, i.e., the binding condition that an anaphor must be bound. However, α_n may be coindexed with any member of the functional chain, and hence be bound by it. The constraint I proposed for anaphoric Agr in (71), repeated here as (91), may easily be viewed as a condition on chains.

91. An anaphoric Agr A must be coindexed with the Agr of the Controller of A's subject.

To see how constraint (91) works, a few technical details are in order. First, I define 'controller' as follows:

92. Controller: A is a controller of B iff A is a Potential Controller of B and A and B are in the same anaphoric domain.

93. Potential Controller: A is a Potential Controller of B iff B is a subject and the Agr of B Excludes the Agr of A.

94. Exclusion: B Excludes A iff the maximal projection of B does not dominate the maximal projection of A.

95. Same Anaphoric Domain: A and B are in the same anaphoric domain iff A and B are in the domain of the same single F-chain.

In (90), the subject of anaphoric AgrS is *ta:nu:*, 'self' and the controller is *Gopi* in the matrix clause. The AgrS of *ta:nu:* excludes the AgrS of *Gopi*, because the maximal projection of the AgrS of *ta:nu:* does not dominate the maximal projection of the AgrS of *Gopi*. But the AgrS of *ta:nu:* and the AgrS of *Gopi* are in the same anaphoric domain, that is, in the domain of a single F-chain.

However, the definition of 'controller' (92), *per se*, does not say anything about the unique choice of Agr with which it is associated. That is, in (90), the indirect object AGR (AGR-IO) of *Raju*, by definition (93), is also a 'potential controller' of *ta:nu:*. The choice depends on the matrix control predicate. A 'control verb' is defined as follows:

96. X is a control verb iff the subject Agr of its sentential complement is +anaphoric.

Recall my earlier proposal that non-control verbs like, *he:Lu* 'say' are turned into subject-control verbs by first person agreement on the embedded predicate. The lexcial semantics of a control verb determine the controller of its complement subject NP. For example, the verb, 'promise' is a subject-control verb, and therefore, the controller of its complement subject is the subject of the higher clause. Translating this into my analysis, if the verb is a subject control verb, its complement anaphoric subject AgrS is coindexed with the subject AgrS of the higher clause. If, on the other hand, a verb is

an object control verb, its complement anaphoric subject AgrS is coindexed with the direct or indirect object AGR of the higher clause. Therefore, following (91), the anaphoric AgrS in (90) is coindexed with the subject AgrS of the matrix clause. Once these two AgrSs are coindexed, by logical transitivity, the subjects of the clauses must be coindexed, hence the control effects.

(97) illustrates object control structures:

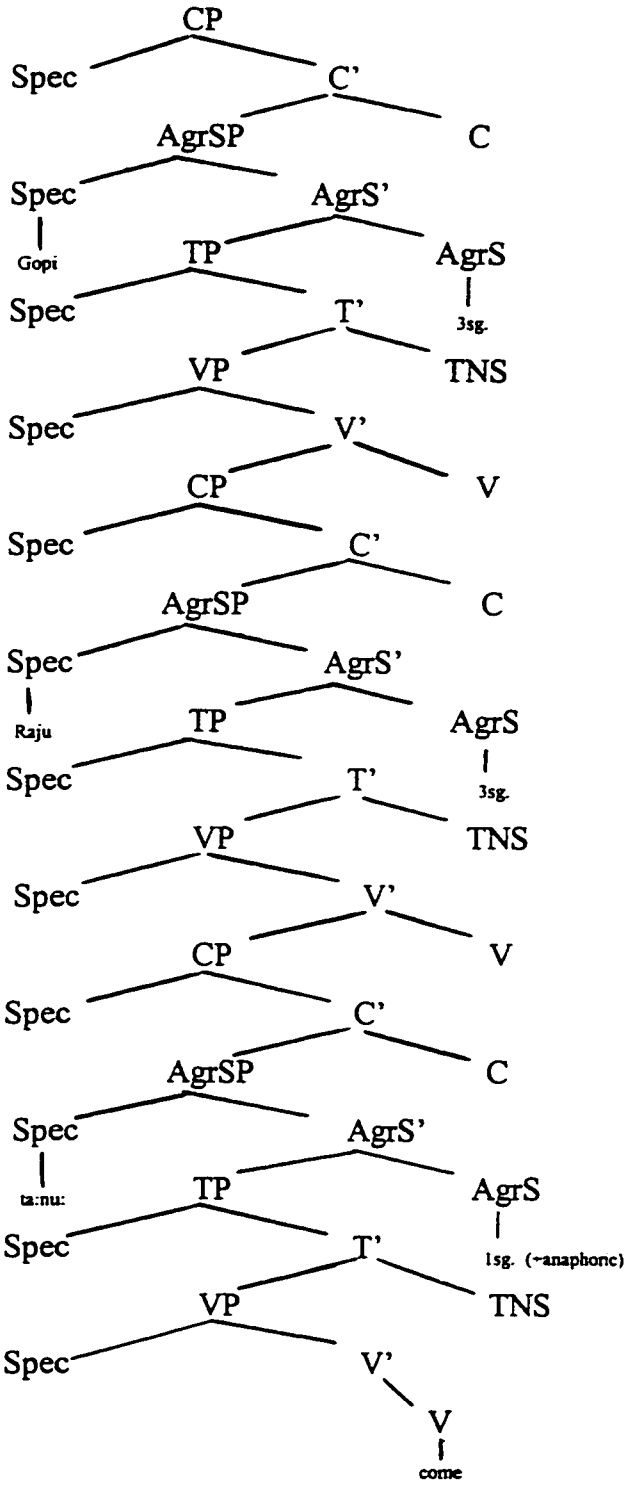
97. Gopi Rajuwannu$_i$ [*ec*$_i$ ba:] anta otta:yisida.
-nom. -acc. come-imp.2sg. COMP force-3sg.m.
'Gopi forced Raju to come'

Recall my earlier suggestion that, in object control structures, Kannada second person agreement may be specified for the feature +anaphoric. The matrix predicate in (97) is an object control verb. The object of the higher clause is the controller of the subject of anaphoric AgrS. So, the embedded subject AgrS is coindexed with the higher object AGR. To capture object control effects, (91) is modified, see (98).

98. An anaphoric Agr A must be coindexed with the Agr/AGR of the Controller of A's subject.

Next, let us see how FACH works in long-distance binding. For ease of reference, (81) is repeated as (99):

99.


CP
Spec
C'
AgrSP
C
Spec
AgrS'
Gopi
TP
AgrS
Spec
T'
3sg.
VP
TNS
Spec
V'
CP
V
Spec
C'
AgrSP
C
Spec
AgrS'
Raju
TP
AgrS
Spec
T'
3sg.
VP
TNS
Spec
V'
CP
V
Spec
C'
AgrSP
C
Spec
AgrS'
ta:nu:
TP
AgrS
Spec
T'
1sg. (+anaphoric)
VP
TNS
Spec
V'
V
come

In (99), analogous to (90), a functional anaphoric chain is formed. But, unlike in (90), a theoretical problem arises with respect to coindexing, because of the long-distance binding property of the third person reflexive pronoun *ta:n*. This reflexive pronoun may be coreferential with either *Raju* or *Gopi*. Consequently, the doubly embedded anaphoric AgrS may be coindexed with the AgrS of the next higher or the matrix clause. However, an additional stipulation, or condition on chains is unnecessary once the syntactic properties of linguistic elements like, *ta:nu* 'self', are considered. Because of its ability to be bound by non-local third person subjects, the use of *ta:nu*, in structures like (99), may yield ambiguous readings. However, this is not a concern of present analysis, which only says that an anaphoric relation is mediated by a functional element.

If, in (99), the deeply embedded complement subject is a first person pronoun, the sentence will be three ways ambiguous, since the speaker of the sentence can also be the referent of the first person pronoun on an indirect discourse interpretation. Contrast this with the null case, as in (52). The anaphoric domain of the null complement subject includes only the immediately higher clause. Since a null subject lacks inherent features, it must be identified locally. In this case, it is first person agreement which identifies the null argument in the same clause. Because first person AgrS is anaphoric, it must be bound. The next higher AgrS is the closest binder. Once

the anaphoric AgrS is bound by that higher AgrS, the binding condition for anaphors is satisfied. When two AgrSs are coindexed, by transitivity, the null subject is controlled by the next higher subject. The binding requirement for anaphors is satisfied once an anaphor is bound by the immediately superordinate Agr even in instances with overt complement subjects. If the syntactic requirements of overt pronominals are met, the anaphoric Agr may be bound in the matrix clause.

The present analysis predicts that coreference between two linguistic elements is not possible even though the lexical properties allow it, if the mediator does not allow it. This is borne out in (5b) and (61), repeated as (100):

100.*Gopi$_i$ [ta:nu:$_{i/j}$ barta:ne] anta he:Lida.
self come-3sg.m. COMP say-3sg.m.
'Gopi$_i$ said that self$_{i/j}$ will also come'

A complement third person reflexive pronoun can take a higher subject like *Gopi* as its antecedent. Nevertheless, binding is blocked here because of the embedded AgrS which is non-anaphoric. The unacceptable (100) supports the claim that a functional element mediates an anaphoric relation between two NPs. Therefore, on this view, control is an anaphoric relation of a specific kind.

The present analysis does not allow a functional anaphoric chain to be formed for a

non-anaphoric Agr. The condition on non-anaphoric Agr, stated in (64), is repeated as (101):

101. A complement non-anaphoric subject Agr cannot be coindexed with a higher subject Agr.

My analysis predicts that a controllee may be null or overt, and control into finite complements is possible. It also predicts that the controlled NP is always a subject. This follows from the definition of a control verb given in (96), repeated in (102):

102. X is a control verb iff the subject Agr of its sentential complement is +anaphoric.

(102) ensures that the controlled NP is always a subject, since only the complement subject Agr of a control verb is specified for the feature +anaphoric. According to constraint (98), an anaphoric Agr must be coindexed with the Agr of the controller of the subject of anaphoric Agr. This amounts to saying that the subject of anaphoric Agr is controlled and the controllee is a subject NP.

Further, the analysis predicts that a null complement subject allows split-antecedents. Because, on my analysis, the anaphoric nature of a null complement subject derives from the nature of an agreement head, which is specified for the number feature. If the head is specified singular, the null subject does not allow split-

antecedents. If, on the other hand, the head carries plural agreement, the null subject
30
allows split-antecedents, as in (55), repeated below:

103. Raju$_i$ Gopige$_j$ [ec_{i+j} ivattu khanDita Lata manege hogta idivi] anta
-dat. today definitely house-dat. go-prt.pp. be-1pl. COMP
he:Lida.
say-3sg.
` Raju$_i$ told Gopi$_j$ that (they)$_{i+j}$ are definitely going to Lata's house today'

The anaphoric binding in (103) may be compared to that of in English (104):

104. John$_i$ and Tom$_j$ looked at themselves$_{i+j/*i/*j}$

In (104), the plural anaphor, *themselves*, cannot have only *John* or *Tom* as its antecedent. Similarly, the complement anaphoric AgrS in (103) carries a plural marker. Hence it is bound by the immediately superordinate AgrS which also carries a plural marker. By transitivity, the subjects of coindexed AgrSs are coindexed. Hence the null complement subject allows split-antecedents.

The proposed analysis can easily be extended to non-finite clauses as well. It is always the matrix COMP which F-governs the following functional heads. The binder α_1 in the functional chain may be a subject or an object of the higher clause. The value for the bindee α_n of non-finite clauses is fixed by individual grammars of languages (for Kannada, see section 3.10).

My analysis does not face certain problems found in Saxon (cf.), and Borer (cf.). I discuss them in turn.

The definition of a control verb on Saxon's analysis is (105):

105. X is a control verb if and only if its sentential complement contains a NP with the features [+anaphor, +pronominal].

As Saxon herself observes, the above definition entails that the control verb subcategorizes for a complement non-head, which clashes with the standard assumption that the head of a category (in this case, the control verb) can only subcategorize for its complement head bearing certain features (p.305). But, the above definition associates the required features with a complement non-head. To circumvent this problem, Saxon resorts to Williams' (1980) and Chomsky's (1986b) suggestion that subjects (or `specifiers') may inherit features of the category head. On my analysis, resort to a predication relation is not required at all, as the definition stated in (102) entails that the control verb subcategorizes for a complement head specified +anaphoric.

Borer's analysis encounters a serious theoretical problem according to which, an anaphoric AGR/Agr moves to COMP to be bound by an element in its specifier position. If it is pronominal, the movement of AGR/Agr is prohibited so that Principle B is not violated. In other words, her analysis treats a Spec-head relation as a certain type of binding, which may lead to the violation of binding Condition B. For example, Trentino, a northern Italian dialect allows null subject only if a subject clitic

is obligatorily present (Rizzi 1986b). See (106), (Rizzi's 3a,b,c):

106a. El Gianni el magna
b. *pro* el magna
c.**pro* magna

On Rizzi's analysis, the subject clitic *El* is a strong AGR with pronominal properties, which licenses a *pro* subject. Assuming that the subject pronominal clitic *El* occupies a functional head position, if a Spec-head relation is a certain type of binding (as in Borer's analysis), then the coindexation of the AGR (which moves to COMP position to I-identify its subject) with an overt or a non-overt specifier will result in the violation of Condition B.

Borer's analysis is also problematic for binding Condition C. The moved anaphoric AGR may be bound by a full lexical NP in the matrix clause, as in *John tried to leave*. Therefore, Borer is forced to assume that AGR does not enter into binding Condition C. Evidently, my analysis does not encounter such theoretical problems.

We are left with two questions; can the proposed analysis be extended to other languages, and what are its implications. Unfortunately, for lack of data, it is not possible to test how my analysis works in other cases. The different analyses discussed in this study address only very limited data; this is especially so for Saxon

(1986) and Borer (1989). For her anaphoric AGR analysis, Borer draws data from many languages, but this involves quite simple structures. An exception to this observation is Finer's (1985) analysis. Finer notes that in languages with switch-reference systems, SS (the same subject marker) signals obligatory coreference between subject NPs of hierarchically adjacent clauses, and DS (the different subject marker) signals obligatory noncoreference between subject NPs of hierarchically adjacent clauses. These markers may be analyzed as functional categories, since they occupy COMP positions, and carry meanings that specify temporal relations between two clauses. But, as noted above, these markers are strictly local. We need data from morphologically rich languages, which allow control into finite complements, and allow overt pronominals to be controlled in multi-tiered structures. Only then, can the implications of the present analysis become clearer.

3.10. *Anaphoric AGR and Non-finite Clauses*

In this section, I extend the ± anaphoric Agr analysis to Kannada non-finite and copular clauses. Negative clauses are also discussed briefly. But, as noted in the beginning of this chapter, the scope of this section is quite limited. Its purpose is only to show that a unified analysis of control and non-control effects in Kannada may be achieved through the concept of ±anaphoric Agr/AGR. Based on the referential properties of subjects of subordinate clauses, Borer (cf.) assigns ±anaphoric features to

the embedded AGR of a given language. The similar analysis presented here for Kannada non-finite clauses appears to be on the right track. It differs from the one made for finite clauses in that it takes the control relation in non-finite clauses to be a relation between the controller and the embedded argument NP. The control relation in finite clauses was viewed as a one between the controller and the embedded predicate. What is common in both views is that the control relation is mediated by an anaphoric Agr/AGR.

Chapter 2 showed that a null AGR projects in non-finite clauses. In this section, I show that a null AGR can, systematically, be specified for the feature ±anaphoric. For convenience, sentences discussed earlier are repeated here.

Consider (107) and (108), which contain, respectively, gerundive and infinitival complements.

107a. Gopi$_i$ [*pro*/ta:nu$_i$ T.V. no:Duvudannu] nillisida.
-nom. self-nom. see-npst.ger.acc. stop-3sg.m.
'Gopi stopped watching T.V.'

b. Gopi$_i$ [awanu$_{\bullet i/j}$/na:nu$_{\bullet i}$ T.V. no:Duvudannu] nillisida.
he/I-nom.
'Gopi$_i$ stopped him$_{\bullet i/j}$/me$_{\bullet i}$ from watching T.V.'

108a. Gopi$_i$ [*pro*/ta:nu$_i$ hogalu] oppida.
-nom. self-nom. go-inf. agree-3sg.m.
'Gopi agreed to go'

b. Gopi$_i$ [awanu$_{\bullet i/j}$/na:nu$_{\bullet i}$ hogalu] oppida.
he/I-nom.
'Gopi$_i$ agreed for him$_{\bullet i/j}$/me$_{\bullet i}$ to go'

The third person reflexive pronoun and the null complement subjects in the (a) sentences are obligatorily coreferential with the matrix subject. But the first and third person pronouns in the (b) sentences are obligatorily non-coreferential with the matrix subject. With third person reflexive pronouns and null subjects, the null AGR in gerundive and infinitival clauses is anaphoric. When first and third person pronouns are subjects, the complement AGR is non-anaphoric.[32,33] Depending on the type of complement NP, the null AGR acquires its feature ±anaphoric.

