

**CASE, AGREEMENT AND WORD ORDER:
ISSUES IN THE SYNTAX AND ACQUISITION OF TAMIL**

by
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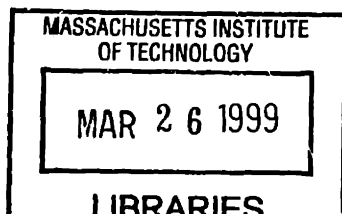
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Submitted to the Department of Linguistics and Philosophy on October 19, 1998
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ABSTRACT:

This dissertation focuses on the syntax of Tamil, a Dravidian language. The main issues discussed in the dissertation may be broadly classified into (a) those concerning the TP-internal structure and (b) those concerning the TP-external structure. The aim is to provide as complete an account as possible of the syntactic issues under consideration in both adult syntax and developmental syntax.

With respect to the TP-internal structure, the case and agreement properties in the syntax of Tamil are indicated in a wide variety of constructions, including finite (nominative and dative subjects, imperatives) and non-finite (verbal participles, infinitivals) sentences, and the theoretical processes necessary for the assignment of case and the determining of verb agreement are established. Evidence is given for the TP-internal positions of the various argument DPs, including diagnostic tests for subjects and (especially, nominative) objects. Agreement facts and the relations between DPs and V are discussed with special emphasis on nominative object and V agreement and null case PRO and V without agreement. Anaphoric binding is shown to be parasitic on the agreement domain. The discussion is completed with an analysis of the auxiliary system, arguing for head movement of the V and an iterative *vP* structure.

The TP-external structure concerns the re-ordering of phrasal constituents, locally and long-distance. It is shown that Tamil is a configurational language which exhibits long-distance and local extraction to A-bar positions targeting the same sites as independent clefting and topicalization procedures in the language. Consequently, word order changes are shown to have specific syntactic and semantic consequences. It is also argued that Tamil shows symmetric rightward and leftward extraction procedures.

It is established from the analysis of the syntactic structures and natural speech data that developmental syntax approximates adult syntax in all aspects. Children acquiring Tamil are shown to make productive and extensive use of case and agreement (including default agreement) forms. Additional evidence to show that the entire range of TP-internal and TP-external processes are in place is drawn from the use of *pro*, imperatives, non-finite verbs (including verbal participles and infinitivals), reflexives, serial verbs, NP extraction and case-drop phenomena. The syntactic structuring and processes are argued to be identical in both grammars.

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CHAPTER 1: CASE AND AGREEMENT

1.0 INTRODUCTION

The issue of interest in this chapter centres on the inflectional features of the verb and its arguments, mainly nominal case and verbal agreement features. We discuss these issues in a wide variety of constructions, from the simplest nominative-accusative configuration, to infinitivals and participials. The theoretical assumptions are based in the Minimalist Program (Chomsky 1993, 1994, 1995) and in particular, on the most constrained version proposed in Chapter 4 'Categories and Transformations' (Chomsky 1995).

1.1 MINIMALIST PROGRAM: THEORETICAL ASSUMPTIONS

In this section, we will outline the general mechanisms underlying the assignment of (abstract) case to DPs and DP-V agreement. In subsequent sections, we will discuss several types of constructions including dative subject sentences with non-nominative subjects and non-accusative objects. The mechanisms are drawn directly from the Minimalist Program (Chomsky 1993, 1995) and the notions therein of feature checking and checking domains have been adopted.

A language is assumed to be a generative procedure that constructs pairs of linguistic structures which Chomsky labels π and λ . These structures are interpreted at the interface levels Phonetic Form (PF) and Logical Form (LF). If these structures are interpretable at the interface levels then the derivation is said to *converge*, otherwise it is said to *crash*. In fact, there is a selection procedure based on economy between competing convergent derivations. The more *economical* derivation will converge while the less economical one will not. The pair (π, λ) is a sequence of symbolic elements that have been computed in such a way that the final string S is interpretable by both PF and LF. This computational procedure involves the insertion of lexical items into the computation by an operation called *Select* and the combination of such symbolic items into a single syntactic object (that is interpretable) by an operation called *Merge*.

Any lexical item is associated with a range of features including *semantic* features (artifact), *phonological* features (consonant-initial) and *formal* features (case, phi-features, categorial features etc.). A fundamental property of the computational system is *feature-checking* (involving only *formal* features) which is assumed to be the basis for all movement/displacement operations under the *Last Resort Condition*. By this condition, movement or displacement is deemed expensive and occurs only if there are unchecked features which can be checked by movement. *Formal* features may be further divided into those that are *intrinsic* to a lexical item (category, gender, accusative-case-assignment) and those that are optionally added (number, case, tense) when the lexical item enters into the generative procedure but which are not a part of the

item's lexical entry. In the following, we will be interested primarily in the *formal* features that are involved in processes such as agreement and case.

An important property of features is feature-strength. Only *strong* features induce overt movement, in that they require a *category* of a certain kind to be in their checking domain. *Strong* features appear to be restrictively found in non-substantive or functional categories. Consequently, the Extended Projection Principle (requiring a subject in every sentence) now reduces to a strong D or NP feature in T, overt wh-movement to a strong D-feature of C, V2 positioning to a strong V feature on C and verb-raising to a strong V feature on T. Another property of *strong* features is that they induce cyclicity. That is to say, when a *strong* feature attracts a substantive category to be in its checking domain (which may be loosely defined as the maximal projection containing the head with the *strong* feature), such a relation is strictly local. The substantive category must check the first available such *strong* feature and not pass it en route to a higher, attracting *strong* feature. Conversely, the feature must attract the most local substantive category that can check it and not choose one that is more distant. Island violations are also subsumed under this condition. This locality relation is also reformulated as the Minimal Link Condition or the condition on Shortest Move. *Weak* features are not checked in the overt syntax but, rather, covertly at LF. Overt movement is assumed to involve raising of both the feature and the lexical item which bears the feature and covert movement, only the raising of features but not the lexical item. All features must be checked by LF for the derivation to converge. Additionally, *formal* features may be $[\pm\text{interpretable}]$. The $[\text{+interpretable}]$ features survive into LF but not the $[\text{-interpretable}]$ features. For example, the former includes the phi-features of nouns, the nominal categorial features and the finiteness feature of T and the latter, the case features of V and T and the phi-agreement features of V and Adj. All $[\text{-interpretable}]$ features are deleted once they are checked.

The lexicon contains substantive (noun, verb etc.) and functional items along with their idiosyncratic properties. Syntactic structures comprise both functional (T, D, C etc.) and lexical heads (N, V, Adj etc.). In earlier formulations of the Minimalist Program, AGR was also considered an additional and essential functional category. Unlike the other functional categories, AGR does not have semantic content. T has the semantic content of finiteness and perhaps event structure, C the semantics of mood or locutionary force and D the semantics of referentiality. The primary role of AGR was as a mediator. AGR was assumed to bear the verbal and nominal phi-agreement features and (as AGRs) was involved in subject agreement and subject case and (as AGRo) in object agreement and object case. In fact, the verb and its arguments were assumed to originate within the maximal projection VP (Fukui and Speas 1986). The functional AGR heads were considered to be checking devices without semantic content serving two purposes: (i) they checked the features of the verb that raises to them and (ii) they checked the properties of the noun that raises to their Spec; thus, making sure that the V and the NP are properly paired. The main verb carried the morphological reflexes of Tense and AGR features and NPs carried the reflexes of case and AGR features. The functional heads T and AGR were assumed to carry both

nominal and verbal features. T carried the verbal feature of tense and independently the EPP¹ feature, as well as the nominal feature of case. Both agreement and structural case were taken to be manifestations of a Spec-Head relation, but case properties depended upon the characteristics of the functional head T and the lexical head V. In both positions the relation of the NP to V was mediated by AGR. In both agreement was determined by the phi-features of the AGR head of the AGR complex ([_{AGR} AGRs+T] for the subject and [_{AGR} AGRo+V] for the object), and case by an element that adjoins to AGR (T for subject case and V for object case). An NP in a Spec-Head relation to the AGR complex was assumed to bear the relevant case and/or agreement features.