The definition of a control verb (102) is modified accordingly:

109. X is a control verb iff the subject Agr/AGR of its sentential complement is +anaphoric.

In finite clauses, the anaphoric subject Agr mediates a control relation between the subjects of two clauses, and between the object of a higher clause and the subject of a complement clause. In non-finite clauses, the anaphoric subject AGR mediates such a relation.

Constraint on anaphoric Agr (98) is revised accordingly, see (110):

110. An anaphoric Agr/AGR A must be coindexed with the Agr/AGR of the controller of A's subject.

What (110) says is that in finite subject control structures, the complement anaphoric AgrS must be coindexed with the higher AgrS. In finite object control structures, the complement anaphoric AgrS must be coindexed with the higher AGR (direct or

indirect). In non-finite subject control structures, the complement anaphoric AGRS must be coindexed with the higher AgrS. In non-finite object control structures, the complement anaphoric subject AGRS must be coindexed with the higher AGR (direct or indirect).

Similarly, the condition on non-anaphoric Agr (101) is revised as (111):

111. A non-anaphoric complement subject Agr/AGR cannot be coindexed with a higher subject Agr.

According to (111), in finite structures, the complement non-anaphoric subject Agr cannot be coindexed with a higher subject Agr. In non-finite structures, the complement non-anaphoric subject AGR cannot be coindexed with a higher subject Agr.

Thus far, strong Agr and null AGR, which are specified for the feature ± anaphoric, are dealt with. Now consider weak Agr, which is defective in person marking, and therefore does not allow null subjects. Given this, weak Agr can be specified for the feature ±anaphoric only if the subject is overt. If the complement subject is a third person reflexive pronoun, as in (112a), the complement Agr is specified for the feature +anaphoric; but if the complement subject is a first or third person pronoun, as in (112b), the complement Agr is specified for the feature -anaphoric.

112a. Gopi$_i$ [ta:nu$_i$ buddhivanta] anta tiLididda:ne.
-nom. self-nom. intelligent COMP think-3sg.m.
`Gopi$_i$ thinks that self$_i$ is intelligent'

b. Gopi$_i$ [awanu$_j$/na:nu$_k$ buddhivanta] anta tiLididda:ne.
he/I-nom. think-3sg.m.
`Gopi$_i$ thinks that he$_j$/I$_k$ is intelligent'

In (113), the complement Agr with a null subject cannot be specified for the feature ± anaphoric. The complement Agr is therefore left without an antecedent. By the absence of transitivity, the null subject is also not identified. The unacceptable (113) supports Jaeggli & Safir's (1989) statement that a thematic null subject must be identified, which is derivable from the Theta Criterion.

113. *Gopi$_i$ [*pro*$_{i/j}$ buddhivanta] anta tiLididda:ne.
intelligent-sg.m. COMP think-3sg.m.
`Gopi$_i$ thinks that (he)$_{i/j}$ is intelligent'

It was shown in footnote 12 of Chapter 2 that the complement first person subject of a copular clause can be coreferential with the matrix subject depending on the matrix predicate. Contrast (112b) with (114):

114.Gopi$_i$ [na:nu$_i$ buddhivanta] anta he:Lida.
I-nom. intelligent COMP say-3sg.m.
`Gopi$_i$ said that he$_i$ is intelligent'

The same state of affairs holds in negative complement clauses as well. The relevant examples are (115a,b) and (116).

115a. Gopi$_i$ [*pro*/ta:nu/na:nu$_i$ baruvudilla] anta he:Lida.
self/ I-nom. come-ger.npst.NEG COMp say-3sg.m.
'Gopi$_i$ said that he$_i$ will not come'

b.*Gopi$_i$ [awanu$_i$ baruvudilla] anta he:Lida.
he-nom. come-ger.npst.NEG
'Gopi$_i$ said that he$_i$ will not come'

116.*Gopi$_i$ [na:nu$_i$ baruvudilla] anta tiLididda:ne.
I-nom. come-ger.npst.NEG COMP think-3sg.m.
'Gopi$_i$ thinks that he$_i$ will not come'

So summarizing, if the complement subject is a first person pronoun, the null AGR in copular and negative clauses may be specified for the feature ± anaphoric. If the complement subject is a third person pronoun, the null AGR in these clauses is specified for the feature -anaphoric. If the complement subject is a third person reflexive, the null AGR in these clauses is specified for the feature +anaphoric. The only difference between copular and negative clauses is that a null complement subject

is allowed in the latter, but not in the former.

3.11. *Dative Subject Constructions*

For completeness, I briefly investigate control in dative subject constructions (DSC), which are extensively used in Kannada. These are employed with predicates expressing knowledge, doubt, belief, perception, liking, disliking, wanting, obligation,

and physical and mental attributes. It is important to consider how control effects in these constructions are brought about, because dative verbs are uniformly marked for third person neuter agreement, never first person agreement. The discussion shows that the control mechanism that operates in DSCs is different from the one found in finite structures inflected for PNG. In the latter, control is encoded syntactically, that is, by an agreement marker. Whereas in a DSC, the mechanism of encoding control seems to depend on the semantic aspect of the predicate. However, it is beyond the scope of this study to provide a systematic account of control in DSC.

Sridhar (1979) presents several arguments to show that a dative NP in a DSC is its subject. The relevant arguments for the ensuing discussion are based on the reflexive pronoun *ta:n* and on coreferential subject deletion. The binding requirement for Kannada *ta:n* is that the antecedent of the reflexive must be the subject of the sentence (117). The Dative NP not only can control a local reflexive, but also the one in an embedded sentence (118a&b) (examples are taken from Sridhar):

117. jan$_i$ merige$_j$ tanna$_{i/*j}$ jagavannu biTTukoTTanu.
John Mary-dat. self's place-acc. gave up
'John$_i$ gave up his$_i$ own place for Mary'

118a. mu:rtige$_i$ tanna$_i$ makkaLa bagge tumba abhimana.
Murti-dat. self's kids toward much pride
'Murti$_i$ is very pround of his$_i$ kids'.

b.dineshanige$_i$ [kyaroline tannannu$_i$ pritisutta:Le endu] gottu.
Dinesh-dat. Caroline self-acc. loves compl. knows
'Dinesh$_i$ knows that Caroline loves him$_i$'.

Note that the Dative subjects in (118) and non-dative subject, *jan*, in (117) control the reflexive pronoun. In this, both subject types behave similarly.

In conjoined sentences, all verbs take participle form, with the exception of the final verb. All but one (either the first or the last) identical subjects are deleted, (119) (see footnote 5 of Chapter 2 for a discussion about conjoined sentences):

119.Uma$_i$ [$\varnothing_i$ aŋDige hogi] [$\varnothing_i$ tarakari tandu] aDige ma:DidaLu.
Uma shop-to having gone vegetables having brought meal made
'Uma, having gone to the shop, having brought vegetables, cooked the meal'

120a) illustrates the deletion of a Dative subject under identity with a Nominative subject. In (120b) the dative subject acts as the controller for the deletion of a Nominative subject.

120a. [$\varnothing_i$ henDatiya jna:paka bandu] rama$_i$ vihvalana:danu.
wife's rememberence having come Rama went berserk
'Remembering his$_i$ wife, Rama$_i$ went berserk'

b. [$\varnothing_i$ bisilinalli tirugi] sureshanige$_i$ ba:ya:rike a:yitu.
sun-in having wandered suresh-dat. thirst happened
'Having wandered in the sun, Suresha became thirsty'

The following conclusion can be reached on the basis of the above data: A null Dative subject can be coreferential with a Nominative subject and vice versa. So, depending on the Case of the matrix and complement subjects, there are three sets of data to be considered to determine how control operates into or out of a DSC.

Matrix Subject	Complement Subject
i. Nominative	Dative
ii. Dative	Nominative
iii. Dative	Dative

i. *Nominative + Dative*: A and B-control (i.e., associated with null and third person reflexive) are allowed, as are (optional) C and D-control (i.e., associated with third person and first person pronouns). In finite (with PNG) constructions, only D-control could be ambiguous. But in a DSC, both C and D control are ambiguous. Because the absence of first person agreement enables the pronoun *awanige* in (121b) to have a discourse antecedent. The relevant examples follow:

121a. Gopi$_i$ [tanage/*ec*$_i$ gottu] anta he:Lida.
-nom. self-dat. know-sg.neu. COMP say-3sg.m.
`Gopi$_i$ said that self/(he)$_i$ knows'

b. Gopi$_i$ [awanige$_{i,j}$ gottu] anta he:Lida.
he-dat.
`Gopi$_i$ said that he$_{i,j}$ knows'

c. Gopi$_i$ [nanage$_{i,j}$ gottu] anta he:Lida.
I-dat.
`Gopi$_i$ said that I$_{i,j}$ know'

ii. *Dative + Nominative*: Only A and B-control are allowed.

122a. Gopige$_i$ [ta:nu/*ec*$_i$ barti:ni] anta gottu.
-dat. self-nom. come-1sg. COMP know-sg.neu.
`Gopi$_i$ knows that self/(he)$_i$ is coming'

b.*Gopige$_i$ [awanu:$_i$ barti:ni] anta gottu.
-dat. he-nom. come-1sg.
`Gopi$_i$ knows that he$_i$ is also coming'

c. Gopige$_i$ [awanu.$_{i/j}$ barta:ne] anta gottu.
-dat. he-nom. come-3sg.m.
`Gopi$_i$ knows that he.$_{i/j}$ is coming'

d. Gopige$_i$ [na:nu.$_{i/j}$ barti:ni] anta gottu.
-dat. I-nom. come-1sg.
`Gopi$_i$ knows that I am.$_{i/j}$ coming'

ii. *Dative + Dative*: Depending on the matrix predicate, all four types of control are allowed. If allowed, only an obligatory C and D-control reading is available.

123a. Gopige$_i$ [tanage/*ec*$_i$ ella: gottu] anta jambha bandide.
-dat. self-dat. everything know-sg.neu. COMP proud come-is
`Gopi$_i$ is proud that self/(he)$_i$ knows everything'

b. Gopige$_i$ [awanige/nanage$_i$ ella: gottu] anta jambha bandide.
-dat. he/I-dat.
`Gopi$_i$ is proud that he/I$_i$ know(s) everything'

124a.*Gopige$_i$ [tanage/*ec*$_i$ ella: gottu] anta siTTu bandide.
self-dat. everything know-sg.neu. COMP anger come-is
`Gopi$_i$ is angry that self/(he)$_i$ knows everything'

b. Gopige$_i$ [awanige/nanage$_j$ gottu] anta siTTu bandide.
-dat. he/I-dat. anger come-is
`Gopi$_i$ is angry that he/I$_j$ know(s)'

The following observations can be made on the basis of the above data:

(a) With the exception of one paradigm (dative-dative), both A and B-control behave in a uniform way in DSCs, as they do in other constructions. That is, the

complement null and third person reflexive subjects fail to be coreferential with the matrix subject, only in (124a). (b) Both C and D-control exhibit a different pattern from the one found in constructions other than DSCs. The pattern in DSCs has the following features: (i) C-control with a Nominative NP is not possible; see (122b). (ii) The complement first person pronoun cannot be coreferential with the matrix dative subject even if the complement predicate is marked for first person agreement; see (122d). (iii) Only non-obligatory C and D-control are available, if dative complement subjects are coreferential with the Nominative matrix subject; see (121b&c). (iv) The availability of both C and D-control depends on the matrix predicate, if both complement and matrix subjects bear dative Case; (contrast (123b) with (124b)). When available, both C and D control are obligatory; see (123b). (c) In the Dative-Dative set, depending on the matrix predicate, the complement null and third person reflexive subjects are in complementary distribution with the complement first and third person pronouns.

To summarize,

(a) Irrespective of Case and matrix predicate type (with the exception of (124a)), the complement null and third person reflexive subjects are obligatorily coreferential with the matrix subject.

(b) Dative first and third person complement subjects depend entirely on the matrix predicate to be coreferential with the matrix subject.

(c) Nominative first and third person complement subjects with first person agreement (122c&d) are problematic for the anaphoric Agr hypothesis.

However, (122b) does not pose a genuine problem for the analysis given the fact that third person subject with first person agreement is marginal in other than DSC constructions. The unacceptable (122c) supports a non-anaphoric Agr analysis of third person agreement.

All in all, we are left with the following situation: An anaphoric Agr analysis cannot be extended to account for control in DSC constructions when the complement clause is a DSC, because of the unavailability of first person agreement. The analysis cannot be extended either when it is available, as in (122d).

The conclusion reached in (b) and the observation made with respect to (122d) and (124a) can only be explained in terms of the lexcial semantics of matrix verbs.

The above data is not exhaustive. There are Nominative and Dative alternating cases (that is, certain predicates may take either a Nominative or Dative subject), and obligational constructions in which the behavior of first and third person pronouns needs to be considered to come up with a generalization regarding control in DSCs. I

will not consider this issue further.

3.12. *Summary*

I showed in this chapter how control effects are brought about in Kannada. Even

though focus was on finite complements, I proposed a unified analysis of control by appealing to the notion of anaphoric Agr/AGR. I showed that the movement analysis of the data is problematic for the *Barriers* framework. I proposed instead a Functional Anaphoric Chain Hypothesis to account for the control phenomenon. I have proposed a general constraint, which can easily be extended to account for the control effects in other languages as well. I also distinguished control structures involving control verbs from those involving non-control verbs.

The following table summarizes the anaphoric element and types of control associated with Kannada clauses. Different types of Agr/AGR are specified for the feature ± anaphoric. The feature +anaphoric signals coreference between complement and matrix subjects. The availability of different types of control for each +anaphoric Agr/AGR is shown by an associated entry. The feature -anaphoric signals disjoint interpretation between complement and matrix subjects. So, -anaphoric Agr/AGR lacks an associated entry of a control type. If Agr/AGR is specified for both anaphoric and non-anaphoric features, the associated entry of a control type is also specified for plus and minus features. The table does not include second person Agr, since it was not dealt with in detail. Nevertheless, it was observed that, in finite object control structures, the second person Agr is specified for the feature +anaphoric. In such constructions, the complement second person subject is obligatorily coreferential with

the indirect object of the matrix clause. But in finite subject control structures, if the complement clause is marked for second person agreement, the second person Agr is specified for the feature -anaphoric. In such constructions, the second person complement subject gets an interpretation obligatorily disjoint from that of the matrix subject, even if the matrix subject is a second person pronoun.

(125):

Complement	**Anaphoric**	**Control Type**			
a. *Finite*:					
i. I person Agr	+	A	B	C	D
ii. III person Agr	-				
b. *Infinitive &Gerundive*:					
i. AGR with *ta:n* & null subjects	+	A	B		
ii. AGR with I & III per.pro.	-				
c. *Copular*:					
i. Weak Agr with *ta:n*	+		B		
ii. Weak Agr with III per.pro.	-				
iii. Weak Agr with I per.pro.	±				±D
iv.*Weak Agr with a null subject					
d. *Negative*:					
i. AGR with *ta:n* & null subjects	+	A	B		
ii. AGR with III per.pro.	-				
iii. AGR with I per.pro.	±				±D

Finally, a few words on an overall typology of control complements discussed in

this study, and by other authors. Kannada, Telugu, Dogrib, Serbo-Croatian, Rumanian, Persian, Hebrew, and Greek all allow control into finite complements. Despite having agreement morphology, with the exception of Kannada, Telugu, and Dogrib, the others depend on tense/modality variation in expressing the control relation. For example, Hebrew finite complement clauses allow control only in past and future tenses, whereas Persian finite complement clauses are in the subjunctive. Japanese, Korean, and Saramaccan may be classified under one group, for lack of agreement morphology. In Saramaccan, an overt NP is obligatorily controlled in the absence of a complementizer. Korean also allows obligatorily controlled overt NPs, if the embedded clause is not tensed. Japanese distinguishes control and non-control structures with tense variation; embedded verbs in control structures do not have the flexibility of taking various tense or modal suffixes. Some languages like English which have weak agreement morphology, but do not have a distinct morphological way of expressing the control relation, come under a third group. In these languages, the burden is shifted to specific syntactic structures. But, in Turkish, which has subject-verb agreement, word order creates obviation. The languages which have switch-reference systems come under a fourth group. In these languages, unlike others, the syntactic principles that are necessary to explain control structures are simple and straightforward.

Footnotes to Chapter 3:

1. Finiteness in Kannada is a function of agreement only in non-negative clauses. The Kannada NEG element *illa* is not marked for any type of agreement. But negative sentences are still treated as finite. The verbs marked for neuter agreement in dative constructions are also treated as finite. Copular sentences, which do not make a distinction in `person' (that is, only gender and number are marked), are also treated as finite constructions. Kannada makes a gender distinction only in the third person singular. So, `person' signals finiteness in the Kannada control phenomena discussed in this chapter.

2. All Dravidian languages, except Malayalam, exhibit this type of control phenomenon, which to my knowledge, has not previously been accounted for.

3. There is a dialectal variation as to whether a third person pronoun with first person agreement is allowed. Such a combination is not very common even in dialects which allow it, and it may be marginal for some speakers.

4. Hariprasad (1994) cites the following Telugu (a sister language) sentence, which poses a problem for his analysis of the agreement system. However, he offers no account of it.

i. jaanui$_i$ [[tanu/waaDui$_i$ kuuda paarTii-ki wast-aa-nu] ani] ceppa-aa-Du
John-nom. self/he also party-to come-pst.1sg. tell-pst.3sg.m.
`John$_i$ told that he$_i$ would also come to the party'

5. Kannada does not make a singular/plural distinction in the optative.

6. Thus far discussed data lead to a different set of data in which the first person complement subject is controlled by a third person subject, and the first person object complement refers to the speaker. Similarly, the second person complement subject is controlled by the higher object, and the second person object complement refers to the speaker. But, the unacceptable following sentences suggest that the above said coreferential readings are not available. It is not clear to me what principle is operating here to block these readings.

i.* Gopi$_i$ Rajuwige [na:nu$_i$ nannannu$_j$ hogaLide] anta he:Lida.
I-nom. I-acc. praise-1sg. Comp say-3sg.m.
`Gopi$_i$ told Raju that he$_i$ praised me$_j$'

ii.* Gopi Rajuwige$_j$ [ni:nu$_i$ ninnannu$_j$ hogaLu] anta he:Lida.
you-nom. you-acc. praise-2sg. Comp say-3sg.m.
'Gopi told Raju to praise you'

7. The Dogrib postposition must occur with pronominal inflection if its NP object is deleted.

8. Kannada reflexively interpreted empty categories can appear as direct or indirect objects of the verb, or as possessors of the noun, but not as objects of postpositions. These facts are illustrated in (i-iv), respectively:

i. Gopi$_i$ kattiyinda *ec*$_i$ tividukoNDa.
-nom. knife-inst. stab-AUX.REF.3sg.m.
'Gopi$_i$ stabbed (himself)$_i$ with a knife'

ii. Gopi$_i$ *ec*$_i$ anna ma:DikonDa.
-nom. rice cook-AUX.REF.3sg.m.
'Gopi$_i$ cooked rice for (himself)$_i$'

iii. Gopi$_i$ *ec*$_i$ maganannu kareda.
-nom. son-acc. call-3sg.m.
'Gopi$_i$ called (his)$_i$ son'

iv.*Gopi$_i$ *ec*$_i$ bagge he:LikoNDa.
-nom. about talk-3-AUX.REF.sg.m.
'Gopi$_i$ talked about (himself)$_i$'

9. GB theory predicts that a controlled NP has the following properties:

i. The controlled NP is the subject of a non-finite clause.
ii. The controlled NP is an empty category.

10. Comorovski (1985) shows that Rumanian allows control into finite (subjunctive) clauses, and the controlled NP, although empty, receives Case. The evidence that the controlled NP receives Case comes from the emphatic pronouns, which may appear in control complements. Sentence (i) illustrates this point:

i. Maria$_i$ a incercat [[ ] sa ajunga ea$_i$ prima]
has tried SUBJ arrive.3s she.Nom the-first
'Maria tried to arrive the first'

Under the usual assumptions about Case assignment, Case entails government. Therefore, the controlled NP in Rumanian is governed. Note that the overt (emphasized) subjects in Kannada sentences also bear Nominative Case.

11. O'Neil (1995) tries to reduce English control to raising, thereby eliminating any control theory. The crucial factor for his analysis is that the complement subject must be non-overt. The overt controlled nominal data discussed in this chapter invalidate his analysis as a general crosslinguistic theory of control.

12. The argument against a VP analysis is at stake, if VPs are analyzed as small clauses (SCs). That is, the fact that control affects only subjects may support analyses in which control complements are treated as VPs rather than clauses. If VPs themselves are analyzed as SCs, then the arguments against a VP analysis become untenable. Stowell (1982/83) analyzes small clauses as projections of the heads of their predicates. On his analysis, the lexical categories such as AP, VP, and PP are transparent to government, which accounts for the possiblity of Case assignment to and proper government of the SC subject. So, as Stowell himself observes, those categories may never function as control complements or else PRO will be governed. For example (Stowell's (41)a-d):

i.*I don't want [$_{AP}$ PRO sick]
ii.*Bill told Mary [$_{AP}$ PRO helpful]
iii.*We expect [$_{PP}$ PRO in Tokyo by noon]
iv.*Sally saw[$_{VP}$ PRO perform on TV]

Similarly, Chung & McCloskey (1987) propose an analysis of small clauses in Modern Irish. In contrast to English, the initial NP in these clauses need not be governed or assigned Case by an external governor. The structures Chung & McCloskey analyze as SCs are found in an extremely common type of adjunct phrase. And these structures have NP, XP sequences in a fixed order. The XP in these structures is a maximal projection, and could be PP, AP or VP. But these VPs are limited to progressive phrases. The negative complementizer *gan* can introduce a VP, which Chung& McCloskey also analyze as a small clause. That is, on their analysis, SCs may belong to the category S. However, Chung & McCloskey observe that the syntactic conclusion that SCs belong to the category S holds only if the complementizer is introduced by a phrase structure rule, and not if, thedefining property of complementizer is that of selecting clausal or propositional arguments. Two reasons can be given for not extending a SC analysis to Kannada data: (i) the Kannada complementizer selects propositional arguments. (ii) strong evidence against

a VP analysis of Kannada cases comes from the behavior of overt pronominal forms, which I discuss in section 3.6.4.

13. Saxon revises the Binding Theory as follows:
   i. An anaphor must be bound in the minimal domain containing it and an accessible SUBJECT.
   ii. A pronominal must be free in the minimal NP or S containing it.
   iii. An R-expression must be free.

14. According to S.N. Sridhar (personal communication), with some difficulty, the first person pronoun may refer to the speaker of the sentence. But to some speakers, including myself, this reading is not available. To obtain that reading, some additional linguistic elements, like, *nanna parava:gi* 'on my behalf', is necessary. However, Sridhar agrees that with non-control verbs, the second reading is easily available.

15. It is not clear to me why gerundive transitive complements are perfectly acceptable with a non-overt subject. For example,

   i. Gopi$_i$ [$ec_{i/*j}$ pustakavannu hintirugisuvuda:gi] he:Lida.
      -nom. book-acc. return-ger.npst. Comp say-3sg.m.
      'Gopi$_i$ said that (he)$_{i/*j}$ will return the book'

16. Postal (1970) suggested a relation between control and direct discourse cases. He argued that Direct Discourse Interpretation involves a 'special kind of pronominalization' that which generates first and second person forms. For instance (examples are taken from Postal):

   i. a. Harry promised Betty to leave.
      b. I will leave, Harry said to/promised Betty.

   ii. a. Harry ordered Betty to leave.
      b. (You) leave, Harry ordered Betty.

The Equi operation deletes complement subjects in (b) sentences. The following principle regulates which NP must be deleted (simplified version):

   iii. a. If the subject of the complement sentence is First Person, Equi deletes an NP which is a coreferent of the main clause subject.

b. If the subject of the complement sentence is Second Person, Equi deletes an NP which is a coreferent of the main clause indirect object.

Given this, the Kannada connection between subject control and first person agreement, object control and second person agreement may not be arbitrary.

17. Saxon makes no distinction between control and non-control verbs. The data she discusses from different languages are also limited. Hence, it is difficult to extend the present discussion of control and non-control verbs to Dogrib.

18. However, my analysis does not hinge on the feature specification of the null complement NP. On my analysis, a functional element (here, an anaphoric Agr) mediates an anaphoric relation between two NPs (see section 3.9).

19. English also allows long-distance control, if there is no intervening NP, see (i)&(ii) (from Kuno 1987). But these instances of long-distance control illustrate an exception to the general observation that a null subject must be coreferential with an NP in the immediately superordinate clause.

i. John$_i$ said to Mary that it was obvious that $\varnothing_i$ preparing himself$_i$ for the exam would be impossible.

ii.*John$_i$ said to Mary that Jane thought that $\varnothing_i$ preparing himself$_i$ for the exam would be impossible.

The control effects in (i) can be explained, if we assume, following Borer (1989), that the AGR in English gerunds is anaphoric.

20. Zec notes that, in Gokana (Hyman & Comrie 1981), the split-antecedent need not be present syntactically:

i. lébàree ko baè do
lebare said they fell
'Lebare said that they fell' ('they' may or may not include Lebare)

Similarly, in English (ii), 'they' may or may not include 'John'.
ii.John said that they are coming late.

21. The analysis proposed in the text predicts that the null complement subject allows split-antecedents (see section 3.9).

22. Comorovski shows that in Rumanian, only an emphatic pronoun may refer to a subject NP in its immediate sentential domain. See also footnote 10, above.

i. Maria a spus [$_{s'}$ ca [$_{s}$ *Ioana* a intrat *ea* prima]]
has said that has entered she the-first
'Maria said that it is Ioana who entered the first'
*It is Maria who said that Ioana entered the first'

23. Borer (1986) replaces the Extended Projection Principle of Chomsky (1981) by the requirement that INFL have an I-subject, stated in (i):

i. Coindex NP with INFL in the accessible domain of INFL.

The NP coindexed with INFL in accordance with (i) is called the I-subject.

24. Borer (1989) assumes that AGR in English infinitives is +anaphoric, and in gerunds ±anaphoric.

25. Alternatively, third person Agr could be treated as an R-expression (Mark Baltin, personal communication). Below I extend the ±anaphoric Agr analysis to non-finite clauses. For conceptual reason, I continue to refer to third person agreement as non-anaphoric.

26. Kannada does not exhibit **that-t* effects, which suggests that Specifier-HEAD agreement between the Spec(c) and the complementizer *anta* is vacuous. The complementizer can agree with both ± WH elements. Given this, the movement of an element, which is +N, to COMP, which is also +N, is least problematic to the theory.

27. Since pronominal clitics, agreement affixes, and verbal inflections are overt at PF, they must be manifested at S-Structure. Assuming control relation is encoded at S-structure, the movement of anaphoric Agr also occurs at S-structure.

28. Baker & Hale (1990) suggest that functional heads do not count as potential minimal governors for traces of lexical heads. In Southern Tiwa, N incorporates directly into the V, stranding the demonstrative determiner (data from Allen, Gardiner, and Frantz (1984)):

ia. [Yede seuan-ide] a-mu-ban.
that man-suf 2sS/A-see-past
'You saw that man'

b. [$_{DP}$ Yede [$_{NP}$ [$_{Ni}$ *e*]] a-seuan$_i$-mu-ban.
that 2sS/A-man-see-past
'You saw that man'

Niuean, an Oceanic language, also allows noun incorporation, but does not allow N inside a prepositional phrase to move out of that PP:

ii. *Ne tutala tagata$_i$ a au [$_{PP}$ ke he [$_{NP}$ t $_{Ni}$]].
past-talk-person abs-I to
'I was people talking (to)'

Baker & Hale attribute this contrast to the distinction between lexical and functional categories. To account for such cases, Baker & Hale refine Relativized Minimality in the following way, which is sensitive to these heads:

iii. Z is a potential antecedent governor for Y if and only if
a. Y is a lexical X° category and Z is a lexical X° category m-commanding Y, or
a' Y is a functional X° category and Z is a functional X° category m-commanding Y.

Contreras (1991) proposes two kinds of barriers distinguishing lexical heads from functional heads. The above discussion justifies assumption (iii) that only functional heads participate in a chain formation.

29. Gueron & Hoekstra (1988) motivate the notion T(ense) Chain to distinguish arguments from predicates. On their analysis, the Tense operator in COMP assigns a T-mark to the Tense node it governs, and Tense T-marks the verb it governs, creating a T-chain.

30. This line of reasoning to account for split antecedents, obviously, does not hold for languages in which the anaphoric element is other than Agr.

31. Simpson and Bresnan (1983) offer an analysis of Warlpiri suffixes, which determine the controller of the subjects of nonfinite clauses of contemporaneous

action. Sakaguchi (1990) distinguishes control structures from non-control structures in Japanese on Tense variation criteria.

32. The behavior of first and third person pronouns in gerundive complements (including negative complements) is not as simple, as suggested in the text. The availability of C and D-control depends on factors like direct versus indirect speech, and on the Case of the gerunds. The data is further complicated by the fact that gerunds are common in dative constructions. I have given only a sketchy account of gerundive clauses in the text. An unified account of control in gerundives is beyond the scope of this study.

33. Although I have not discussed control into adjunct clauses, the control analysis made in this chapter accomodates such control. Participial relative clauses are used in adjunct control structures (see Chapter 2 for data). The null complement subjects of participial relative clauses are obligatorily coreferential with the matrix subject, and a third person pronoun obligatorily receives a disjoint interpretation. Constraint (110) does not make an argument/adjunct distinction. Therefore, the null anaphoric AGR in an adjunct clause is coindexed with the Agr of the controller.

34. It was shown in Chapter 2 that Kannada data support Speas' hypothesis that null subjects are permitted in languages which lack agreement entirely or in languages with morphologically uniform agreement. Null subjects are allowed in both finite and

negative clauses, because of the presence and absence of agreement, respectively. But, null subjects are not allowed in copular clauses, which are marked for number and gender agreement but not for person.

35. Certain predicates may take either a Nominative or Dative subject:

ia. Gopi$_i$ [na:nu$_i$ siTTa:de] anta he:Lida.
-nom. I-nom. anger-be-1sg. COMP say-3sg.m.
'Gopi$_i$ said that he$_i$ was angry'
Lit. Gopi$_i$ said that I$_i$ became angry.

b. Gopi$_i$ [nanange$_i$ siTTu bantu] anta he:Lida.
I-dat. anger come-3sg.neu.
'Gopi$_i$ said that he$_i$ was angry'
Lit. Gopi$_i$ said that anger came to me$_i$.

CHAPTER 4

This chapter considers Kannada reflexive constructions. The data is important because while one set is unproblematic for the existing GB binding theory, another set raises difficulties.

Within GB binding theory, there are several approaches to pronouns. Under the most commonly held view, Condition B is considered a condition on the distribution of pronouns. But, Reinhart and Reuland (1993) (henceforth R&R) view it as a condition on reflexive predicates. In R&R's system, reflexive pronouns are classified into SELF anaphors and Simple Expression (SE) anaphors. Both types of anaphors are referentially dependent, but only SELF anaphors serve to reflexive-mark their predicates. Since reflexive-marking is a necessary condition for local binding, only SELF anaphors are allowed to be locally bound. R&R revise the binding conditions as follows:

1. Condition A: a reflexive-marked syntactic predicate is reflexive.
2. Condition B: a reflexive semantic predicate is reflexive-marked.

Within standard GB binding theory, the roughly analogous conditions are stated as follows:

3. Condition A: an anaphor is bound in its governing category.
4. Condition B: a pronoun is free in its governing category.

The aim of this chapter is twofold; first, to provide a detailed analysis of both Kannada's reflexive auxiliary and its long-distance reflexive pronoun. Second, I argue for the following negative claim:

(i)The claims about reflexives, pronouns etc., made by a variety of accounts in the overall GB framework do not fully stand up with respect to Kannada.

This chapter is organized as follows: Sections 4.1 and 4.2 discuss the syntactic binding requirements for the Kannada short-distance reflexive auxiliary *koL* and the long-distance reflexive *ta:n*. As is well-known, cross-linguistically, unlike long-distance reflexives, short-distance reflexives are generally unproblematic for the binding theory. Kannada data goes along with this statement. In section 4.1, I briefly discuss the reflexive auxiliary. Compared to analogs in other languages, it is semantically more constrained, discussion of which will be deferred to section 4.6. Section 4.3 discusses the complementarity between the pronoun and the reflexive. Most of the discussion in section 4.4 is devoted to understanding *ta:n*'s long-distance binding property.

The domain of long-distance anaphors has now been extensively discussed in the literature. Languages vary as to the definition of the domain of long-distance anaphors. It will be shown that the domain of the Kannada long-distance anaphor varies depending on the presence or absence of the reflexive auxiliary. Section 4.6 addresses the problematic data and deals with the semantic conditions governing the

appearance of the reflexive auxiliary. The discussion reveals that the complementarity between the reflexive auxiliary, and the reflexive pronoun and the regular pronoun in Picture NPs and PPs depends on these semantic conditions. Even though the lack of complementarity between anaphors and pronouns in Picture NPs and certain PPs is found cross-linguistically, the Kannada data present problems of a novel sort, which are not handled in existing GB theory. Since these problems point to the semantic conditions governing the appearance of the reflexive auxiliary, the discussion of Picture NPs and PPs is deferred to section 4.6. Section 4.7 discusses inherent reflexivity. Section 4.8 concludes.

4.1. *The Short-distance reflexive auxiliary koL*

Before discussing the data, a note on the term 'Reflexivization' is in order. I will use 'Reflexivization' to refer to the GB concept of binding of anaphors, limited to those anaphors which are reflexive forms and not reciprocals, however this distinction is utlimately drawn, a question I do not address here. In R&R's system, it stands for the coindexing of two arguments licensed by a reflexive marker. Within standard GB theory, the binding of long-distance reflexives is also an instance of reflexivization. But R&R's system treats only the binding of short-distance anaphors, which reflexive-mark their predicates, as an instance of reflexivization. In this chapter, unless otherwise mentioned, the term 'Reflexivization' is used in the former sense.