Multiple Subject Constructions/Transitive Expletives in Icelandic appeared to require at least three Spec positions outside the VP for the three ‘subjects’ in these constructions (Chomsky 1995, p341, Jonas and Bobaljik 1993, Jonas, 1995a). It is argued that their internal structure must be—

(1) [_{Agp} Nom AGRs[_{TP} Nom T [_{Agp} Nom AGRo [VP]]]]

This constituted the most direct evidence for the Spec, AGR positions. However, Chomsky argues that AGR positions are not strictly necessary and that in these constructions the ‘subjects’ may be taken to occupy multiple Specs. We do not discuss the details of this analysis here.² It has also been argued that Spec, AGRs (and its relative position to T) and Spec, AGRo are necessary to explain DS-case constructions (Schutze 1993). However we adopt the radically reformed tree without AGR positions and show that the range of case and agreement facts can be accommodated into a structure without AGR. The core functional categories are D, C and T alone.

We also adopt one other departure from more conventional approaches. It has often been assumed that the subject of a sentence is an argument of V and that the subject originates from within the VP where it is assigned its θ -role by V. When the V takes multiple arguments (double object constructions) it has been assumed that the VP-internal structure incorporates a VP shell structure (Larson 1988) with multiple V’ levels, with the V assigning the θ -roles to all the arguments, and with V-raising to different positions within the VP. Hale and Keyser (1993) and Marantz (1984) argue that double object constructions incorporate a light verb, which may or may not be overtly expressed³ and to which V raises overtly. If the internal arguments of the V in a double-object construction occupy the specifier and complement positions of the V, then the subject cannot be lower than Spec, vP. Chomsky assumes this

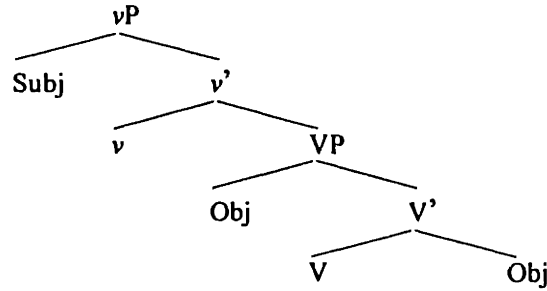
¹Extended Projection Principle which is the motivating principle behind the highest Spec position within the TP, both within the Principles and Parameters framework and within the Minimalist Program.

² More recently Jonas for Icelandic and Belfast English and McCloskey for Irish (Jonas, 1998 and McCloskey 1998) argue that three positions are indeed required to account for certain word orders that are not predicted by Chomsky’s multiple Spec analysis. We do not enter into the comparative merits of these proposals.

³For Larson the higher V included an agentive suffix that was incorporated into the verb and enabled the selection of an agent argument in Spec, VP.

configuration more generally in causative and agentive constructions, and also for simple transitives and intransitives (both unergatives and unaccusatives)—

(2)



One argument offered in favour of such a structure derived from θ -role assignment. If a DP/NP does not have a θ -role, or if a category does not assign a θ -role, the derivation will not converge since full interpretation will not be possible. In discussing the relation between movement and θ -theory Chomsky points out that feature-checking and θ -role assignment are complementary, that θ -roles are a ‘base property’ (property of a position of merger), while feature-checking is the result of movement. Therefore, a DP/NP cannot raise to a θ -related position and receive a θ -role. The subject must, consequently, be base-generated in Spec, vP rather than raise to it for θ -role assignment. Chomsky assumes that the ‘external’ θ -role that is assigned to the subject is by the $v+V$ complex. With regular transitive constructions, the subject does not receive its θ -role from the V directly but rather from within vP. v must have a strong V feature that requires the verb to raise to it. Further evidence for this separation of the external argument from the verb comes from Marantz (Marantz 1984, Kratzer 1996, Collins 1993) who points out the asymmetries between the subject-verb and the verb-object relations. The interpretation of the verb can be more idiosyncratic and dependent on the internal (object) argument, but it is seldom affected in that way by the external (subject) argument—

- (3) take an aspirin
 take a nap
 take a bus

Additional subject-object asymmetries may also argue for this structure. The structural case on the subject is considered separate from the lexical or inherent case on internal arguments. Further, serial verb constructions are known (Collins 1993, 1995) to generally share a subject but not the internal arguments. If serial verb constructions are a sequence of Vs and the subject is an argument of v this asymmetry is also explained. This structure will become particularly pertinent in discussing auxiliaries and serial verb constructions in Tamil as well. We assume therefore that the external argument is in a sense divorced from the verb (V).

From what we have said so far, both lexical and functional categories bear features (T has tense, EPP, case and phi-features, V has category, case and phi features, v has a strong

verbal feature, DP/NPs have category, number, case features). If the features on the functional categories are *strong* we should find overt raising. This overt raising (*Move-F* or *Attract-F*) is, as we indicated earlier, a strictly constrained, local relation, governed by the conditions on shortest move. Finally, all features must be checked by LF for the derivation to converge. In the following, we discuss in turn various configurations in Tamil and the case and agreement properties of each.

1.2 CASE AND AGREEMENT CONFIGURATIONS

1.2.1 Nominative-Accusative

Tamil⁴ is an SOV language (head final), that has rich case and agreement morphology. The case forms in Tamil are marked by either a case affix or a bound postposition; certain postpositions themselves take case-marked NPs as complements. (There are also a number of free postpositions in Tamil but they are not relevant here.) There are nine cases in Tamil and they are given in (1) along with the corresponding morphemes (Lehmann 1993). The case morphemes are affixed to the noun stem, after the number marker (unmarked in the singular and marked by -gaL in the plural), the oblique suffix and certain euphonic increments (which are not directly relevant). It may be useful to note here that vocatives (which we shall discuss in the context of imperative constructions) are usually identical to the nominative forms. Generally, the only difference is in the intonation peak that accompanies vocatives but not nominatives. In a few consonant final nouns (for ex. plural nouns) the affix -ee is added

(4)	<u>case</u>	<u>case affix</u>	<u>Postposition</u>
	Nominative	(morphologically unmarked)	
	Accusative	-ai	
	Dative	-ukku, -kku, -ku	
	Locative	-il	-iDam
	Instrumental	-aal	
	Sociative	-ooDu	-uDan
	Ablative		-irundu(nom. or loc. NP)
	Genitive	-in, -adu, ø	-uDaiya
	Benefactive		-aaga (dative NP)
	Vocative	-ee (consonant final stems only)	

The verb agrees with the nominative subject for person and number in all persons and for gender, in the third person⁵. The morphological agreement forms are as in (5) (phonetic alternants are also

⁴The dialect from which the examples are drawn is a standardized version without class or caste implications. It rests somewhere between the colloquial dialects and the written form of Modern Tamil. Since the dialectal variations are generally lexical and phonological, the variations do not matter very much to our discussion.