Kannada does not have a SELF anaphor like English *himself*, *themselves*, etc. Reflexivization, in the sense of R&R, is marked by the auxiliary *koL* (*koND* in Past tense). This is added to the past participle form of the verb and agrees in person, number and gender features (PNG). The descriptive facts about the reflexive auxiliary are dependent on different classes of verbs, as spelled out in the following sections.

I. *Standard Verb Constructions (SVC)*:

The term 'standard verb' is used here to distinguish regular verbs like, *odu*, 'read', *bari*, 'write', etc., from light verbs like, *varadi ma:Du*, 'report' (lit. 'report do'), etc. English verbs also make such a distinction; 'take care of', 'make fun of', etc., as opposed to standard verbs like, 'read' and 'write', etc. These verb types differ in that only light verbs depend on the nouns they occur with for θ-role assignment.

The reflexive auxiliary *koL* licenses the coindexation of the subject of a verb with that verb's direct or indirect object[1]. But, surprisingly from a cross-linguistic view point, both pronouns and the reflexive pronoun *ta:n* can be locally bound in the domain of *koL*. Generally, when they are in direct object position, either type of pronoun carries an emphatic marker. Consider:

5.Gopi$_i$ tannanne:/awananne:$_i$ hoDedukoNDa.
-nom. self-acc.emph. he-acc.emph. beat-AUX-REF.pst.3sg.m.
'Gopi$_i$ beat himself$_i$'

6.Gopi$_i$ tanage/awanige$_i$ tiNDi ma:DikoNDa.
self/he-dat. breakfast do-AUX-REF.
'Gopi$_i$ prepared breakfast for himself$_i$'

The reflexive auxiliary *koL* can only be bound by a subject, but is compatible with subjects of any person. Since it is constrained by the subject-antecedent condition, the auxiliary is not used to express the equivalent of English sentences like (7a). Instead, in analogs of (7a), an emphatic clitic is attached to the postposition, as in (7b).

However, (7b) has two readings. The pronoun *awana* can have *Raju* as its antecedent, or can have a discourse antecedent.

7a.She talked to Bob_i about $himself_i$

b.awaLu [$Rajuwina_i$ jote] [$awana_{i,j}$ bagge:ne:] matana:DidaLu.
she -gen. with he-gen. about-emph. talk-3sg.f.
'She talked to $Raju_i$ about $him_{i,j}$ '

Both syntactic requirments for *koL* binding are positive:

(i) It must be bound in the local domain.
(ii) It must be bound by a subject.

The first syntactic requirement satisfies standard binding theory Principle A, stated in (3).

The governing category or the local domain is defined as follows Chomsky & Lasnik 1993):

8. The governing category for α is the minimal CFC which contains α and in which α's Binding condition could, in principle, be satisfied.

The Complete Functional Complex (CFC) is a projection containing all grammatical functions compatible with its head. The governing category or the local domain for the reflexive auxiliary *koL* is the minimal clause which contains that auxiliary. In

examples (5&6) above, the reflexive auxiliary is bound within the local domain.

Although non-universal, the second syntactic requirement for reflexive-binding, that is, the subject antecedent condition, is widely attested crosslinguistically.[3]

II. *Light Verb Constructions (LVC)*:

koL is also required in certain 'light verb' constructions like that meaning 'commit suicide'.

9a. Gopi a:tmahatye ma:DikoNDa.
suicide do-AUX.REF.3sg.m.
'Gopi committed suicide'

b.*Gopi a:tmahatye ma:Dida.
do-3sg.m.
=(9a)

III. *Inherently Reflexive Verbs (IRV)*:

With inherently reflexive verbs, *koL* is optional:

a. Standard inherently reflexive verbs:

10. Gopi na:čida/na:čikoNDa.
ashame/ashame-AUX.REF.3sg.m.
'Gopi was ashamed'

b. Inchoatives as inherently reflexive verbs:[4]

11. Gopi college-ge se:rida/se:rikoNDa.
-dat. enroll/enroll-AUX.REF.3sg.m.
'Gopi enrolled in a college'

IV. *Non-reflexive Constructions (NRC)*:

The reflexive auxiliary is also used in reciprocal constructions, as in (12):[5]

12. Gopi mattu Raju obbarannobbaru hoDedukoNDaru.
    and each other beat-AUX.REF.3pl.
    'Gopi and Raju beat each other'

And, in certain non-reflexive uses, *koL* is also optional:[6]

13. Gopi Rajuvannu samarthisida/samarthisikoNDa.
    -acc. defend/defend-AUX.REF.3sg.m.
    'Gopi defended Raju'

Only standard verbs, but not all, allow non-reflexive uses of the auxiliary. This observation will be clarified in section 4.6.4.

To summarize, the facts about the Kannada reflexive auxiliary discussed so far are not problematic for the existing GB Binding Theory.

4.2. *The Long-distance reflexive pronoun ta:n*

The Kannada long-distance reflexive pronoun *ta:n* does not inflect for gender, but does have distinct singular and plural variants. It can only have a third person NP as its antecedent. First and second person pronouns lack a special form corresponding to *ta:n*; in the relevant positions, the simple pronoun is used. The peculiar syntactic property of *ta:n* is that, depending on the presence or absence of the reflexive auxiliary *koL*, it obeys either binding condition A or B. In the absence of the reflexive auxiliary *koL*, *ta:n* behaves like a pronoun with respect to binding condition B; it

cannot be locally bound, similar to Norwegian *seg*, and Dutch *Zich*.[7] This is illustrated in (14).

14a.*Gopi$_i$ tannannu$_i$ hoDeda.
self-acc. beat-3sg.m.
`Gopi$_i$ beat self$_i$ '

b. Jon$_i$ foraktet seg self$_i$ /*seg$_i$/*ham$_i$ (Norwegian) (Hellan (1988))
`John despises himself/SE/him'

c. Jan$_i$ veracht zichself$_i$ /*zich$_i$ /*hem$_i$ (Dutch)
`John despises himself/SE/him'

For *ta:n* to be locally bound, *koL* is required (see (5)).[8] Therefore, in R&R's terms, Kannada *ta:n* is a SE anaphor, which does not reflexive-mark its predicate.

Like the reflexive auxiliary *koL*, the reflexive pronoun *ta:n* also can only be bound by a subject; but unlike *koL*, it is limited to third person antecedents.

For the reflexive pronoun, *ta:n*, to be bound, one positive and one negative syntactic requirement must be met:

(i) *ta:n* can only be bound by a third person subject.
(ii) *ta:n* must not be locally bound in the absence of the reflexive auxiliary *koL*.

4.3. *The complementarity between the pronoun and the reflexive pronoun*

Pronouns and the reflexive *ta:n* pattern together in the domain of *koL*. Generally, even outside of the domain of *koL*, complementarity between these two elements is

missing, supporting R&R's claim that SE anaphors are subject to Principle B, instead of Principle A. The difference between pronouns and *ta:n* lies in the fact that, in many instances, the reflexive ambiguates the coreferential possibility, as sentence (15b) illustrates.

15a. $Gopi_i$ marketnalli $awana_{i/j}$ sne:hitanannu noDida.
-loc. he-gen. friend-acc. see-3sg.m.
'$Gopi_i$ saw $his_{i/j}$ friend in the market'

b. $Gopi_i$ marketnalli $tanna_i$ snehitanannu noDida.
self-gen.
'$Gopi_i$ saw self's$_i$ friend in the market'

Because of its ability to be bound by non-local third person subjects, the Kannada reflexive pronoun sometimes yields ambiguous readings, as in (16).

16. $Gopi_i$ $Rajuwige_j$ $tanna_{i/j}$ tandeyannu kaLuhisalu he:Lida.
self-gen. father-acc. send-inf. say-3sg.m.
'$Gopi_i$ told $Raju_j$ to send self's$_{i/j}$ father'

To summarize, *ta:n* displays a number of distinguishing properties, which are cross-linguistically attested for long-distance anaphors:

(a) it allows an antecedent outside its local domain/must not be locally bound.
(b) it allows only a subject antecedent.
(c) it is morphologically simplex.
(d) there is not full complementary distribution between *ta:n* and the regular pronoun.

4.4. *Analyses of ta:n*

In this section, I attempt to analyze *ta:n,* applying several common approaches. It

appears that none of the various GB approaches, neither the syntactic nor the non-syntactic, permits a satisfactory unified account of the behavior of *ta:n*. But I will show that the behavior of *ta:n* may be accounted for once its dual role is recognized. That is, *ta:n* behaves like an anaphor when locally bound in the presence of the reflexive auxiliary *koL*, but in the absence of the reflexive auxiliary, *ta:n* behaves like a pronoun in that it must be free in the local domain. Further, *ta:n* behaves like a logophoric pronoun outside the domain of the reflexive auxiliary. As an anaphor and a pronoun, *ta:n* is subject to both syntactic and pragmatic conditions. Following Thráinsson (1991), I show that the syntactic properties of *ta:n* inside and outside the domain of *koL* follow from the feature specifications [-ind ref, +an,-pr,-logo] and [-ind ref, -an, +pr, +logo], respectively.

Within GB theory, properties (a-d) above of long-distance reflexives could be accounted for in several ways. One of two main available strategies is to expand the local domain of the anaphora (Anderson 1986, Yang 1983). For example, reflexives in the Scandinavian languages can occur in infinitival clauses and be bound by the matrix subject whereas their English counterparts have to be bound within the infinitival clause in such structures. On Anderson's analysis, an anaphor in English is bound in its governing category, whereas in Scandinavian, it is bound by a superordinate subject within its anaphoric domain.

It is well-known that this approach has its limits, chiefly because the non-local domain requirement on the binding of long-distance reflexives varies across languages. In addition, in some cases, e.g., Icelandic *sig* and Chinese *ziji*, the anaphor need not be syntactically bound at all. This is also true of Kannada *ta:n*, as (17) illustrates:

17. Gopi cintisutta kuLita. ta:nu e:nu tappu ma:Dide.
-nom. think-prt.pp. sat self-nom. what wrong did
ellaru: tannannu e:ke tappu tiLiyutta:re.
everybody self-acc. why wrong understand
'Gopi sat thinking. What did self do wrong. Why does everybody misunderstand self'

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In (18), *ta:n* takes its antecedent from the previous discourse. In the light of the above example, I will not discuss further the domain expansion approach.

The second strategy is to deny that a long-distance reflexive is a true anaphor, so that Principle A is not violated (Bok-Bennema 1985, Reinhart 1983). The reflexive can then be treated as a bound or unbound pronominal, or as a pronominal anaphor. However, if *ta:n* were to be analyzed as a pronominal anaphor, one would encounter the problem mentioned earlier. That is, as a pronominal, the governing category for

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ta:n, in which it must be free, can be specified. But, as an anaphor, the governing category for *ta:n*, in which it must be bound, cannot be specified, because, as noted earlier, *ta:n* need not be syntactically bound at all.

Further, *ta:n* does not fully behave like a simple anaphor either. Reinhart (cf.) claims that a sloppy identity interpretation for a reflexive (under ellipsis) requires that the antecedent c-command the reflexive. But in (18), the antecedent does not c-command *ta:n*, and yet both sloppy and strict readings are available (adapted from Thráinsson 1991):[11]

18. Gopiya$_i$ abhipra:ya [Raju tanage$_i$ mosa ma:Didda:ne] anta,
-gen. opinion -nom. self-dat. cheat do-3sg.m. COMP
Baluwina abhipra:yawu ashTe.
-gen. opinion-inc. too

'It is Gopi's opinion that Raju has betrayed him, and it is Balu's opinion too'

a. It is Balu's opinion that Raju has betrayed Gopi = strict
b. It is Balu's$_i$ opinion that Raju has betrayed him$_i$ =sloppy

As was seen, the reflexive *ta:n* behaves like a pronoun outside the domain of the reflexive auxiliary *kol*. *ta:n* also exhibits other distributional properties of a pronoun. For example, it is well-known that anaphors do not allow split-antecedents, while pronominals do. In (19), *ta:n* shows the pronominal property of allowing split-antecedents.

19. Gopi$_i$ Rajuwige$_j$ [Balu tammannu$_{i+j}$ isTapaDuvudilla] anta he:Lida.
-nom. dat. -nom. self-pl.acc. like-not COMP said
'Gopi$_i$ told Raju$_j$ that Balu doesn't like them$_{i+j}$ '

But, in the domain of the reflexive auxiliary, *ta:n* does not allow split-antecedents, see (20):

20. Gopi$_i$ Rajuwina$_j$ baLi [Balu tammannu$_{i+j}$ lekkisuvudilla] anta
-nom. -gen. near -nom. self-pl.acc. care not COMP
du:rida/*durikoNDa.
complain/complain-AUX-REF. 3sg.m.
'Gopi$_i$ complained to Raju$_j$ that Balu doesn't care them$_{i+j}$'

There is a third GB approach to long-distance reflexivization, the LF movement hypothesis. According to this hypothesis, both short and long-distance reflexives move cyclically at LF from Infl to Infl, which neatly explains the assumed subject-orientation of these anaphoric elements. For more about the movement hypothesis, see Chomsky (1986a:174), Pica (1987&1991), Battistella (1989), R&R (1994), and Hestvik (1992).

Pica's movement analysis predicts that in languages making use of lexical inflection and lexical complementizers, long-distance reflexivization cannot occur when the reflexive is embedded in an indicative clause. Pica's analysis assumes that the C-position is only available for movement when it is not lexically filled. The C-position is therefore available when it is not filled at S-structure, or when the complementizer deletes at LF. According to a general principle of interpretation, complementizers associated with tensed (indicative) inflections may not delete at LF. This line of reasoning is supposed to explain the contrast between Icelandic (21) and (22). In (21), the embedded clause is in the subjunctive, hence the grammaticality. But, the embedded clause in (23) is indicative, hence the ungrammaticality.

21. Jon_i sagoi peim [ao Maria elski (subj) sig_i]
Jon_i told them [that Maria love 3sg $self_i$]

22.*Jon_i veit [ao Maria elskar (ind) sig_i]
Jon_i knows [that Maria loves 3sg $self_i$]

But the Kannada counterpart of (22), ruled out under Pica's movement hypothesis, is the fine (23).

23. $Gopige_i$ [Lata $tannannu_i$ pri:tisutta:Le] anta gottu.
-dat. -nom. self-acc. love-npst.3sg.f. COMP know
`$Gopi_i$ knows that Lata loves $self_i$ '

So, an approach like Pica's fails for the Kannada data.

A fourth, non-syntactic approach, appeals to logophoricity (see Hellan 1991, Reinhart & Reuland 1991, Sells 1987, and the references cited there). Logophoric binding relations fall outside the domain of a structural binding theory. Rather, they are expressed in terms of argument structure.

Mailing (1984) observes that although the logophoric function has primarily a semantic basis, it tends to become `grammaticalized'. That is, the domain of logophoric pronouns tends to be defined in terms of some syntactic factor which characterizes the prototypical logophoric context (p.231). For example, Clements (1975) shows that logophoric pronouns in Ewe are restricted to clauses introduced by a `verbal preposition which (uniquely in Ewe) subcategorizes object clauses that characterize the thought, speech, and perceptions of individuals other than the speaker-narrator' (p.169). After a detailed analysis of Icelandic data, Mailing suggests that

reflexive pronouns have two distinct roles in Icelandic: (i) the familiar syntactic role of a clause-bounded obligatorily bound anaphor, and (ii) the more semantic role of a logophoric pronoun, which is correlated with subjunctive mood where governed by certain nonfactive verbs of saying. In the subsequent discussion, I consider several logophoric domains proposed in the literature.

Hellan (1991) proposes that long-distance anaphors obey two containment conditions; predication command and perspective command. These differ from each other in the following way; the first states that the reflexive must occur inside a constituent predicated on the binder, while the second states that the reflexive must be contained in a constituent understood as being under the binder's point of view. The predication requirement for Norwegian *seg* is intended to explain the contrast between (24) and (25) (taken from Hellan (cf.)):

24. Jon_i horte oss snakke om seg_i
Jon heard us talk about REFL

25*Vi fortalte Jon_i om et forsok pa a hjelpe seg_i
we told Jon about an attempt to help REFL

In (24), the material following *Jon* is predicated of *Jon*, but not in (25). A similar paradigm obtains in Kannada:

26. $Gopi_i$ $tanna_i$ bagge na:vu ma:tanaDuvudannu ke:Lida.
self-gen. about we talk-ger.acc. heard
'$Gopi_i$ heard us talk about $self_i$'

27a.*na:nu $Gopige_i$ $tanna_i$ bagge he:Lide.
I -dat. self-gen. about said
'I told $Gopi_i$ about $self_i$'

b. *awanu Gopige$_i$ tanna$_i$ bagge he:Lida.
he -dat. self-gen. about said
` He told Gopi$_i$ about self$_i$ '

But resort to a predication relation to explain the contrast between sentences (26) and (27) is unnecessary, since *ta:n* is controlled by a third person subject antecedent condition. (27a) violates this constraint on two counts: First, *ta:n* is not coindexed with the subject; second, even if it were, the subject is first person. (27b) violates only the subject antecedent condition. Therefore, the constraint independently rules out sentences like (27). Hellan notes that both Norwegian *seg* and Icelandic *sig* obey predication command, but only the latter obeys perspective command.