⁵This seems noteworthy since in the first two persons the reflexive pronominal form is undifferentiated from the general oblique form of the pronoun; only in the third person is there a separate reflexive pronominal form, i.e. taan, which furthermore, is unmarked for gender.

given). The internal structure of the verb also includes a tense marker which precedes the agreement inflection—

(5)	<u>Person</u>	<u>Singular</u>	<u>Plural</u>
	1st person	-een, -ēē	-oom, òò (incl. and excl.)
	2nd person	-aay, -ee	-iirgaL, -iinga
	3rd person	-aan, āā (masc.)	-aargaL, -aanga, -aa (m., f. & hon.)
		-aaL, -aa (fem.)	
		-adu, -um (neut.)	-ana
		-aar (honorific)	

This agreement pattern is seen usually only when the subject bears the *nominative* case, morphologically. We draw a distinction between the actual case-marking on an NP (its morphological case) and the structural/configurational position it occupies (abstract case) (Marantz 1991, Friedin and Sprouse 1991, Schütze 1993, 1994). Thus, subjects in Tamil may be marked by non-nominative morphological case but yet meet all other criteria of subjecthood.

Let us consider first, the subject-verb agreement in a simple, active sentence in Tamil. The syntactic tree prior to feature-checking for the sentence in (6) is given in (7), and tree after feature-checking in (8). Here, the order within the VP reflects the fact that Tamil is head-final. This is assumed to be a parametric choice contrary to Kayne (Haider 1993, Mahajan 1995)⁶. All heads are strictly final except when the order of major VP constituents has been permuted (see Chapter 2). Morphological case forms are given at the outset for the sake of convenience. We do not assume early insertion of morphological items into the computational procedure, rather, the relation between the feature bundles that are a part of the computation and the lexicon are assumed to be ‘late’ (Halle and Marantz 1993)—

- (6) raaman siitaa-kku hanumaan-ai anup-in-aan
 Rama-N Sita-D Hanuman-A send-past-3sm
 ‘Rama sent Hanuman to Sita.’

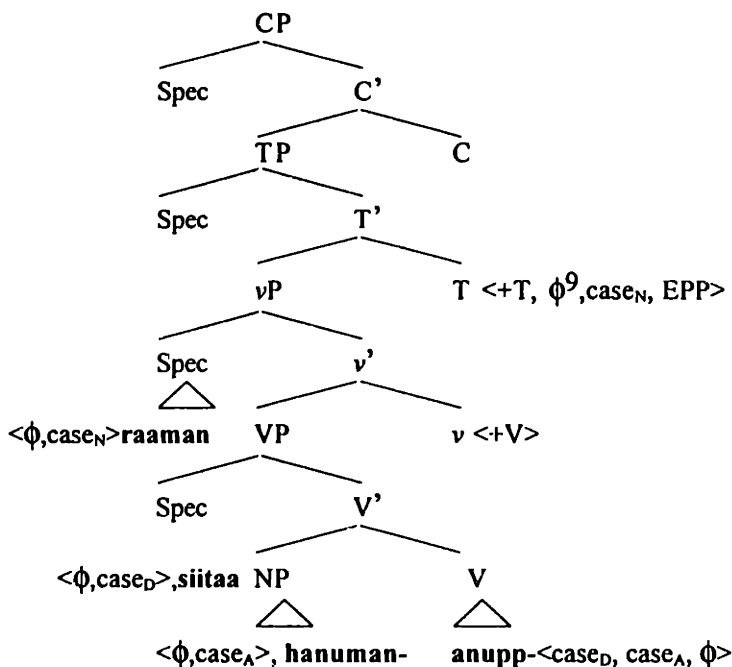
The verb **anuppa** ‘to send’, takes two internal arguments. The direct object merges with it as a complement and the indirect object merges with the complex category V’ to project a maximal category VP. Both these arguments are assigned their θ -role by the verb (V)⁷. The subject **raama**, ‘*Rama*’ is inserted as an argument of v ’ and merges with it to form vP . v takes VP as its

⁶Within the Minimalist Program Chomsky derives Kayne’s universal SVO word order only for complex objects but not for simple ones which is still assumed to be a parametric choice.

⁷In the following, ‘verb’ and V, and ‘light verb’ and v , are used interchangeably.

complement. The relevant formal features are also indicated on the phrase-marker within angled brackets⁸—

(7)



Both internal arguments are assigned their θ -roles by the verb. The higher (dative) object has its case feature checked by the verb as well. The verb raises to v attracted by the [+V] feature on v . The complex $v+V$ (=Vb) assigns a θ -role to the external argument. Vb raises to T attracted by the T and phi-features, and the external argument raises to Spec, TP attracted by the EPP feature. In checking domain of the head T, the NP has its case and phi-features checked and the verb its phi-features. The T feature is checked also¹⁰ The object has a case feature, which must be checked as well. It is assumed to raise to an outer Spec of vP for this purpose. This is necessary since ‘structural’ cases are assumed to be checked outside the VP, within some higher functional projection, unlike inherent case which is assigned by Merger.¹¹ The structure post-checking is shown below. A scenario we wish to avoid would be one where the object raises to Spec, TP over the subject. This is prevented by the conditions on Shortest Move or the Minimal Link Condition (Mf.C). The closest position where the object can check its case feature is the

⁸The case features on the nominal are selected randomly when the category enters the computation. If they match those on the verb then they are checked and the derivation will converge, otherwise, they will remain unchecked and derivation will crash.

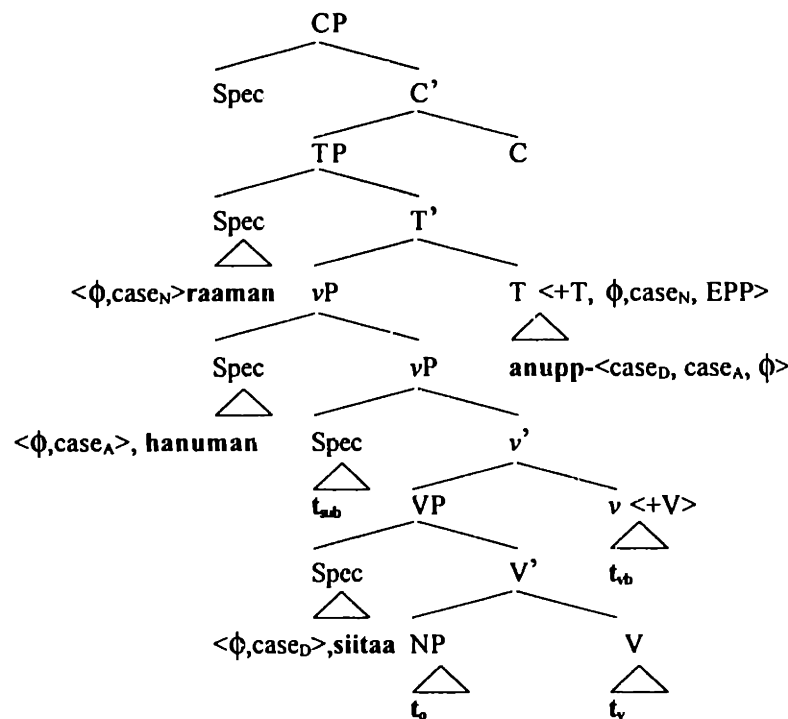
⁹Nominal and verbal phi-features.

¹⁰In checking the tense feature on T, one of two situations is possible. The V may be attracted by the strong T feature itself or it may be attracted by the phi-features and check T in parallel. It may be apparent, but raising motivated by a feature F may also result in the checking of other features of the raising category gratis, if the appropriate relations obtain. Since we do get constructions without agreement but with tense (participial constructions) we assume that a strong T actually requires a V in its checking-domain.

¹¹ There is ample reason to believe that the accusative case is ‘structural’. One reason is that the object NP of a transitive verb can be passivized and bear the ‘structural’ case appropriate to its raised position. That is, the NP’s case is dependent on its structural position.

verb. MLC will be violated if the object tries to get case from Spec, TP. Further, the closest argument to Spec, TP is the external argument, so raising the object over the subject will also violate MLC. Though the order of constituents post-checking is the same as the non-checked word order, we assume that there is overt raising in Tamil. The reasons for this will become clear in our discussions of DS constructions—

(8)



Let us now consider the simple intransitives, both unergatives and unaccusatives—

(9) hanumaan po-n-aan
Hanuman-N go-past-3sm
'Hanuman went.'

(10) maram aaD-i-adu
tree-N shake-past-3sn
'The tree shook.'

In the latter, it has been assumed (Chomsky 1981) that the verb does not assign accusative case to the internal argument. The θ -role is assigned by the verb, however. The argument has to raise to Spec, TP to get its case and to check the EPP feature, and we assume it raises through Spec, vP en route to avoid possible violations of the MLC. This much is straightforward. With unergatives, the structure is assumed to be the same as the transitive structure, with the external argument being generated in Spec, vP. Unergatives are assumed to be hidden transitives (Hale and Keyser) and though these constructions (in English and Tamil) do not have an overt object, it is

nonetheless assumed that there is a *null* object¹². The reasons for this have to do with the ease with which unaccusatives, but not unergatives, may be transitivized. Thus in Tamil, there is a process of affix changing (shown in bold) that transitivizes unaccusatives. Compare the following pairs—

(11) siitaav-in talai **tirumb-i**-adu
 Sita-G head-N turn-past-3sn
 ‘Sita’s head turned.’

(11a) siitaa-N tan talai-ai **tirupp-in**-aaL
 Sita-N self head-A turn-past-3sf
 ‘Sita turned her head.’

(12) koDam **niramb-i**-adu
 pot fill-past-3sn
 ‘The pot filled.’

(12a) siitaa koDatt-ai **nirapp-in**-aaL
 Sita-N pot-A fill-past-3sf
 ‘Sita filled the pot.’

But unergatives are resistant to this procedure. Thus, the internal structure for unergatives is similar to the one assigned to transitives, except that there is a null, internal argument. We adopt this structure for Tamil unergatives. Thus far we have seen feature-checking in a simple sentence where the subject is assigned a nominative case. This is the most common configuration in Tamil. There are, however, predicates that take a dative subject. We turn to these next.

1.2.2 ‘Dative-subject’ Predicates

In constructions with a dative-subject (DS), the subject NP bears a non-canonical, morphological case given its structural position within the TP. These predicates may or may not select objects. When they do, we find objects marked with either the accusative-case (canonical object case) or the nominative case (non-canonical object case). This selection is contingent on the particular predicate that is selected. In one case, **muDi** ‘to be able’, the subject bears the instrumental case. DS-predicates that occur with accusative objects include verbs of mental experience (examples, **teriya** ‘to know’, **puriya** ‘to understand’), verbs of emotional experience (example, **piDikka** ‘to like’), and verbs of physical and biological experience (examples, **pasikka** ‘to be hungry’, **valikka** ‘to pain, to hurt’)—

¹²Other languages have been shown to have an overt object or pronominal element in unergative construction (Hale and Keyser 1993).

- (13) ramanu-kku siitaav-ai piDikk-um
 Rama-D Sita-A like-3sn
 ‘Rama likes Sita.’

In the above we see that the verb bears default agreement features of the third person, neuter, singular, i.e. the features match neither the phi-features of the subject nor the phi-features of the object. The dative-marked NP, despite the non-canonical morphological case, is the subject of the sentence and this may be demonstrated by applying two tests for subjecthood, (i) the binding of the anaphor *taan* and (ii) subject control of PRO, where we find that the dative subject preferentially binds the anaphor and PRO. In Tamil, an object anaphor can only be bound by a subject and no other argument (see section 1.7) The fact that the anaphor is bound by the dative-marked NP is therefore strong evidence for the subjecthood of the dative-marked NP—

- (14) raman-ukku tann-ai piDikk-um
 Rama-D self-A likes-3sn
 Rama_i likes self_i

The matrix subject also determines the referential features of PRO, which is the subject of the non-finite verb. In (15), the dative-marked NP of the matrix clause is co-referential (obligatorily) with PRO, the embedded subject (see section 1.2.3). The internal structure of the sentence is also indicated—

- (15) [_{TP} raaman-ukku [_{TP}PRO kudiray-ai ooTTa] teriy-um
 Rama-D horse-A to drive know-3sn
 ‘Rama knows horse-riding.’

The dative subject with nominative object configuration is found in a *closed* class of predicates. These include predicates expressing existence or possession (examples, *iru* ‘to be’, *uL* ‘to exist’), those expressing need or obligation (examples, *poodu* ‘be enough’, *veNDu* ‘want’), certain complex verbs (examples, *ñaabakam vara* ‘to remember’, *kaadu kekka* ‘hear’) and some modal auxiliaries (example, *veNDa* ‘to want’)—

- (16) raman-ukku muuNu sagodarar-gaL iru-nd-aanga
 Rama-D three brothers be-past-3p
 ‘Rama had three brothers.’

In these cases, the nominative objects appear to agree with the verb. The verb carries all the regular inflectional morphology including tense and agreement (as well as any auxiliaries) as the example shows. Agreement is generally considered a feature of ‘subjecthood’, but in these cases, the dative case-marked argument is the subject. We apply the same tests of anaphor-binding and control as above to demonstrate this—

(17) raman-ukku oru payyan tan uur-ile iru-kk-aan
 Rama-D one boy-N self-G village-L be-pres-3sm
 Rama_i has one boy_j in self_i's village

(18) [_{TP}raaman-ukku [_{TP}PRO siitaa-kku hanumaan-ai anuppa] tevaipaT-T-adu]
 Rama-D Sita-D Hanuman-A send-inf be necessary-past-3sn
 'It was necessary for Rama to send Hanuman to Sita.'

From the above we see that subject-verb phi-agreement does not uniquely signal the subject. It does so in the canonical cases but not always. The subject position seems to be determined uniquely by the strong EPP feature. This is both interesting and somewhat problematic and raises several questions regarding these constructions. What are the loci of the dative-subject and the nominative-object? If the nominative-object is not the subject, how does it determine the agreement features of the verb? What can we say about the agreement features on the verb in the dative-accusative cases?

Before we turn to feature-checking we must mention one source of possible confusion, especially given the acquisition corpus. DS-predicates, we said, take either accusative or nominative objects and this is a lexically determined feature. However, there are certain instances where the accusative object appears to alternate with a nominative object (we also see this with nominative-accusative predicates)—

(19) raaman-ukku paaTTu piDikk-um
 Rama-D song-N like-3sn
 'Rama likes songs.'

These are instances of a process of optional object case-marker drop which is permitted in certain dialects. This occurs when the object-NP has either been incorporated into the verb to form a complex verb form or is interpreted as being non-specific. Compare the example above with the following—

(20) raaman-ukku paaTT-ai piDikk-um
 Rama-D song-A like-3sn
 'Rama likes (a specific) song.'

There are also other restrictions on case-drop. It is not possible to drop the case when the object is a [+rational] noun. Thus, (19) is grammatical while (21) without the accusative case-marking on the object is not—

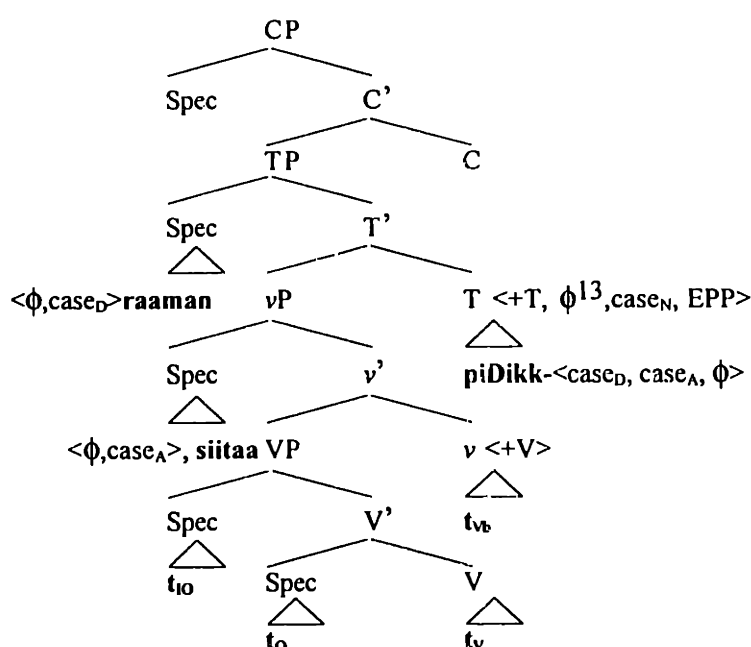
(21) *raaman-ukku peNN piDikk-um
 Rama-D girl like-3sn
 'Rama likes (a) girl.'