The notion of perspective command holds for non-clause-bounded-reflexivization, and correctly predicts that Icelandic (28) and Italian (29) are ill-formed. But Kannada analogs of these, (31) and (32), are well-formed.

28.*Jon$_i$ kemur ekki nema Maria kyssi sig$_i$
Jon comes not unless Maria kisses REFL

29*Osvaldo$_i$ ritorno in patria prima che il fisco
Osvaldo returned to his country before the public treasury
sequestrasse il proprio$_i$ patrimonio
sequestered REFL's estate

30. tanage$_i$ haNa koDadiddare Gopi$_i$ baruvudilla.
-dat. money give-unless come-NEG
`Gopi$_i$ does not come unless money is given to self$_i$ '

31. tanna$_i$ a:stiyannu sarka:ra vashpaDisikoLLuvudakke modalu
self-gen. property government confiscate before
Gopi$_i$ tanna$_i$ de:shakke maraLida.
self-gen. country returned

'Gopi$_i$ returned to self's$_i$ country before the government confiscated self's$_i$ property'

Sells (1987) observes that there is no unified notion of logophoricity *per se* and that logophoric phenomena are a result of the interaction of more primitive notions, like SOURCE, SELF, and PIVOT, etc. In (32), although the source of expression is *Raju*, the antecedent of *ta:n* must be *Gopi* and not *Raju*. Dalrymple (1993) observes that a similar situation obtains with Marathi *aapan*, see (33):

32. Gopige$_i$ Rajuwininda$_j$ [ta:nu$_{i/*j}$ na:Le barabe:ka:gilla] anta tiLiyitu.
-dat. -inst. self-nom. tomorrow come-not COMP know
'Gopi$_i$ came to know through Raju$_j$ that self $_{i/*j}$ need not come tomorrow'

33. Jane$_i$ laa John$_j$ Kaduun kalle ki aapan$_{i/*j}$ gharii jaanaar aahot
-dat. by heard that self house is going
'Jane$_i$ heard from John$_j$ that self $_{i/*j}$ was going home'

Moreover, Sells claims that all logophoric binding is variable binding. But Thráinsson observes that this is not the case with Icelandic *sig*. As discussed earlier, Kannada *ta:n* does not exhibit the properties of a bound -variable (see discussion around example (18)).

The import of the above discussion is that none of the various GB approaches, either syntactic or non-syntactic, seems to permit a satisfactory unified account of the behavior of *ta:n*. Even though it is not possible to define the logophoric domain of Kannada *ta:n*, as in Icelandic and similar languages, it does exhibit certain properties

attributed to logphoric pronouns. Especially, it can occur syntactically unbound, as in (17), above. But, characterizing *ta:n* as a pure logophor also fails to account for the Kannada data.

The above mentioned GB approaches must all treat *ta:n* as a single syntactic entity, that is, as a long-distance anaphor. So, those approaches fail to offer a satisfactory account of *ta:n*. To develp one, it is necessary to recognize two syntactic roles for *ta:n*; one as a logophoric pronoun in the absence of the reflexive auxiliary, and the other as an anaphor in the presence of the reflexive auxiliary. Once the two syntactic roles of *ta:n* are recognized, I show its behavior may be explained under Thráinsson's approach. This is the topic of next section.

4.5. *Thráinsson's Analysis*

Thráinsson presents a detailed analysis of the referential properties of NPs by providing a typology of reflexives. To explain the behavior of long-distance reflexives, he introduces a binary feature **±independent reference** (±ind ref) as an extension of the existing GB feature system. While within GB theory, an anaphor is treated as an NP which lacks 'inherent reference', and which hence must have a syntactic antecedent, on Thráinsson's analysis, an anaphor is an NP, which lacks 'independent reference'. Thráinsson takes 'capacity for independent reference' to mean the capability of 'picking up a definite referent in the world, or [freely] in the previous discourse' (Giorgi, 1984:309).

Hence on his analysis, an anaphor may or may not be syntactically bound. Under this view, short-distance reflexives are anaphors distinguished from long-distance reflexives by the feature +anaphor. He argues that long-distance reflexives differ from regular pronouns in lacking independent eference. By way of illustration, Thráinsson gives the following sentence (his 36):

34. 'He lay alone in the dark, thinking. Mary was always.....'

Thráinsson observes that it is possible to begin a book or a short story or a chapter or section of a narrative by something like (35), but not with a sentence containing a reflexive NP. In his system, the feature specification for Kannada *ta:n* and the regular pronoun *awanu* would presumably be as follows;

35a. *ta:n* = [-ind ref, -R, -an, +pr]

b. *awanu* = [+ind ref, -R, -an, +pr]

But, the above feature specification captures only partially the behavior of *ta:n* and *awanu*. (35) misses two syntactic properties of *ta:n* and one of *awanu*; First, as was seen, *ta:n* and *awanu* behave like anaphors in the presence of the reflexive auxiliary *koL*. This does not follow from (35). Instead, (35) explains only the pronominal nature of *ta:n* and *awanu* in the absence of the reflexive auxiliary. Second, the logophoric property of *ta:n* is not captured.

So, the feature specification for *ta:n* in its dual role is given in (36). Note that the feature -R is redundant, since the feature -ind ref is incompatible with the feature

+R. So, (35a&b) are revised as (36&37), respectively:

36a. *ta:n* = [-ind ref,-an,+pr,+logophoric] (outside the domain of *koL*)

b. *ta:n* = [-ind ref, +an, -pr,-logophoric] (in the domain of *koL*)

37a. *awanu* = [+ind ref, -an, +pr] (outside the domain of *koL*)

b. *awanu* = [-ind ref, +an, -pr] (in the domain of *koL*)

As a pronoun outside the domain of *koL*, *ta:n* is subject to Principle B, that is, it cannot be locally bound. However, unlike pronouns, it lacks 'independent reference', that is, it needs a discourse antecedent. The feature specification [-an] is motivated by the fact that *ta:n* need not be syntactically bound at all, as in (18), above. Because *ta:n* obeys certain logophoric restrictions, it is specified for the feature +logophoric. As an anaphor in the domain of *koL*, *ta:n* is subject to Principle A, that is, it must be locally bound.

The behavior of the regular pronoun *awanu* in the absence of *koL* does not warrant an explanation. But, when *koL* is present, this form behaves like an anaphor. Similar to *ta:n* then, *awanu* also has two syntactic roles.

To summarize, the above characterization of *ta:n* and *awanu* accounts for the syntactic properties of these elements. The discussion of reflexive constructions in the following section supports the dual role analysis of *ta:n* and *awanu*.

4.6. *The Reflexive Auxiliary koL*

In this section, I discuss Kannada constructions involving the reflexive auxiliary *koL*. I use the term 'reflexivization' in the sense of R&R, that is, to designate coindexing of two arguments licensed by the reflexive auxiliary. The data, especially, the reflexivization facts regarding certain PPs, seem problematic for any extant version of binding theory. The discussion reveals that the reflexive auxiliary *koL* is semantically constrained, and lacks a logophoric use, unlike either the English SELF anaphor, 'himself', etc. or *ta:n*.

Before the discussion of the data, a note on reflexive and non-reflexive uses of the auxiliary *koL* is in order. According to R&R, a predicate is reflexive iff (at least) two of its arguments are coindexed, and one of the arguments is a SELF anaphor. Following R&R's definition of a reflexive predicate, I distinguish two uses of the Kannada reflexive auxiliary; reflexive and non-reflexive. In its reflexive use, two arguments of a predicate end up identical in the presence of *koL*. In its non-reflexive use, the arguments do not end up identical in the presence of *koL*. (38a) illustrates the reflexive use of the auxiliary, whereas (38b) illustrates the non-reflexive use of the auxiliary. With a certain type of verbs (see below), the reflexive auxiliary is present even in the absence of binding conditions.

38a. Gopi$_i$ awanannu$_i$ samarthisikoNDa.
he-acc. defend-AUX.REF.3sg.m.
'Gopi$_i$ defended himself$_i$'

b. Gopi$_i$ awanannu$_j$ samarthisikoNDa.
he-acc. defend-AUX.REF.3sg.m.
'Gopi$_i$ defended him$_j$'

4.6.1. *Analyses*

As is well-known, complementarity between pronouns and anaphors often breaks down in certain PPs and Picture NPs. I discuss them in turn. While discussing Kannada data, the issue of complementarity arises between the reflexive pronoun (*ta:n*), pronoun (*awanu*) and the reflexive auxiliary (*koL*), but not between *ta:n* and *awanu* as both *ta:n* and *awanu* behave similarly in and outside the domain of *koL*. Sentences (39a&b) illustrate noncomplementarity and complementarity between the English pronoun 'he'and the anaphor 'himself', respectively. The relevant examples in this section are taken from Kuno (1987), Wilkins (1988), Hestvik (1991) and R&R (1993):

39a. Ben put the blanket over him/himself.

b. Max relies on himself/*him.

The contrast between (40a&b) is handled in several ways within GB theory.

On R&R's view, in (39a), the PP object NP is not, itself, an argument of the verb, whereas, in (39b), the preposition and the verb form a complex thematic unit selecting the NP. Hestvik argues that the PP in (39a) is a Complete Functional Complex (CFC), hence the pronoun is free in this domain. According to Wilkins, there is an optional

there is an optional secondary predication between the direct object NP `the blanket' and the PP in (39a). When the secondary predication relationship exists, the NP and the PP create an opaque domain, allowing the pronoun to be coindexed with the subject.

The Kannada counterparts of (39) do not manifest such a contrast.

40a.*Gopi$_i$ tanna/awana$_i$ me:le hoddike eLeda.
-nom. self/he-gen. over blanket pull-3sg.m.
`Gopi$_i$ pulled the blanket over self/him$_i$ '

b. Gopi$_i$ tanna/awana$_i$ me:le hoddike eLedukoNDa.
self/he-gen. pull-AUX-REF.3sg.m.
`Gopi$_i$ pulled the blanket over himself$_i$ '

41a.*Gopi$_i$ tanna/awana$_i$ me:le bharavase iTTidda:ne.
self/he-gen. over confidence keep-3sg.m.
`Gopi$_i$ relies on self/him$_i$ '

b. Gopi$_i$ tanna/awana$_i$ me:le bharavase iTTukoNDidda:ne.
keep-AUX-REF.3sg.m.
`Gopi$_i$ relies on himself$_i$ '

The lack of a *ta:n/awanu* contrast in these Kannada sentences can be explained in several ways. One is that, (40a), on par with (41a), is ruled out by Principle B of the binding theory. Another alternative, following R&R, is to say that, the preposition and verb in (40a) form a thematic unit not allowing the anaphoric pronouns to be coindexed with the subject. The reflexive auxiliary *koL* in the (b) sentences licenses such coindexation. But now consider:

42a. Gopi$_i$ Rajuvannu tanninda$_i$/awaninda$_{i/j}$ du:ra taLLida.
-acc. self/he-inst. away push-3sg.m.
`Gopi$_i$ pushed Raju away from self$_i$/him$_{i/j}$ '

b.*Gopi$_i$ Rajuvannu tanninda/awaninda$_i$ du:ra taLLikoNDa.
push-AUX-REF.
`Gopi$_i$ pushed Raju away from himself$_i$ '

The difference between (40a) and (42a) is that the former is acceptable only if the pronoun is not coreferential with the subject, as in (43), whereas in the latter, both readings are allowed, as shown in (42a).

43. Gopi$_i$ awana$_j$ me:le hoddike eLeda.
he-gen over blanket pull-3sg.m.
`Gopi$_i$ pulled the blanket over him$_j$ '

If one says that the preposition and the verb in (40) form a thematic unit, that explains the unacceptable (40a), and predicts that (42a) should be out, and (42b) should be well-formed. But, on the contrary, (42a) is well-formed, and (42b) is ruled out. The same line of reasoning can be extended to reject extending Hestvik's and Wilkin's analyses as models of the Kannada data.

The binding phenomena observed in English sentences with PPs hold only for PPs headed by locative and temporal prepositions. In other PPs, complementary distribution is maintained, as in (39b). As already seen, the Kannada data exhibit a different pattern. To clarify the point, I give one more illustration. The variant of (44) without the reflexive auxiliary *koL* is not acceptable.

44.Gopi$_i$ toppiyannu tanna/awana$_i$ taleya me:le iTTukoNDa/*iTTa.
hat-acc. self/he-gen. head-gen. on put-AUX-REF.3sg.m.
`Gopi$_i$ put the hat on his$_i$ head'

To summarize, several GB approaches to the lack of complementarity between pronouns and anaphors in sentences with tranitive verbs taking locative PP complements fail to account for the Kannada data.

Now consider sentences with intransitive verbs taking locative PP complements. These are fine with or without the reflexive auxiliary *koL*.

45. Gopi$_i$ tanna/awana$_i$ suttamutta noDida/noDikoNDa.
self/he-gen around see/see-AUX-REF.3sg.m.
`Gopi$_i$ looked around him/himself$_i$'

46. surangadalli Gopi$_i$ tanna/awana$_i$ me:le/keLage kaNDiyannu
tunnel-loc. self/he-gen. above/below opening-acc.
huDukida/huDukikoNDa.
search/search-AUX-REF.3sg.m.
`In the tunnel, Gopi$_i$ searched above/below him/himself$_i$ for an opening'

However, there is a semantic difference linked to the presence of the reflexive auxiliary. With the auxiliary, the sentences convey an intentional reading, whereas without the auxiliary such a reading is unavailable. The semantic notion `intentional' is made clear in the next sub-section.[12] This semantic difference suggests that Kannada reflexivization is in part semantically constrained, a conclusion supported by the discussion of Picture NPs.

4.6.2. *Semantic Conditions*

Consider the following English sentences. In (47), the pronoun may have *John* as its antecedent or it may have a discourse antecedent. But (48), unlike (47), is unambiguous because of the SELF anaphor `himself'.[13]

47. John$_i$ saw his$_{i,j}$ picture.
48. John$_i$ saw a picture of himself$_i$

In English, the use of a reflexive anaphor disambiguates the coreferential possibilities in environments, such as (47). In Kannada, this is accomplished through the use of the reflexive *ta:n*.[14] Sentences (49) and (50) are analogous to (47) and (48).

49. Gopi$_i$ tanna/awana$_i$ mukhavannu kannaDiyalli noDida/noDikoNDa.
self/he-gen. face-acc. mirror-loc. see/AUX-REF.3sg.m.
`Gopi$_i$ saw self/his$_i$ face in the mirror'

50. Gopi$_i$ [Raju$_j$ tanna/awana$_i$ bagge du:ru he:Luvudannu]
-nom. -nom. self/he-gen. about complaint tell-ger.npst.acc.
ke:Lida/ke:LisikoNDa.
hear/hear-AUX.REF.3sg.m.
`Gopi$_i$ heard Raju complaining about him$_i$/himself$_i$'

Without the reflexive auxiliary, the reflexive pronouns in (49&50) have only a disambiguating function. With the auxiliary, both (49&50) have an intentional reading.

The semantic notion 'intentional' in (49), may be understood through the following hypothetical situation: *Gopi* is about to leave the house. Before leaving, he wants to check his appearance. So, he looks in the mirror. Similarly, in (50), *Gopi* might have heard *Raju's* complaints by eavesdropping. These readings are not available without the reflexive auxiliary.

The reflexive auxiliary is obligatory, whether or not intentionality is relevant, if the predicate implies that there is physical contact between the `doer' of the action and the object involved in it. For example, (51) has an `accidental' interpretation, whereas,

(51) has an `intentional' one. But, *koL* is obligatory in both sentences.

51a. Gopi$_i$ eNNeyannu tanna/awana$_i$ me:lella cellikonDa.
oil-acc. over all spill-AUX-REF.3sg.m.
`Gopi$_i$ spilled the oil all over himself$_i$'

b.*Gopi$_i$ eNNeyannu tanna/awana$_i$ me:lella cellida.
oil-acc. over all spill-3sg.m.
`Gopi$_i$ spilled the oil all over self/him$_i$'

52a. Gopi$_i$ eNNeyannu tanna/awana$_i$ me:lella suruvikonDa.
oil-acc. over all pour-AUX-REF.3sg.m.
`Gopi$_i$ poured the oil all over himself$_i$'

b. *Gopi$_i$ eNNeyannu tanna/awana$_i$ me:lella suruvida.
oil-acc. over all pour-3sg.m.
`Gopi$_i$ poured the oil all over self/him$_i$'

Contrast the English analogs of (51&52) (distinctions which some speakers seem not to make):

53a. John$_i$ spilled gasoline all over himself$_i$.
b. John$_i$ spilled gasoline all over him$_i$.

54a. John$_i$ poured gasoline all over himself$_i$.
b.*John$_i$ poured gasoline all over him$_i$.

Kuno (1987) accounts for the contrast in English sentences based on intentional and accidental readings.[15] But, the contrast between the relevant Kannada and English sentences suggests that whether or not intentionality is relevant, the reflexive auxiliary is obligatory, if the predicate implies that there is physical contact between the `doer' of the action and the object involved in it.