Such restrictions are not placed on the nominative objects of DS predicates such as **tevaippaDa** ‘be necessary’. We need not pursue this further, but it is important to mention this difference between apparent and real nominative objects.

Returning to the discussion of DS predicates, we note that the θ -role of the subject (in either configuration) is either a ‘goal’ or an ‘experiencer’ role assigned by the verb. Further, the case on this NP is also determined by the verb. The external argument in these cases must, therefore, be generated in Spec, VP rather than in. Spec, vP.

It remains for us to show how feature-checking may be carried out in these sentences. Let us consider the DS predicates with accusative objects first. The characteristics of this configuration are recapitulated here: the verb bears the 3rd person, neuter, singular agreement marking; the VP-internal subject is inherently case-marked; the object is marked with the canonical object-case (therefore, these predicates must also carry the (accusative) case feature); the dative-marked NP is the subject of the sentence. The verb can also be marked for tense as we mentioned earlier. The tree post-checking should look something like this—

(22)



The verb checks dative case on the inherent argument in Spec, VP. This argument has no unchecked features that it must check within the domain of T. However, it raises to Spec, TP ‘attracted’ by the EPP feature. This is what, we assume, gives it a structurally high position from which the binding and control facts (discussed earlier) will follow. V raises to v and thence to T. The internal argument in Spec, V’ raises to the outer Spec of vP, as in the case of the regular nominative-accusative configurations and has its case checked in the domain of Vb (v+V). The first question to ask is whether vP is a required part of the structure. We assume that v is always a part of the numeration. The computational procedure will not generate a Spec, vP however, if

¹³Nominal and verbal phi-features.

there are no suitable features that can attract the subject. There will be no ‘vacuous’ raising of the subject through Spec, *v*P. Consequently, there will be no external argument. *v*P is still generated and may accommodate auxiliaries (see section 1.5).

The next issue is what happens to the features on T, specifically the phi-features and case_N feature (all [–interpretable] features which must delete by LF). The phi-features cannot be checked on the dative subject since, presumably, they have been checked by the verb. If they are checked, we would expect overt agreement with the dative subject. The object also cannot check the phi-features of T. In addition, T has a case feature. We assume that the ‘agreement’ marking on the predicate in these configurations is determined at Spell-Out. The features are assumed to delete at LF. If the values of the phi-features on T are those given in (23) then the derivation will still converge at PF (and at LF). The [3sn] inflection is assumed to be inserted by ‘default’ to enable PF convergence. If the values are different from those in (23), then there is no other available ‘default’. Note however, that the features on all the arguments must be checked. If arguments have unchecked features, the derivation will not converge. For example, if the external argument has case and phi-features but the phi-features on T are spelled out as ‘default’ then the derivation will crash. ¹⁴—

- (23) [α person] → [–speaker, –addressee]
 [β number] → [singular]
 [γ gender] → [neuter]

Generally, nominative case and overt agreement appear to be contingent upon each other. If nominative case is checked there is always overt agreement. ¹⁵ We consider precisely this situation in DS-constructions, next.

Let us now consider cases where the object has nominative case. Here too, both arguments originate as the internal arguments of the verb. The object bears the non-canonical nominative case; the verb phi-agrees with the object and bears the tense marking. We assume that the verb does not assign nominative case inherently and that this is a structurally assigned/checked case. ¹⁶The fact of phi-agreement between the verb and the object implicates T. The dative subject, as in the previous construction, raises to Spec, TP attracted by the EPP feature. The predicate must not carry an appropriate accusative case feature that it can check on the object. The verb raises to *v* and T. T has a case feature that it cannot check on the inherently case-marked object and the object has a case feature that is unchecked as well. We

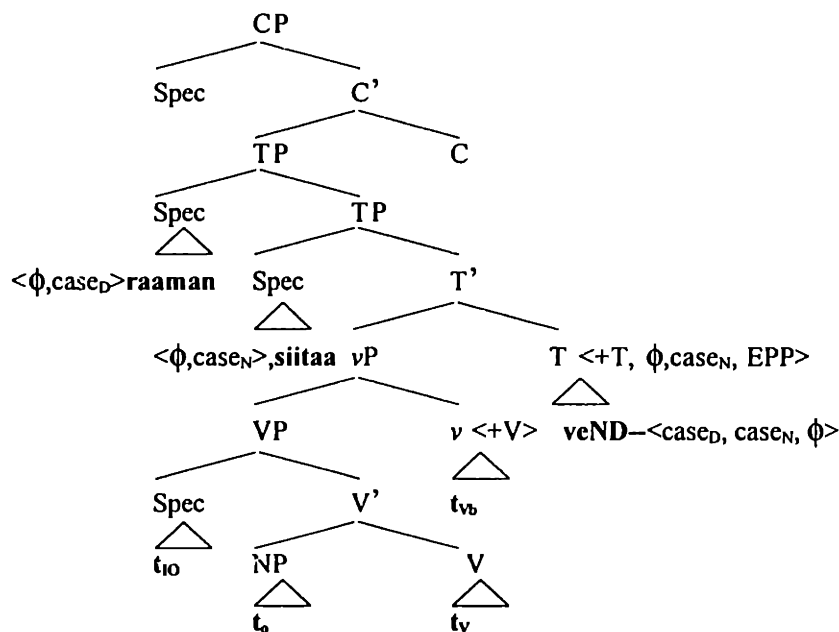
¹⁴There is another example of such ‘case conflict’. In causative constructions, the causative verb takes infinitival complements and assigns accusative case to the subject of the caused-action (the one made to perform the action). However, if the predicate of the complement is DS predicate, the inherently-marked dative case on the lower subject survives - even though structurally the causative verb can assign accusative case to it.

¹⁵Schütze tries to derive similar effects for data in Icelandic with a series of ordered constraints. In his system, the nominative case-feature must be checked if possible, but violations are permitted.