Similarly, *koL* is obligatory when an action is directed toward oneself (whether or not intentional), and the object NP is +animate. If the predicate denotes action aimed

away from oneself, *koL* must be absent. Without the auxiliary, the predicates in (57) and (58) denote a `routine action'. These facts are illustrated below:

55. Gopi$_i$ Rajuvannu tanna/awana$_i$ kaDege eLedukoNDa/*eLeda.
-acc. self/he-gen. toward pull-AUX.REF-3sg.m.
` Gopi$_i$ pulled Raju toward himself$_i$/*self/him$_i$'

56. Gopi$_i$ Rajuvannu tanninda/awaninda$_i$ du:ra taLLida/*taLLikonDa.
-acc. self/he-inst. away push-3sg.m.
`Gopi$_i$ pushed Raju away from self/him$_i$/*himself$_i$'

57. Gopi$_i$ haggavannu tanna/awana$_i$ kaDege eLedukoNDa/eLeda.
rope-acc. self-gen. toward pull-AUX.REF-3sg.m.
` Gopi$_i$ pulled the rope toward himself/self/him$_i$'

58. Gopi$_i$ cenDannu tanninda/awaninda$_i$ du:ra eseda/esedukonDa.
ball-acc. self/he-inst. away throw-3sg.m.
`Gopi$_i$ threw the ball away from self/him/himself$_i$'

A fourth important semantic condition requiring the reflexive auxiliary to be present involves `subject affectedness'.

59a. Gopi$_i$ tanna$_i$/awana$_i$ beraLanu kattarisikoNDa.
self-he-gen. finger-acc. cut-AUX-REF.3sg.m.
`Gopi$_i$ cut self$_i$/his$_i$ finger'

b.*Gopi$_i$ tanna$_i$/awana$_i$ beraLannu kattarisida.
=(59a)

(59a) is ambiguous; Gopi might have intentionally or accidentally cut his finger. (59b) patterns with (14a) (here (60)) in ill-formedness:

60.*Gopi$_i$ tannannu$_i$ hoDeda.
self-acc. beat
`Gopi$_i$ beat self$_i$ '

The unacceptable (59b) and (60) both suggest that the reflexive auxiliary is obligatory when the subject is affected.

To sum up, the following semantic conditions require the presence of the reflexive auxiliary *koL*:[16]

a. Intentionality
b. Physical contact
c. Action directed toward the referent of the subject NP (where the object NP is +animate)
d. Subject Affectedness

The above discussion leads to the following observations; the appearance of the reflexive auxiliary, depending on semantic conditions, may or may not be obligatory. In non-obligatory contexts, the predicate has an intentional reading, if the auxiliary is present. To be more specific, the reflexive auxiliary is not obligatory in intransitive argument PPs (see 45&46, above), in transitive PPs with inanimate objects, and Picture NPs, and these represent contexts where complementarity between pronouns and anaphors breaks down. The lack of complementarity between pronouns and anaphors in English and in similar languages is accounted for not in terms of semantic conditions governing the distribution of reflexive anaphors, but in terms of syntactic conditions, thematic and predicate relations. But, the opposite state of affairs holds with respect to Kannada data. In the next sub-section, I attempt to account for the differences between the Kannada reflexive auxiliary *koL* and the English reflexive anaphor, *himself*.[17]

4.6.3. *Kannada koL and English Self Forms*

An English reflexive anaphor, *himself*, etc. fills an NP position, and in R&R's terms,

reflexive-marks a predicate. Sometimes it disambiguates coreferential possibilities. Hence, it is syntactically and semantically less constrained than the Kannada reflexive auxiliary *koL*. This can be seen in (61). The relevant examples in this section are taken from R&R (cf.)

61a. Max$_i$ said that the queen invited both Lucy and himself$_i$/him$_i$ for tea.

b. The queen invited both Max and myself/me for tea.

Here, the anaphors are used logophorically, and hence need not be locally bound. But, the Kannada reflexive auxiliary has no logophoric use.[18] Compare the unacceptable Kannada (62) with (61):

62a. *ra:Ni LataLannu: mattu tannannu:$_i$/awanannu:$_i$ teage
-nom. -acc. and self/he-acc.inc -dat.
karedukoNDdidda:Le anta Gopi$_i$ he:Lida.
invite-AUX-REF.3sg.f. COMP -nom. sat-3sg.m.
`Gopi$_i$ said that the queen invited both Lata and himself$_i$/him$_i$ for tea'

b. *ra:Ni Gopiyannu: mattu nannannu: teage karedukoNDa:Lu.
-nom. -acc. and I-acc. -dat. invite-AUX-REF.3sg.f.
`The queen invited both Gopi and myself for tea'

The meaning of (62) can only be expressed as (63), that is, without the reflexive auxiliary.

63a. ra:Ni LataLannu: mattu tannannu:/awanannu: teage karedidda:Le
nom. -acc. and self/he-acc.inc. -dat. invite-3sg.f.
anta Gopi he:Lida.
COMP -nom. say-3sg.m.
`Gopi$_i$ said that the queen invited both Lata and self/him$_i$ for tea'

b. ra:Ni Gopiyannu: mattu nannannu: teage karedaLu.
-nom. -acc.inc. and I-acc.inc. -dat. invite-3sg.f.
`The queen invited both Gopi and me for tea'

Now, what if, the object NP in one of the conjuncts in (62b) corefers with the subject? With or without the reflexive auxiliary, this yields unacceptable results; see (64).

64a.*ra:Ni$_i$ Gopiyannu: mattu awaLannu:/tannannu:$_i$ namma partyge
-nom. -acc.inc. and she/self-acc.inc. we-gen. -dat.
karedukoNDaLu.
invite-AUX-REF.3sg.f.
'The queen$_i$ invited both Gopi and herself$_i$ to our party'

b.*ra:Ni$_i$ Gopiyannu: mattu awaLannu:/tannannu:$_i$ namma partyge
-acc. and she/self-acc.
karedidda:Le.
invite-3sg.f.
'The queen$_i$ invited both Gopi and her$_i$ to our party'

The unacceptability of (64b) is expected, since both reflexive and regular pronouns (specified for pronominal features in (36&37a) are locally bound, violating Principle B. (64b) also violates R&R's revised binding condition, stated in (2). Because, on their analysis, Condition B applies at the stage of mapping from LF to semantic representation and at the stage of translating a syntactic predicate into a semantic one, Condition B finds out that one of the arguments in (64b) is a co-argument of *queen*. Therefore, the predicate in (64b) gets a semantically reflexive interpretation, but, is syntactically, not reflexive-marked. But Principle A, stated in (3), is not violated in (64a), because, the anaphoric pronouns (specified for anaphoric features in (36&37b) are locally bound in the presence of the reflexive auxiliary. (64a) does not violate Condition A stated in (1) either. Semantically the reflexive predicate in (64a) is syntactically reflexive-marked in accordance with binding condition (1). But the

sentence is still unacceptable. The unacceptability of (64a) suggests that *koL* can syntactically reflexive-mark a predicate only if the semantic conditions that govern the distribution of the auxiliary are met.

4.6.4. *Verb Types and koL*

This subsection presents further evidence based on verb classes that *koL* is semantically more constrained than the English reflexive anaphor. Sells, Zaenen, and Zec (1986), distinguish, at the semantic level, between an `open predicate' and a `closed' one. In an open predicate, the interpretation of the object is not necessarily bound to the interpretation of the subject. Hence the predicate is of the form R(x,y); a closed predicate has just one semantic argument, its subject, which binds both subject and object argument positions within the semantic structure of the predicate. They show that a reflexive form in English is semantically an open predicate. (65) has three readings, shown in (66)a-c (their (19&20)a-c).

65. John defends himself better than Peter.

66a. John defends himself better than Peter defends himself.
(`sloppy')

b. $John_i$ defends himself better than Peter defends him_i
(`strict')

c. John defends himself better than he defends Peter.
(`object comparison')

But, the Kannada reflexive auxiliary allows only a `sloppy' reading. (67a) is the Kannada counterpart of (65), and can only mean (67b):

67a. Rajuwiginta chenna:gi Gopi tannannu samarthisikoLLutta:ne.
-dat.comp. better self-acc. defend-AUX.REF.3sg.m.
'Gopi defends himself better than Raju'

b. Gopi$_i$ defends himself$_i$ better than Raju$_j$ defends himself$_j$

This is, especially notable, as it was shown earlier in section 4.4 that the reflexive pronoun *ta:n* allows both sloppy and strict readings.

Sells, Zaenen, and Zec show that *zich* in Dutch is interpreted only as a closed predicate, and further observe that the coordination of *zich* with a full NP is not possible, as expected. But, the parallel is possible in Kannada:

68a. Gopi$_i$ tannannu$_i$ mattu tanna$_i$ sne:hitarannu samarthiskoNDa.
self-acc. and self-gen. friends defend-AUX.REF.3sg.m.
'Gopi$_i$ defended himself$_i$ and self's$_i$ friends'

b. Gopi$_i$ awanannu$_{i/j}$ mattu awana$_{i/j}$ sne:hitarannu samarthisikoNDa.
he-acc. he-gen.
'Gopi$_i$ defended himself$_i$ and his$_i$ friends/Gopi$_i$ defended him$_j$ and his$_j$ friends'

The reflexive pronoun in the second conjunct can be replaced by an R-expression (see (69)). But note that the second conjunct in (69) has a non-reflexive reading.

69.Gopi$_i$ tannannu$_i$ mattu Rajuwannu samarthisikoNDa.
self-acc. -acc.
'Gopi$_i$ defended himself$_i$ and Raju$_j$'

Contrast (70) with (71):

70.*ra:Ni$_i$ Gopiyannu: mattu awaLannu:/tannannu:$_i$ namma partyge
-nom. -acc.inc. and she/self-acc.inc. we-gen. -dat.
karedukoNDaLu.
invite-AUX-REF.3sg.f.
'The queen$_i$ invited both Gopi and herself$_i$ to our party'

The contrast between (69) and (70) shows that the distribution of *koL* varies with special classes of verbs. The standard verb 'invite' does not allow the reflexive auxiliary, whereas, the verb 'defend' allows it. Further, the reflexive and non-reflexive uses of *koL* may be combined with the verb 'defend', as in (68b). That is, in (68b), the pronoun may be coreferential with *Gopi*, or it may have a discourse antecedent. When it is coreferential with *Gopi*, the pronoun is bound in the domain of *koL*, yielding a reflexive interpretation. But, if the pronoun takes a discourse antecedent, it is not bound in the domain of *koL*, that is, not coreferential with *Gopi*, yielding a non-reflexive interpretaion. This is where *ta:n* and *awanu* behave differently in the presence of *koL*. Because of its feature +ind ref, the regular pronoun may have a discourse antecedent, if a given verb allows a non-reflexive use of *koL*.

Let us consider two more examples to distinguish and understand these two different uses of *koL* in conjoined structures, and to elucidate the type of verbs which allow such constructions. For example, the verb 'praise' allows both reflexive and non-reflexive uses of *koL*, whereas, the verb 'blame' does not allow the latter.

71a. $Gopi_i$ $tannannu_i$ mattu $tanna_i$ sne:hitarannu: hogaLikoNDa.
self-acc. and self-gen. friends praise-AUX.REF.
'$Gopi_i$ praised $himself_i$ and $self's_i$ friends'

b. $Gopi_i$ $awanannu_{i,j}$ mattu $awana_{i,j}$ sne:hitarannu: hogaLikoNDa.
he-acc. he-gen.
'$Gopi_i$ praised $himself_i$ and his_i friends/ $Gopi_i$ praised him_j and his_j friends'

Both conjuncts in (71) behave like those in (68). But now consider:

72a. Gopi$_i$ tannannu$_i$ mattu tanna$_i$ sne:hitarannu: du:shisikoNDa.
self-acc. and self-gen. friends blame-AUX.REF.
'Gopi$_i$ blamed himself$_i$ and self's$_i$ friends'

b. Gopi$_i$ awanannu$_{i/*j}$ mattu awana$_{i/*j}$ sne:hitarannu: du:shisikoNDa.
he-acc. he-gen.
'Gopi$_i$ blamed himself$_i$ and his$_i$ friends'/* Gopi$_i$ blamed him$_j$ and his$_j$ friends'

In (72b), the pronouns cannot have discourse antecedents, as in (68b) or (71b). This is because the verb 'blame' does not allow a non-reflexive use of *koL*. Neither conjunct in (72b) can stand on its own, if the pronoun *awanu* is not coreferential with *Gopi* (see (73)).

73a*Gopi$_i$ awanannu$_j$ du:shisikoNDa.
he-acc.
'Gopi$_i$ blamed him$_j$ '

b.*Gopi$_i$ awana$_j$ sne:hitarannu du:shisikoNDa.
he-gen. friends-acc.
'Gopi$_i$ blamed his$_j$ friends'

In the absence of the second conjunct in (72a), the predicate is reflexive. Therefore, the conjunct can stand on its own, as in (74a). But, in the absence of the first conjunct, the predicate in (72a) is non-reflexive. The conjunct cannot stand on its own, see (74b):

74a. Gopi$_i$ tannannu$_i$ du:shisikoNDa.
self-acc.
'Gopi$_i$ blamed himself$_i$ '

b.*Gopi$_i$ tanna$_i$ sne:hitarannu du:shisikoNDa.
self-gen.
'Gopi$_i$ blamed self's$_i$ friends'

The verb 'defend' allows *koL* in its non-reflexive use. Hence, unlike the case with *zich*, coordination of *ta:n* with a full NP is possible, as in (68).

To summarize, the lack of logophoric use and strict readings of the reflexive auxiliary suggests that reflexivization in Kannada is syntactically and semantically constrained. Consequently, certain reflexive constructions allowed in English and similar languages are not allowed in Kannada. And certain other constructions allowed in this language are disallowed in those languages.

Reflexive constructions allowed in Kannada but not allowed in other languages are problematic for the existing GB theory, and this is especially true with PPs. Within GB theory, binding conditions of anaphors which are not captured in terms of structural relations are generally accounted for in terms of thematic or pragmatic relations. As was seen, these approaches partially account for the Kannada data. Further, based on thematic conditions, GB offers a stipulative account of complementarity between anaphors and pronominals. In Kannada, the distribution of reflexive *ta:n* and pronouns depends on the distribution of the reflexive auxiliary *koL*. The syntactic distribution of *koL* depends on semantic conditions, which is very evident in constructions involving PPs, and Picture NPs. The lack of complementarity between *ta:n*, *awanu* and *koL* is only apparent, which may be attributed to various semantic uses of *koL*. The fact that the distribution of *ta:n* and *awanu* depends on the distribution of *koL* supports R&R's hypothesis that Condition B should be viewed as

a condition on reflexive predicates, but not as a condition on the distribution of pronouns. But, their system (which defines reflexivization not in terms of binding conditions but in terms of coindexed arguments) treats both locally and non-locally bound SELF anaphors in non-reflexive constructions as logophors. Therefore, their revised Condition A accounts for the syntactic distribution of anaphors in non-reflexive contexts. This amounts to saying that there is a mismatch between syntax and semantics in the data R&R discuss. As was seen, Kannada data do not exhibit this mismatch. The reflexive auxiliary is syntactically present only when a predicate is semantically reflexive (that is, only when semantic conditions allow two of its arguments to be coindexed). These facts about Kannada reflexive constructions justify the negative claim made at the beginning of this chapter that the claims about reflexives, pronouns etc., made by a variety of accounts in the overall GB framework do not stand up with respect to Kannada.

4.7. *Inherent Reflexivity*

It is well-known that inherently reflexive verbs allow SE pronouns to be locally bound. A few illustrations are given below (taken from Everaert 1986, R&R 1993, and Burzio 1994):

75. Max schaamt zich
    Max shames SE = Dutch
    'Max is ashamed'

76. Jon skammer seg
John shames SE = Norwegian

77. Le nubi *si* sono dissipate
'The clouds themselves are dispersed' = Italian

78. Les enfants *se* taisent
'The children themselves are silent' = French

79. Er schamt sich
he shames self = German
'He is ashamed'

As to why inherently reflexive verbs favor SE anaphors over SELF ones, R&R (cf.) conjecture that it follows from principles of economy. That is, the same property should not be marked twice (footnote 15). Burzio (cf.) proposes a Weak Anaphora Principle (WAP) (80), according to which, a weak anaphor is needed in inherently reflexive contexts. But, a strong anaphor is needed in inherently irreflexive contexts. That is, when inherent semantics fails to express coreference, extra morphological material is employed to achieve that. (80) captures the complementarity between semantics and morphology in the expression of coreference (Burzio's 3).

80. Weak Anaphora Principle

Inherent coreference <----> Weak Anaphora

(semantics) (morphology)

The scale of morphological strength relevant to (80) is (81), (Burzio's 4):

81. Morphological Strength Scale

a. 1: ϕ 2. clitic 3. non-clitic 4. Argum.-intensifer

b. ϕ si se se-stesso

self self self-same

For instance, note the contrast in the following sentences (Burzio's (1a, 10a)):

82. John lost his/*his own cool'

83. John is *his/his own doctor'

In (82), as opposed to (83), the phrase *lose one's cool* is inherently reflexive, hence it

does not require extra morphological material. The same principle also accounts for the use of SE anaphors, instead of SELF anaphors, in (75-79). Further, in inherently reflexive contexts involving inalienable possession, the WAP will require a weaker anaphor:

84a. Gianni *si* taglia i capelli
Gianni to-self cuts the hair
`Gianni cuts his hair'

b. Gianni apre gli oochi
Gianni opens the eyes
`Gianni opens his eyes'

Burzio observes that it is possible in contexts like (84a) to say 'Gianni cuts his hair and then cuts someone else's hair'. But, the analogy is not possible in contexts like (84b); '%Gianni opens his eyes and then opens someone else's eyes. So, (84b) requires a weaker anaphor; in this case it is zero.

Further, Burzio observes that the WAP treats English reflexives as strong anaphors, as they are permitted in inherently irreflexive contexts, as illustrated in (85a), but excluded in inherently reflexive ones, as shown in (85b) (Burzio's (29b) & (30b), respectively):

85a. $John_i$ is no longer $himself_i$ these days.

b. $John_i$ knelt (*$himself_i$) down.

Even though the situation in Kannada is slightly different, the data in general support Burzio's WAP. On Burzio's analysis, the status of the Kannada reflexive auxiliary is dubious between strong and weak anaphor, as it appears in both inherently reflexive and irreflexive contexts. But the reflexive pronoun *ta:n* may be treated as a weak anaphor.

Inherent reflexivity in light verb constructions requires the reflexive auxiliary *koL*. Without it, such constructions have different readings. Contrast (a) with (b) in (86&87).

86a. Gopi sustu ma:DikonDa.
-nom. tiredness do-AUX.REF.3sg.m.
'Gopi overtired himself'

b. Gopi sustu ma:Dida.
do-3sg.m.
'Gopi tired (someone)'

87a. Gopi siddhate ma:DikonDa.
preparation do-AUX.REF.3sg.m.
'Gopi prepared himself'

b. Gopi siddhate ma:Dida.
do-3sg.m.
'Gopi made prepartions'

But, in constructions involving standard inherent reflexive verbs, *koL* may or may not be present.

88. Gopi načida/ načikonDa.
shame-3sg.m./shame-AUX.REF.3sg.m.
'Gopi was shy' lit. Gopi became shy

89. Gopi kuLita/kuLitukonDa.
sit-3sg.m./sit-AUX.REF.3sg.m.
'Gopi sat'

koL also optionally occurs with most inherently reflexive verbs:

90. doNi daDa se:ritu/se:rikoNDitu.
boat-nom. shore reach-3sg.n./reach-AUX.REF.3sg.n.
'The boat drifted to the shore'

As noted earlier, in English, strong anaphors are generally excluded in inherently reflexive contexts, whereas, other Germanic languages use SE pronoun in such contexts:[20]

91. The window breaks (*itself)

92. Het gerucht verspreiddle zich
the rumoor spread self =Dutch
'The rumor spread'

In Kannada self-possession and self-identity constructions, the reflexive pronoun *ta:n*[21] is used, as the following illustrate:

93. Gopi tanage ta:ne: vaidya.
-nom. self-dat. self-nom.emph. doctor
'Gopi is his own doctor'

94. Gopi ta:nu ta:na:gilla.
-nom. self-nom. self-be-NEG.
'Gopi is no longer himself'

Burzio notes that the strong anaphors *proprio* and *se-stesso* are employed in Italian analogs (95&96) of (93&94).

95. Gianni$_i$ e [$_i$ il *suo$_i$/proprio$_i$ medico]
Gianni is the his own doctor
'Gianni is his own doctor'

96. Gianni non e piu se-stesso
Gianni not is anymore self-same
'Gianni is no longer himself'

This is so because in (95&96) two different entities are asserted to be one, suggesting strong inherent irreflexivity. That is, for example, in "α is β's doctor", identity of α and β is semantically disfavored. As Kannada lacks a strong anaphor, analogous to English *himself* and Italian *proprio* and *se-stesso*, the reflexive pronoun (treated here as a weak anaphor) is doubled in the above sentences (93&94). In Burzio's terms, (93&94) illustrate an 'argument-intensifier' structure.[22,23]

In inalienable possession constructions, analogous to Italian (84b), a zero anaphor is preferred to *ta:n*, see (97):

97a. Gopi$_i$ *ec*$_i$ ba:yi(yannu) muccida.
-nom. mouth- (acc.) shut-3sg.m.

'Gopi shut his mouth'

b.??Gopi tanna ba:yi muccida.
self-gen.
= (97a)

But, there also are sentences like (98):

98a. Gopi ba:yi(yannu) muččikonDa.
shut-AUX.REF.3sg.m.
=(97a)

b.???Gopi$_i$ tanna$_i$ ba:yi(yannu) muččikonDa.
self-gen. shut-AUX.REF.3sg.m.
= (97a)

The oddness of (98b) can be attributed to the WAP, since both the reflexive auxiliary and pronoun are used in a context where neither is required. But, the well-formed (98a) needs an explanation. To see what principle is at work here, consider:

99a.*Gopi$_i$ tanna/*ec*$_i$ kiwi(yannu) muččida.
self-gen. ear-acc. shut-3sg.m.
`Gopi$_i$ closed his$_i$ ears'

b. Gopi$_i$ *ec*$_i$ kiwi(yannu) muččikonDa.
shut-AUX.REF.3sg.m.
`Gopi$_i$ closed his$_i$ ears'

100a.*Gopi$_i$ *ec*$_i$ mu:g(annu) muččida.
nose shut-3sg.m.
` Gopi$_i$ covered his$_i$ nose'

b. Gopi$_i$ *ec*$_i$ mu:g(annu) muččikonDa.

While (97-100) all illustrate inalienable possession constructions, *koL* is obligatorily present only in the latter two. The following subtle semantic distinction explains the contrast; the action of closing one's own ears or nose must be voluntary, whereas, closing one's own mouth, or one's own eyes, may or may not be, see also (101). Also, notice that zero anaphora is preferred in the place of reflexive pronoun in the presence of *koL*, which supports the WAP.

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101a. Gopi$_i$ *ec*$_i$ kaNN(annu) muccida.
eye shut-3sg.m.
'Gopi$_i$ closed his$_i$ eyes'

b. Gopi$_i$ *ec*$_i$ kaNN(annu) muccikonDa.
shut-AUX.RE.3sg.m.
= (101a)

To summarize, Kannada inherently reflexive constructions in general support the WAP. Here again, the distribution of the reflexive auxiliary varies with verb types, and subtle semantic distinctions.

4.8 *Summary*

In this section, I recapitulate the properties of the reflexive auxiliary *koL* and the reflexive pronoun *ta:n*. In the absence of the reflexive auxiliary, the long-distance reflexive-pronoun *ta:n* behaves like a pronoun with respect to Principle B, and in the presence of the auxiliary, it behaves like an anaphor with respect to Principle A. Further, outside the domain of the auxiliary, *ta:n* allows both 'sloppy' and 'strict' readings, but in the domain of the auxiliary, it allows only 'sloppy' readings. The function of the auxiliary is to reflexivize a predicate in R&R's sense, and the function of *ta:n* is disambiguation. The auxiliary is always bound in the local domain, whereas *ta:n* may be bound in the local domain only if the auxiliary is present. The general behavior of both *koL* and *ta:n* in inherently reflexive constructions partly follows from Burzio's WAP, and partly from their morphological properties. The distribution

of the auxiliary, the reflexive pronoun, and the pronoun can be stated as follows:

102a. AUX-REF must be locally bound to a subject.
b. *ta:n* must be bound to a third person subject, and can be locally bound only in the domain of AUX-REF.
c. In the domain of AUX-REF, a pronoun must be locally bound to a subject.
d. Outside the domain of AUX-REF, reflexive and regular pronouns must not be locally bound.

Footnotes to Chapter 4:

1.The reflexive auxiliary *koL* functions rather like a clitic in doubling direct and indirect object phrases. Clitic doubling occurs in Romance languages, especially, in Spanish and Rumanian, and also in Modern Hebrew. The doubling clitics must agree in number, person, and gender with the doubled NP, for instance (examples are taken from Jaeggli 1982):

i. Miguelito *le* regaló un caramelo a *Mafalda*
'Miguelito gave Mafalda a (piece of) candy'

ii. Miguelito *les* regaló caramelos *a unos chicos del barrio*
'Miguelito gave some candy to some neighborhood kids'

For more on this topic, see Jaeggli (cf.), and Borer (1984), and references cited there.

Alternatively, analogous to Italian *si* and French *se*, *kol* might be analyzed as a reflexive clitic, added to the verb complex by lexical rules (Grimshaw 1982). Under a lexical analysis, *si* and *se* are treated not as arguments, but as valency reducing morphemes. In her (1989) work, Grimshaw treats reflexive cliticization as a case of lexical binding of an external argument. For thepurposes of this chapter, treating *kol* as an auxiliary or as a clitic are equivalent. However, I use 'AUX-REF' in glosses.

2. In such constructions, the object of the PP is always in the genitive.

3. Reflexive-binding in all the other Dravidian languages, including Malayalam, exhibits this syntactic property.

4. The Finnish reflexive morpheme *-utu/-yty-* also has an inchoative use (Sells, Zaenen, & Zec 1987):

i. Pekka kirjoitta-utu-i yliopistoon.
Peter write-reflex-past university-ill
'Peter enrolled in a university'

5. German *sich* also has a reciprocal use (Sells, Zaenen, & Zec 1987):

i. Sie haben sich angeschaut.
'They looked at each other'

6. The term 'non-reflexive' will be made clear later in the discussion.

7. Icelandic *sig* seems to be counterexample to the observation that SE pronouns

cannot be locally bound (Thráinsson 1991):

i. Jon$_i$ rakaði sig$_i$
'John shaved himself'

8. Dutch *zich* is locally bound in triadic predicates, in which one of the arguments is a SELF anaphor (Reinhart&Reuland 1993):

i. Henk$_i$ wees zichself$_i$ aan zich$_i$ toe.
Henk assigned himself to SE

9. Clements (1975) also provides an example of an extended discourse in Ewe in which the antecedent of a logophoric pronoun is in a previous discourse.

10. The local domain or the governing category for *ta:n* is the domain of the reflexive auxiliary. The reflexive pronoun must be free when the auxiliary is not present.

11. Thráinsson observes that the sloppy reading is difficult to get in the Icelandic analog of Kannada (19). But, as noted in the text, both strict and sloppy readings are easily available in the Kannada sentence.

12. Lakoff (1969) explains the ambiguity of the following sentence by appealing to the semantic notion 'intentional'.

i. John hit the wall.
(a) John hit the wall accidentally.
(b) John hit the wall intentionally.

Based on the ambiguity of (i), Lakoff concludes that there are two meanings of the verb *to hit*, differing with respect to the presence or absence of the marker [+intentional].

13. Judgements vary regarding the coreferential possibility in (i):

i. Lucy saw a picture of her.

According to R&R, the pronoun in the above sentence can be coreferential with the subject. But, to some speakers, a coreferential reading is unavailable.

14. Sentence (47), with an additional linguistic element, can be unambiguously expressed:

i. John$_i$ saw his$_{i/*j}$ own picture.

Saxon (1990) notes that the R-pronoun in (iia) is ambiguous between 'referential' and `attributive' uses.

ii. a. *Kristin* wants *her own* car.
b. *Kristin* wants *her* car.

On the referential interpretation, *Kristin* has a car, whereas on attributive interpretation, *Kristin* does not have a car. In such instances, Kannada employs different structures.

iii a. Gopige tanna ha:sigeye: beku.
-dat. self-gen. bed-emph. want
`Gopi wants his own bed' =referential

b. Gopige tannade: a:da ha:sige be:ku.
self-gen.it be-rel.prt.

`Gopi wants his own bed' = attributive

c. Gopige tanna ha:sige be:ku.
self-gen. bed
`Gopi wants his bed'

(iii (a) and (c)) minimally differ in that only in the former is an emphatic clitic attached to the noun `bed'. (iiib) is an instance of relativization.

15. Kuno postulates the semantic constraint on English reflexive pronouns in (i) (his (9.26)), based on the subtle semantic differences in (ii), and (53&54) in the text).

i. Reflexive pronouns are used in English if and only if they are the direct recipients or targets of the actions represented by the sentences.

ii a. John$_i$ pulled the blanket over himself$_i$.
b. John$_i$ pulled the blanket over him$_i$.

Kuno analyzes these sentences in the following way; (iia) implies that John put the blanket over his head and covered himself with it, perhaps intending to hide under it. On the other hand, (iib) does not imply such direct action with the whole body of John as target. Similarly, (54a) also has a strong intentional interpretation with a specific target, whereas (54b) is stative (p.66&67). The intentional and accidental

interpretations may easily be distinguished by contrasting (b) sentences of 53&54.

But, Kuno's constraint is falsified by sentences, like (iii&iv):

iii. Mike knows himself to be honest.
iv. Mike is important to himself.

16. The following list should not be taken as exhaustive (see section 4.7 for a few more semantic differences). Nonetheless, the four conditions cover a significant range of data.

17. Lidz (1996) makes a crosslinguistic analysis of verbal reflexives and advocates a Mismatch Hypothesis to account for their distribution. He draws data heavily from Kannada. But Lidz has missed the intentional use of Kannada *kol* and hence the data discussed in this work are problematic for his analysis.

18. Aikawa (1994) argues that Japanese *Zibun-zisin* cannot be used as a perspective logophor (as in (61)), because *Zibun-zisin* lacks its person feature specification. Even though it is marked for a person feature, the Kannada reflexive auxiliary cannot be used logophorically, because, as a verbalreflexive, the syntactic power of *koL* is quite restricted.

19. Burzio analyzes English reflexives as strong anaphors, since they are consistently permitted in inherently irreflexive contexts, but excluded in inherently reflexive ones.

20. The Kannada reflexive *ta:n* inflects for Case unlike its invariant Germanic counterparts. This may be the reason why *ta:n* is excluded in inherently reflexive constructions. As a weak anaphor, it is excluded in inherently irreflexive constructions also.

21. In sentences (93&94), the reflexive *ta:n* is locally bound in the absence of the reflexive auxiliary *koL*. Also, in these contexts, *ta:n* may be replaced by the regular pronoun *awanu*. Therefore, (93&94) violate the claim that *ta:n* and *awanu* can only be locally bound in the presence of *koL*. But, the local binding of *ta:n* and *awanu* is allowed only in a specific enviornment, that is, in the absence of verb. This means *koL* is required for *ta:n/awanu* to be locally bound in clauses which contain a verb, but not otherwise.

22. Burzio treats intensifier adjuncts like English *own*, French *même*, Italian, *stesso*, and Norwegian *selv* as anaphors. On this analysis, the morphological complex *his own* exemplifies an argument-intensifier structure. Burzio also notes that forms like English *himself* are arguably single arguments, but can have argument-intensifer structure (as in *he himself*), probably due to their complex morphology.

23. Burzio cites the following person-portrayal identity construction (taken from Jackendoff 1992) to show that only strong anaphors, as opposed to weak ones (ii), can be "rewritten" at conceptual structure (*himself* => *statue of himself*), (p.75).

i. Ringo fell on himself.

ii.*Ringo tried PROs to fall/melt

Jackendoff notes that (i) can only mean (a), but not (b):

a. Ringo fell on [the statue of himself]
b.*[the statue of Ringo] fell on himself

Kannada lacks parallel constructions.

24. This subtle semantic distinction shows up in the inchoative use of the auxiliary too.

i. Gopiya kaNNu muccikoNDitu/muccitu.
-gen. eye-nom. shut-AUX.REF. 3sg.n.
'Gopi's eye was closed'
ii.*Gopiya mu:gu muccikoNDitu/muccitu.
-gen. nose-nom. shut-AUX.REF.3sg.n.
'Gopi's nose was covered'

CHAPTER 5

CONCLUSION

This Chapter has two parts. First, theoretically significant findings of Chapter 3 and 4 will be discussed. Next, the findings with respect to the overall issues addressed in this dissertation are dealt with.

Part I

Chapter 3 addressed a theoretically much debated issue; control. Its aim was to investigate an unusual control phenomenon and to give a unified analysis of Kannada control effects.

Within GB theory, two distinct approaches to control phenomena may be recognized. The analyses in Williams (1980), Chomsky (1981), Manzini (1983) and Koster (1984) propose a specific theory of control which is independent of the binding theory. This theory is chiefly concerned with the occurrence and interpretation of PRO in the subject position of infinitival clauses. These analyses differ in treating

PRO either as an anaphor or as a pronominal anaphor. Under Chomsky's system, PRO is both pronominal and anaphoric and thus it is subject to both Principles A and B of his binding theory. Chomsky argues that since it is impossible for a single PRO to satisfy both Condition A and Condition B, the only way it is licensed is not to have a governing category, that is, PRO must be ungoverned. The referential property of PRO falls under the theory of control, the choice of controller is determined independently of the binding theory.

The second overall approach reduces control to binding theory (Saxon 1986, Bouchard 1984 and Borer 1989). This is the position taken in this study as well to account for Kannada control phenomenon. Analyses of this type differ from each other in how they characterize the controllee, and in how control effects are derived.