¹⁶We show later that the case on these nominative objects can be checked by ECM predicates. Inherently case-marked objects cannot have their case checked by an ECM predicate.

assume that T can check the case and phi-features on the object in the overt syntax, once V raises to it. That is, the object will be in the checking domain of T once V raises to T, and itself can raise to Spec, TP. In this movement, the case feature of the object tucks under the Spec, TP which hosts the subject. Secondly moved elements tuck under elements that have previously raised. We will assume from Richards (1997) that this is an universal feature. Note that this is not so for the accusative case checking procedure. There the subject is merged in Spec, vP and any moved element has to adjoin to the outside of that projection. Case can now be checked on T and the object NP. MLC is not in violation since no other NP exists that could possibly check the case feature on T. T also checks the phi-features on the verb. Consequently, we see the appropriate agreement between the object and the verb. If T does not check the case feature on the object NP, the derivation will not converge. It appears that the derivation can tolerate an unchecked case feature on T (which can be deleted), but not an unchecked case feature on an NP.¹⁷ We make one further assumption that the Dative subject is still ‘higher’ than the raised object. This structure accounts for the split in what have been considered traditionally to be ‘subject’ properties—

(24)



Similarly, for the configuration where the subject is marked with the instrumental case and the object with the nominative, the subject is assigned its case internal to the VP. It raises to Spec, T because of the strong EPP feature. T, however, cannot check its case feature with the instrumental NP but checks it on the object, which also has an unchecked case feature. T also checks the phi-features on both the verb and the object—

¹⁷One of the issues discussed at some length in the Minimalist program is the difference between features based on their ‘interpretability’ or visibility to LF. Case, EPP, phi-features of the verb are considered to be [-interpretable] while the categorial, phi-features of nouns are considered [+interpretable]. One attribute of the [-interpretable] features is that they must be checked by LF and in fact, it is these that induce movement or displacement of categories from their positions of merger. In this instance, case on T is a [-interpretable] feature but has no deleterious consequences on the derivation. It is unclear why this is so. We assume that the feature deletes prior to LF even if it is unchecked. Perhaps languages vary in this degree of tolerance.

- (25) raamanaala adu muDiy-um
 Rama-I that-N can-3sn
 ‘Rama can do that.’

Thus far we have discussed agreement and case checking on certain finite constructions. We now turn our attention to non-finite and finite complements of CP/TP embedding predicates.

1.2.3 Finite and non-finite complements

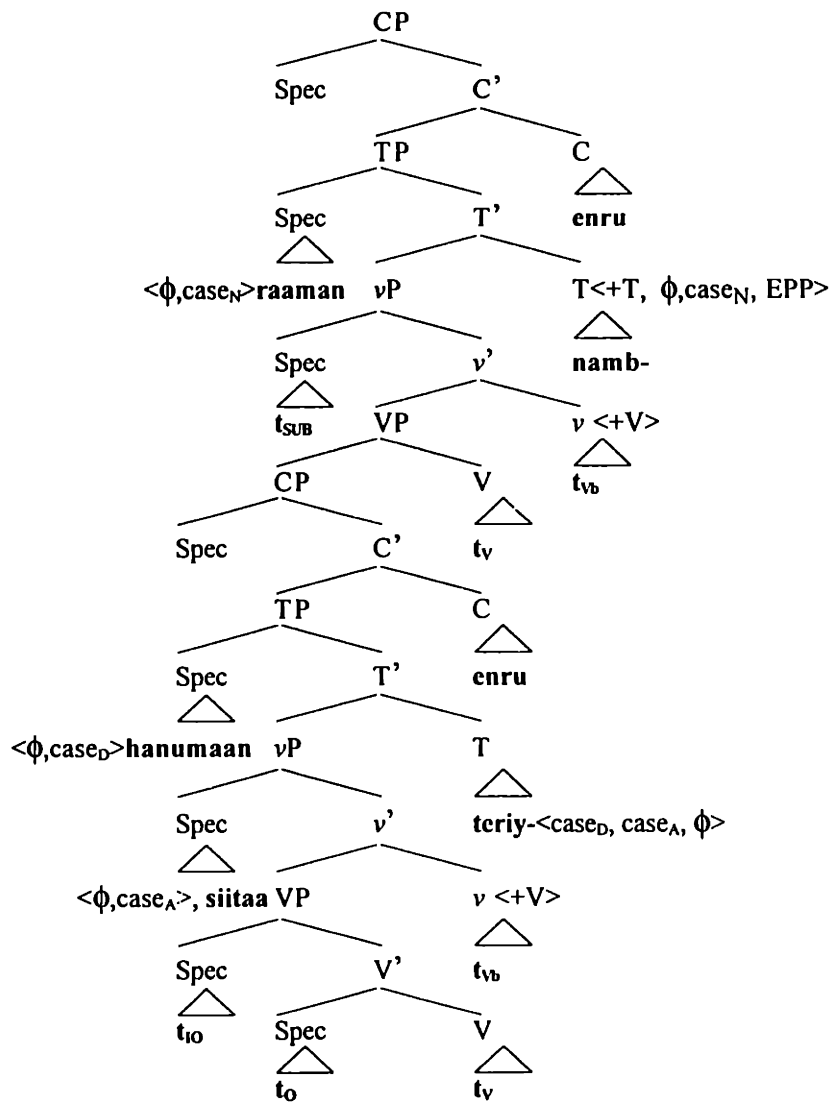
Certain predicates such as **solla** ‘say’, **edirpaarkka** ‘expect’, **namba** ‘to believe’, **keTka** ‘hear’ etc. take finite CP complements, with DS and non-DS predicates. Feature checking in these configurations is extremely straightforward in that it occurs within each minimal domain of T. The matrix T and the embedded T function independently of each other. We give an example here to illustrate this-

- (26) raaman [hanumaan-ukku siitaav-ai teriy-um enru] namb-in-aan
 Rama-N Hanuman-D Sita-A know-3sn that believe-past-3sm
 ‘Rama believed that Hanuman will know Sita.’

The internal structure of the sentence post-checking is given below in (27). The matrix subject raises to Spec, TP of the matrix T (EPP feature) and the verb (or rather the V+v complex) raises to T. The phi-features on the verb and the subject are checked as well. Within the lower clause, the DS subject raises to Spec, TP (EPP feature) but has its case feature checked internal to the VP. The object has an unchecked case feature, which is checked by the lower T which also has a matching, unchecked case feature. The phi-features are checked on both the object and the verb.

We find more interesting examples of case and agreement with infinitival complements. In Tamil, infinitival clauses may be selected as complements of various predicates. They can occur with certain modal auxiliaries, which we return to in our discussion of auxiliaries. They are selected by predicates that only take an infinitival complement and are unable to take finite TP complements. Examples include, **virumba** ‘want’, **ishTam** ‘desire’, **veNDa** ‘want’ (DS predicate) and **muyarci seiyaa** ‘make effort, try’. They are optionally selected by certain predicates that also take finite complements (see above). Examples include predicates like **solla** ‘say’, **uttaravu iDu**, ‘order’, **viDu** ‘let’, **kaTTaayapaDuttu** ‘force’ and the causative verb **veikka** ‘make’. In these cases, the matrix verb affects the case-marking on the external argument of the embedded verb. Finally, they are selected as causal, temporal or resultative clauses with an overt nominative subject in the embedded clause. We discuss each construction in turn.

(27)



Verbs that select an infinitival complement only and never a finite complement are restricted to a small class of obligatory subject-control predicates. The embedded verb carries no tense or agreement and occurs with the infinitival suffix *-a*.¹⁸ The matrix subject is construed as being the agent of the embedded action(s) as well—

- (28) raaman [PRO siitaa-kku hanumaan-ai anupp-a] virumb-in-aan
 Rama-N Sita-D Hanuman-A send-inf want-past-3sm
 ‘Rama wanted to send Hanuman to Sita.’

The matrix T, as we know by now, checks the case and phi-features of the subject NP and has its EPP feature checked by that NP. It also checks the phi-features on the verb and its [tense] feature. The embedded T is specified as [-tense], but still carries an EPP feature and a null case

¹⁸This suffix is constant across all classes of verbs, but the stem morphology changes with each class.

feature¹⁹. The embedded verb checks the case feature on the dative-marked internal argument and the object will have its case checked in Spec, *v*P. We will assume that the verb raises to T even though there are no phi-features to check on the verb, and that T requires a verbal category in its checking domain. The EPP and the null case are checked on the empty pronominal subject (PRO) in Spec, TP. Co-reference between the matrix subject and the null subject of the embedded clause gives us the subject-control reading. We also assume that predicates that select an infinitival complement are selecting TPs rather than CPs for the simple reason that complementizers never seem to select a non-finite TP.²⁰ We do not provide a phrase structure for this tree since it is simple to see what the underlying structure is given the preceding discussion.