Common to both approaches though is the recognition that obligatory control involves a relation characteristic of anaphoric binding. According to Manzini (cf.), Bouchard (cf.) and Koster (cf.), the anaphoric property comes from the controllee itself, which is characterized as [+anaphoric]. On Borer's system, the anaphoric nature of obligatory control does not derive directly from the nature of the null argument, but from the nature of an agreement head with which it agrees, what she calls "anaphoric Agr", which is bound by an A-element.

The major works in the GB literature (with the exception of very few like Borer's) on control are concerned with the nature of null elements in the subject position of infinitival and gerundive clauses, which are non-finite. Most of the analyses do not address the issue of what determines an NP to be controlled. They focus on the nature of the null NP itself to derive the control properties. Further, the contexts in which the behavior of null elements are analyzed are limited to non-finite constructions.

An overall GB approach to ctrol based on certain assumptions fails badly in the context of Kannada data. For Kannada control phenomena exhibit the following properties:

i. there is control into finite clauses.
ii. there are controlled overt NPs.
iii. there is non-semantic verbal agreement

Of the three, the third characterisitc makes Kannada control phenomenon unique. Although most unusual, control structures in some languages do seem to exhibit at least one of the first two properties. But Kannada control manifests all of them. The significant contribution of this study lies in recognizing the role of non-semantic verbal agreement in bringing about control effects; when the complement verb is marked for first person agreement, its subject corefers with a non-first person subject in the superordinate clause. Even a third person reflexive fails to take a matrix third person subject as its antecedent in the absence of first person agreement. And a third

person pronoun is obligatorily disjoint in reference from the matrix third person subject in the presence of third person agreement. These properties of Kannada control structures are challenging to the existing theory of control.

Further, differing from other analyses, this study considers control effects in multi-tiered structures as well. The Kannada control and non-control effects in multitiered structures differ from the ones in languages with switch-reference systems. In the latter languages, the same subject marker signals obligatory coreference between subject NPs of hierarchically adjacent clauses, and the different subject marker signals obligatory noncoreference between subject NPs of hierarchically adjacent clauses. But Kannada first person agreement does not make such a distinction.

The availability of coreference between subject NPs depends on the lexical properties of the complement subject in the presence or absence of a given agreement type. In the presence of first person agreement, the third person reflexive may be coreferential with any (c-commanding) third person subject of a higher clause, whereas a first person pronoun may also have the speaker of the sentence as its referent. But a null subject can only be coreferential with the immediately superordinate subject. As opposed to first person agreement, third person agreement uniformly creates obviation between subjects of clauses in multi-tiered structures.

This means that non-semantic agreement occurs in control structures, while semantic agreement occurs in non-control structures. Any approach to control should consider how such language-specific mechanisms operate in both simple and multi-tiered structures. Only then can a broader perspective on the control phenomenon emerge. The present study offers a first step in this direction.

Assuming control theory is reducible to binding theory, the analysis proposed here is very similar to Borer's. But it differs in that the anaphoric Agr is bound by an A' element. In the analysis proposed here, the anaphoric Agr mediates an anaphoric relation between two linguistic elements resulting in control effects. The analysis was shown to have certain theoretical advantages; contrary to Borer's treatment, assumed universal binding principles are not violated and control effects are executed with fewer stipulations and assumptions. The present analysis also predicts the behavior of overt and empty NPs (in terms of coreference in a given domain, in allowing or not allowing split-antecedents, etc.).

My proposed analysis also distinguishes control structures involving subject control verbs from those involving non-control verbs. Such a theoretical distinction was shown to have factual consequences with respect to how the mechanism of control operates in finite clauses. In finite structures, non-semantic first person agreement signals subject control even with non-control verbs. It was shown briefly

how object control and obviative structures are encoded. In finite structures, second person agreement instantiates object control and third person agreement signals obviation.

Chapter 4 dealt with Kannada reflexive constructions. Its primary concern was to give a detailed analysis of the Kannada reflexive auxiliary and long-distance reflexive pronoun. It was shown that the appearance of the Kannada reflexive auxiliary is governed by subtle semantic conditions, which are not handled in the existing GB theory. Although not discussed, these semantic conditions are also not handled in theories other than GB.

The existing GB binding theory treats the syntactic conditions under which an anaphor may or may not be bound. As syntactic requirements of anaphors vary among languages, the syntactic conditions on the binding elation are revised accordingly. This variation is especially notable for long-distance anaphors. The syntactic distribution of the Kannada long-distance reflexive, *ta:n*, was shown to follow from the lexical properties of the anaphor itself. However, unlike the reflexive auxiliary, the behavior of long-distance reflexive is not unexpected to the theory given the nature of long-distance anaphors crosslinguistically.

Like local anaphors in other languages, the Kannada reflexive auxiliary satisfies Principle A of binding theory. The syntactic distribution of the reflexive auxiliary is

not problematic as far as the binding condition is concerned; it is always bound in its local domain. However, the discussion revealed that semantic conditions need to be taken into account in the appearance of the reflexive auxiliary. Even GB theory recognizes another aspect of anaphor binding which falls outside the structural domain; thematic structure. There are several proposals in the literature to accomodate the thematic domain of anaphors (see Koster & Reuland (1991) and references cited there). In the literature, the more specific semantic relationships between verbs and their arguments are referred to in terms of θ-roles. In GB theory, these semantic roles are represented by means of θ-grids. Therefore, those proposals treat anaphor binding in terms of being co-arguments or sensitive to the hierarchy of thematic roles, etc. But, the semantic conditions that control the Kannada reflexive auxiliary are quite different from the ones that are handled in these proposals.

Part II

Chapter 1 addressed two issues; the existence of a syntactic VP, and functional categories. The issue of configurationality is one of the most controversial topics in GB theory. Since Hale (1982), languages have been classified into "configurational" and "non-configurational" types. Generally, languages with rich morphology, and/or free word order are classified as non-configurational. But not all languages make a clear-cut distinction between these two types. For example, Kiss (1987) and Horvath

(1986) construct plausible arguments for and against a VP in Hungarian. Hasegawa (1980), Saito (1985), Hoji (1987) and Whitman (1987) argue for a configurational analysis for Japanese. These authors provide both theory-external and theory-internal evidence to show that Japanese is configurational.

Mohanan (1982) argues for a non-configurational analysis for Malayalam. Mohanan's major arguments against a configurational analysis are the following; unlike English, grammatical relations are not encoded structurally in Malayalam, and binding facts differ significantly from those of English, in which, binding is defined on structural terms. As Kannada and Malayalam are sister languages, it was of theoretical importance to see how these two languages behave with respect to the configurationality issue. I presented several pieces of evidence to show that Kannada is configurational. Even though, as in many other languages, morphological Case signals grammatical relations in Kannada, an adjacency requirement for Case-drop provides positive evidence for a VP constituent in this language. Unlike Malayalam, the Kannada binding facts also argue for a VP constituent. Moreover, since binding facts are not directly related to issues of grammatical relations, there is at least some independent motivation for the version of S-structure which contains a VP.

A parametric approach to the study of languages throws much light on the characteristics of individual languages. Among the major parameters, the one

involving configurationality distinguishes Kannada from Malayalam, despite their close genetic relation. Saxon (1986) also shows that Dogrib is a configurational language whereas Navajo is not, even though both are Athapaskan. These observations have a significant impact (in terms of considering genetic relation vs. individual characteristics) on any approach to linguistic theory which considers genetic relation among languages to arrive at theoretical generalizations.

Within the Principles and Parameters framework, functional categories play a significant role in arriving at language-specific parameters. For example, Ouhalla (1991:5) notes that languages tend to fall into at least two different typological groups depending on the position of the NEG category in the clause structure. This follows from the NEG parameter, according to which NEG selects a specific category in one group of languages and a different category in the other. Several pieces of evidence were presented to show the existence of functional categories in Kannada. The discussion was limited to the functional categories C, Agr, NEG, and TNS.

It was shown that in addition to nominalizing and signalling the finiteness of a clause, the functional category C is obligatorily present in sentences containing sentential operators. This finding is theoretically relevant for further investigation of Kannada constructions containing sentential operators.

Languages vary in choosing a functional category as a Nominative Case assigner. In Turkish, Agr is responsible for the Nominative Case, whereas in Arabic, it is Tense. It was shown that Tense assigns Nominative Case in Kannada as well. In the course of the discussion, it was suggested that, in a given language, the topmost node may be responsible for binding theoretic purposes. This requires further cross-linguistic investigation.

The role of the functional categories, Agr and NEG, in Kannada grammar was made clear in Chapters 2&3. Only by recognizing these two categories, could certain important aspects of Kannada grammar, such as, *pro*-drop and control phenomena receive a compact explanation. The peculiar control phenomenon is essentially a matter of the nature of Agr.

It was shown that the structure of the Kannada finite clause supports Ouhalla's (cf.) hypothesis that the hierarchical order reflects the morphological order of functional elements. As H,N,O,R&T (cf.) note, agglutinating languages provide a testing ground for such a hypothesis, because the morphological structure of inflected words is more transparent in agglutinating languages than in fusional languages such as Germanic and Romance. As in Finnish, another property which makes Kannada interesting in connection with the Split-Infl Hypothesis is that Agr is separate from Tense, which is evident in negated sentences. The NEG element appears with Tense,

but not with Agr. In Finnish, the negation element is inflected for agreement but not for Tense.

The Split-Infl Hypothesis also leads to an interesting issue involving finiteness. Since all types of Kannada non-finite clauses carry a Tense element, it is reasonable to say that finiteness and Tense are two different things. If finiteness is associated with an Agr element, given the finiteness of negative sentences which lack Agr, one is forced to say finiteness and Agr are also two different things. This is not a desirable consequence, at least, in Kannada. All languages seem to encode finiteness in some fashion, the evidence for which comes from binding theory. As was seen, in Kannada, Agr is relevant for binding theoretic purposes. Then, one is led to assume that finiteness is encoded in two different ways in Kannada; overtly and abstractly. The abstract finiteness may be associated with null agreement in Kannada negative clauses.

The findings of Chapter 2 lend significant support to the Null Subject Parameter and the null AGR hypothesis. In addition, the findings also questioned the general understanding of the parameter which tends to associate a given language as a whole with a specific parameter, that is, a given language may be labelled as a *pro*-drop or non *pro*-drop language. It was suggested that *pro*-drop may be subject to a disambiguity principle. However, it is clear that this issue requires much further investigation.

The postulation of null AGR was motivated theoretically. However, the syntactic role of null AGR was shown to have its limits; to achieve a unified account of Kannada control effects in non-finite clauses, but not to license *pro* subjects. The null AGR, like weak Agr, fails to identify a *pro* subject. Assuming either Agr or tense licenses *pro* in Kannada, it is always the rich Agr which identifies it. This explains why *pro* is not allowed in negative main and copular clauses. Even if *pro* is licensed by tense, there is no rich Agr to identify it.

Among the features dealt with in this thesis, Kannada verb agreement appears to be a significant one as it relates to parameters and language variation. Languages vary in having or not having verb agreement. Kannada non-negative finite constructions are distinct from negative ones in that only the former are marked for subject-verb agreement. Verb agreement is responsible for the control relation in finite structures. This is of theoretical interest given that languages like, Persian, Hebrew, Serbo-Croatian, etc., do not make use of agreement morphology in encoding the control relation. This means that behavior of the same lexical items varies across languages, supporting Borer's (1983) view of parametric variation. Borer associates parameters with individual lexical items, as part of the information included in their lexical entries, rather than with the principles of UG. The lexical items are restricted to functional categories. Under this approach, the behavior of a given lexical item may vary from language to language, and a given language can be expected to instantiate

more than one value of a given parameter in terms of different lexical items. Both expectations are fulfilled in Kannada.

The first is fulfilled by contrasting the properties of Kannada agreement morphology with that of agreement morpholgy in other languages. The functional categories, Agr and NEG, instantiate both values of the Null Subject Parameter in this language. That is, Kannada is in different respects both a *pro*-drop and a non *pro*-drop language.

A significant question remains unanswered: if one assumes a movement analysis for Kannada control phenomena, how can one explain the lack of Relativized Minimality effects without resorting to language-specific stipulations (section 3.8.2)? As noted earlier, to come up with series of stipulations is not an attractive solution as it goes against the spirit of theory. I have so far found no explanation for it. Several other areas of Kannada grammar, such as *wh*-constructions, cleft constructions, etc., no doubt need to be investigated to find an answer.

Some of the issues dealt with in Chapter 3 also clearly require much further research. The non-movement anaphoric Agr hypothesis needs to be tested against cross-linguistic data. The anaphoric Agr analysis was extended to non-finite clauses, but data from the latter were not dealt with in detail. Nevertheless, the analysis seems

to be on the right track, given the fact that a similar analysis accounts for control effects in non-finite clauses of different languages. However, very little was accomplished with respect to control in dative constructions. The discussion revealed that the control mechanism involved in dative constructions is quite different from the one found in finite and non-finite clauses. This is chiefly due to the lexical semantics of dative verbs, which are marked for neuter agreement.

Nonetheless, the brief discussion about DSCs distinguishes finite control structures involving rich agreement from those involving neuter agreement. The analysis of the former type control structures may be extended to non-finite clauses but not to the latter type by hypothesizing a correlation between the agreement type and the mechanism of control. A weak Agr, unlike rich and null Agr/AGR, fails to license/identify a *pro* subject, and a neuter Agr, unlike rich and null Agr/AGR, fails to mediate an anaphoric relation between two NPs.

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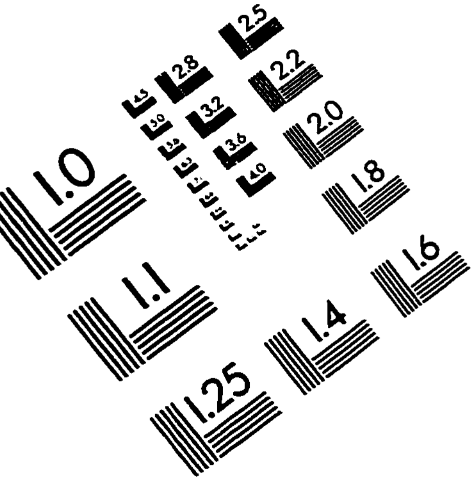
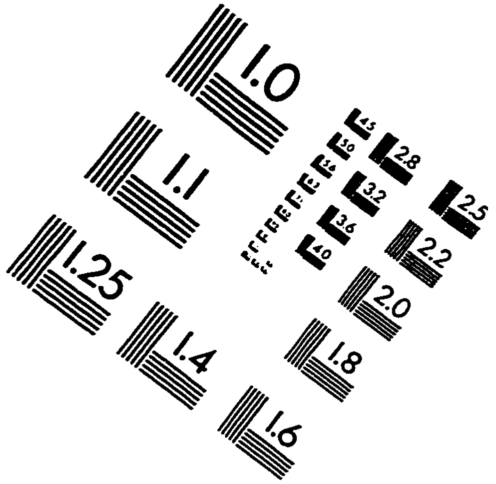
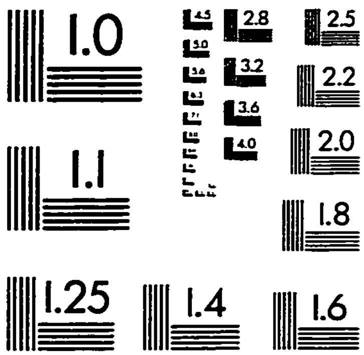
IMAGE EVALUATION TEST TARGET (QA-3)







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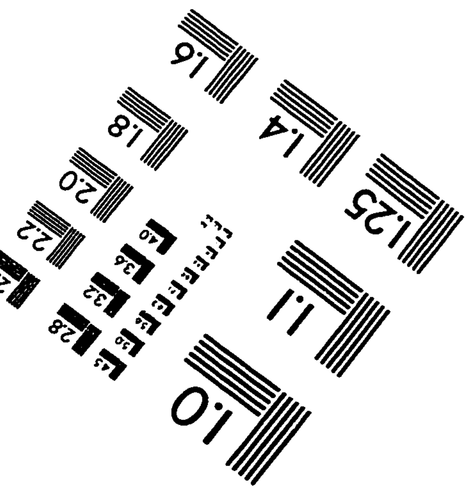

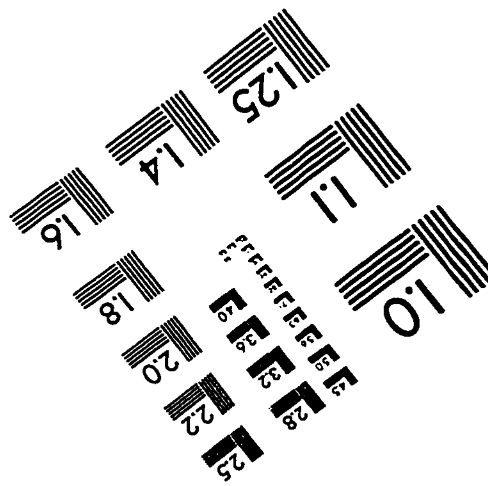

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