An additional feature of these predicates is that they are unable to support an overt NP in the embedded subject position—

- (29) *raaman [hanumaan siitaav-ai paarkk-a] virumb-in-aan
 Rama-N Hanuman-N Sita-A see-inf want-past-3sm
 ‘Rama wants Hanuman to see Sita.’

The embedded T, being specified [-tense], cannot check the (nominative) case feature on the argument **hanumaan**. The matrix verb does not have any unchecked case features either. So the derivation crashes.

A DS equivalent of this predicate, is the verb **veNDa** ‘to want’²¹. It is a dative subject–nominative object DS-predicate—

- (30) raaman-ukku poor-ila veTri veND-um²²
 Rama-D war-L victory-N want-3sn
 ‘Rama wants victory in war.’

It can optionally select infinitival complements. However, these infinitival complements may either be subject-controlled or optionally select an overt NP as the external argument—

¹⁹T that is specified [-tense], carries the null case that can only be checked on PRO. If T is specified [+tense] then it carries a nominative case feature that is checked on an external or internal argument of the predicate.

²⁰We shall ignore here any co-dependence between C and TP. We simply assume that predicates may either select TPs or CPs. If the former, then with certain implications on case for the external and internal embedded arguments as we shall see. In some sense, we are resorting to notions of transparency of TP from the P&P theory.

²¹The meaning of **veNDa** and **virumba** are similar and can be translated as ‘want’. The former indicates a certain amount of internal compulsion while the latter indicates a wish or a desire.

²²This verb is morphologically deficient in that it has the same inflectional marking for all numbers and genders in the present tense. In the past tense the agreement can be seen if an auxiliary is present—

- (a) raaman-ukku siitaa veNDi iru-nd-aaL
 Ram-D Sita-N want be-past-3sf
 ‘Rama wanted Sita.’

- (31) raaman-ukku [_{TP}PRO siitaav-ai kaappaatt-a] veND-um
 Rama-D Sita-A save-inf want-3sn
 ‘Rama wants to save Sita.’
- (32) raaman-ukku [_{TP}hanumaan siitaav-ai kaappaatt-a] veND-um
 Rama-D Hanuman-N Sita-A save-inf want-3sm
 ‘Rama wants Hanuman to save Sita.’

The case on the matrix subject is checked by the matrix T (specified $\langle [+tense], case_N, \phi, EPP \rangle$). The case feature of the internal NP *siitaa* is checked by the verb (specified $case_A$) in νP . As we know, the embedded T (specified $[-tense]$) carries the EPP and the null case features. PRO is the result of this EPP feature and T also checks its null case feature. In the second example, the embedded T will be unable to check the case feature on the overt NP but, unlike (29), the derivation in (32) does converge. This is possible because the matrix predicate has a nominative case feature, which it can check on the embedded overt subject. Thus, the case feature on the overt NP *can* be checked by the matrix T. We assume that this somewhat non-local case-checking is achieved by covert raising of the unchecked case feature. However, this case feature checking does *not* have implications for verb agreement. Neither the matrix nor the embedded verb shows ‘agreement’ with this subject—

- (33) *raaman-ukku [_{TP}hanumaan siitaav-ai kaappaatt-a] veND-i iru-nd-aan
 Rama-D Hanuman-N Sita-A save-inf want-vbp be-past-3sm
 ‘Rama wants Hanuman to save Sita.’

The embedded subject NP *is* in the checking domain of the embedded predicate and consequently T, but neither its case nor its phi-features may be checked in this domain. So it cannot show agreement with this verb. Further, it *is not* in the checking domain of the matrix verb (and is not θ -related to it) but has its case feature checked by the matrix T. This relation is also insufficient for ‘agreement’. Recall our discussion of nominative objects. The essential difference between the two constructions is the location of merger of the argument. Agreement between object and the predicate is possible only when the object can be in the direct checking domain of the verb and consequently, T. However, this relationship is not *necessary* for case feature checking. Note that in the subject-control case the matrix T carries an unchecked nominative case feature (exactly as in the dative-accusative configurations) and that is permissible.

In the above we have seen feature checking in simple finite constructions with nominative and dative case-marked subjects. We have also seen case and agreement in certain predicates that select finite TP sentential complements and others that select infinitival TP complements. With infinitival complements we showed that predicates varied in whether they could check case on an embedded, overt subject or object NP that has an unchecked case feature. We discussed one predicate in particular, which could check case on an embedded argument. We now turn to other predicates (nominative-accusative) that behave similarly.

Predicates like **solla** ‘say’, **uttaraviDu**, ‘order’, **viDu** ‘let’, **kaTTaayapaDuttu** ‘force’ and the causative verb **veikka** ‘make’ also select an infinitival complement. As with **veNDa-** ‘to want’, these infinitivals can check case on NPs within the embedded TP which have unchecked case features. If the embedded predicate is of the nominative-accusative type, the matrix verb checks an accusative case feature on the overt (subject) NP. If the embedded predicate is a dative-accusative predicate, we find no visible changes but if it is a dative-nominative predicate, we find accusative case on the embedded object. We illustrate these in the following with the causative verb (the relevant NP is shown in bold)—

- (34) hanumaan [TPsiitaav-ai modiratt-ai paarkk-a] vei-t-aan
 Hanuman-N Sita-A ring-A see-inf make-past-3sm
 ‘Hanuman made Sita see the ring.’
- (35) hanumaan [TPsiitaa-ukku vishayatt-ai puriy-a] vei-t-aan
 Hanuman-N Sita-D matter-A understand-inf make-past-3sm
 ‘Hanuman made Sita understand the matter.’
- (36) hanumaan [TPsiitaa-kku modiratt-ai kiDaikk-a] vei-t-aan
 Hanuman-N Sita-D ring-A get-inf make-past-3sm
 ‘Hanuman made Sita get the ring.’

In (34), the external argument ‘Sita’ cannot have its case checked by the lower T. That this is an external argument of the embedded verb is quite clear. It is the agent of the action indicated by the predicate. The matrix verb is able to check its accusative case feature with the lower external argument. In (35), the two internal arguments of the lower predicate have no unchecked, case features. The matrix verb has an unchecked accusative case feature but no argument with which to check the feature. In (36), the embedded T cannot check the case feature on the internal argument of the embedded predicate, but the matrix T can. Accusative case feature checking by the matrix predicate is possible and in fact, necessary. The accusative case marking on the subject/object NP is structural case and not inherent. Passivization will promote this object to the position of the matrix subject with the associated nominative case. As we might expect, this case-checking relation also obtains in multiple embeddings—

- (37) [TP₁lakshmaNan-ukku [TP₂raaman [TP₃hanumaan-ai siitaa-kku modiratt-ai
 Lakshmana-D Rama-N Hanuman-A Sita-D ring-A
 kaaTT-a] soll-a] veND-um]
 show-inf say-inf want-3sn
 ‘Hanuman wants Rama to tell Hanuman to show the ring to Sita.’

Within TP₁ (the outermost or the highest clause), the dative subject (**lakshman**, ‘Lakshman’) has its case-checked VP-internally. T₁ can check a nominative case feature as well. The predicate **veNDa** ‘to want’, selects a TP complement (which we call TP₂). TP₂ has an external argument

(**raama** ‘Rama’). T2 cannot check the nominative case feature on this argument since it is an infinitival and only able to check the null case. However, the matrix T1 can check its case. Now, the predicate in TP3 has two internal arguments which have their case checked locally (within VP for the indirect object and within vP for the direct object). There is also an external argument (**hanuman**. ‘Hanuman’) which cannot have its case checked by a non-finite T3. The predicate **solla** ‘to say’ of TP2 can check the accusative case on this external argument. Thus, all NPs in the sentence have their case features checked. If the verb **solla** ‘to say’ of TP2 were to be replaced by the verb **virumba** ‘desire, like to’ (which we know cannot check the case on an overt lower argument), then the sentence would be ungrammatical. The case feature on the external subject of TP3 will remain unchecked.

This case-checking process by a matrix verb is not an unbounded one. case features cannot be checked long-distance, that is by a predicate or a T that is not immediately adjacent. We can demonstrate this through the following—

- (38) [TP₁raaman-ukku[TP₂PRO[TP₃hanumaan-ai siitaa-kku modiratt-ai koDukk-a]
 Rama-D Hanuman-A Sita-D ring-A give-inf
 soll-a] veND-um]
 say-inf want-3sn
 ‘Rama wants to tell Hanuman to give the ring to Sita.’

- (39) [TP₁raaman-ukku [TP₂hanumaan[TP₃PRO siitaa-kku modiratt-ai koDukk-a]
 Rama-D Hanuman-A Sita-D ring-A give-inf
 soll-a] veND-um]
 say-inf want-3sn
 ‘Rama wants Hanuman to tell someone to give the ring to Sita.’

- (40) *[TP₁raaman-ukku [TP₂PRO[TP₃hanumaan siitaa-kku modiratt-ai
 Rama-D Hanuman-N Sita-D ring-A
 koDukk-a] soll-a] veND-um]
 give-inf say-inf want-3sn
 ‘Rama wants someone to tell Hanuman to give the ring to Sita.’

In the above, the NP **hanuman** ‘Hanuman’, carries a case feature that its local T (TP3) cannot check. It has to get case from a suitable predicate or T if the derivation is to converge. The internal arguments of the verb **koDukka** ‘to give’ have all their features checked. The options for case are either the predicate of TP2 or T1 (TP1). The former can check a nominative case feature and the latter an accusative case feature. If the predicate in TP2 checks the case on this NP, then it is construed as the subject of TP3. That is, Hanuman gives the ring to Sita. T2 by virtue of its EPP and null case features has PRO as its external argument which is controlled by the matrix subject (TP1). That is, Rama is the one who wants and the one who tells Hanuman to give the ring to Sita. If the matrix T (which can check a nominative case feature, being [+tense]) checks the case on the NP **hanuman** ‘Hanuman’ then it is construed as the subject of the predicate in TP2

and *not* the subject of TP3. Thus, Rama wants but Hanuman says that some unspecified person (PRO is generated in Spec, TP3) gives the ring to Sita²³. It is not possible to construe the nominative marked NP in (40) as the subject of TP3. Hence, the ungrammaticality of (40). It may be argued that the ungrammaticality is because of the unchecked case feature on the verb *solla* ‘to say’ and not because the NP has its case checked by a matrix verb when a more local case-checker is available. We have already demonstrated with ECM and dative-accusative predicates that the case features on the T (nominative) and the ECM verb (accusative) need not be *obligatorily* checked.

If we employ a case featureless verb like, *virumba* ‘to like’ in TP2, we know that it cannot check case on the subject NP of TP3—

- (41) *_{[TP1raaman}_{[TP2PRO}_{[TP3siitaa} velai-ai seiyy-a] virumb-a] son-n-aan]
 Rama-N Sita-N work-A do-inf like-inf say-past-3sm
 ‘Rama told someone to like Sita to do the work.’²⁴

The only predicate that can do so, is the matrix predicate *solla* ‘to say’. However, it cannot check case on an NP in TP3. This is most clearly seen when the object is scrambled locally, over the subject—

- (42) *_{[TP1raaman}_{[TP2PRO}_{[TP3velai-ai} **siitav-ai** seiyy-a] virumb-a] son-n-aan]
 Rama-N work-A Sita-N do-inf like-inf say-past-3sm
 ‘Rama told someone to like Sita to do the work.’

Here, there is no local case-checking head to bypass, but the NP cannot stand in a case-checking relation with the predicate in TP1.

In the above, we have discussed infinitival complements where the overt subject, if present, has its case feature checked by a matrix verb. We saw examples of both accusative case feature checking by a matrix predicate and a nominative case feature checking by a matrix T.

In Tamil, an infinitival can be embedded within a matrix as an ‘adverbial’ clause. It has various semantic interpretations including purpose, result and cause-effect, as well as temporal relations. Examples are given below—

²³It must be pointed out that this external argument could be a *pro* as well. Since null arguments are possible in Tamil, it is likely that the accusative case has been checked on the subject of T3 which happens to be phonetically null. It is not important to pursue this distinction.

²⁴This sentence has the sense of ‘demanding’ that Sita like working.

Cause-effect:

- (43) [[_{TP}hanumaan maratt-ai aaTT-a] siitaa mela paar-tt-aaL]
Hanuman-N tree-A shake-inf Sita up look-past-3sf
'Because Hanuman shook the tree, Sita looked up.'

Result:

- (44) [_{TP}ilai vizh-a] [hanumaan maratt-ai aaTT-in-aan]
leaf fall-inf Hanuman-N tree-A shake-past-3sm
'Hanuman shook the tree that the leaves fell.'

Temporal relations:

- (45) [siitaa maratt-aDi-ila uTkaar-a] [hanumaan lankai-kku va-nd-aan]
Sita-N tree-under-L sit-inf Hanuman-N Lanka-D come-past-3sm
'While Sita was sitting under the tree, Hanuman came to Lanka.'

Purpose:

- (46) [raaman siitaav-ai kaNDu-piDikk-a] [hanumaan lankai-kku po-n-aan]
Rama-N Sita-A see-catch-inf Hanuman-N Lanka-D go-past-3sm
'Hanuman went to Lanka so that Rama may find Sita.'

The infinitival clause has been moved to the periphery. Let us ignore this movement for the present. It appears that an infinitival clause licenses an overt subject directly. There is no other source of case for the subject of the infinitival clause. This is a very surprising given what we have said about [-tense] Ts. In all these examples, the purpose etc. clause can also be marked by a postposition or a nominal head that indicates purpose, result, etc. The clause is not infinitival anymore and the predicate is nominalized (47 and 50) or adjectivalized (48 and 49)—

Cause-effect:

- (47) [[_{TP}hanumaan_i maratt-ai aaTT-in-ad-aala] siitaa mela paar-it-aaL]
Hanuman-N tree-A shake-past-nom-I Sita up look-past-3sf
'Because Hanuman shook the tree, Sita looked up.'

Result:

- (48) [[_{TP}ilai vizhu-kir-a] varai] [hanumaan maratt-ai aaTT-in-aan]
leaf fall-pres-adj until Hanuman-N tree-A shake-past-3sm
'Hanuman shook the tree that the leaves fell.'

Temporal relations:

- (49) [siitaa maratt-aDi-ila uTkaar-nd-a-pozhudu] [hanumaan lankai-kku va-nd-aan]
Sita-N tree-under-L sit-past-adj-time Hanuman-N Lanka-D come-past-3sm
'While Sita was sitting under the tree, Hanuman came to Lanka.'

Purpose:

- (50) [raaman siitaav-ai kaNDu-piDi-pp-ad-arku] [hanumaan lankai-kku po-n-aan]
Rama-N Sita-A see-catch-fut-nom-for Hanuman-N Lanka-D go-past-3sm
'Hanuman went to Lanka so that Rama may find Sita.'

The case and phi-features on the arguments within the purpose etc. clause are checked internal to the TP. However, these infinitivals do not behave like the infinitival complements we discussed earlier. For example, it is not possible to cleft the infinitival clause in these constructions. Infinitival and finite complements can be routinely clefted across the matrix verb (see Chapter 2). The purpose etc. clauses with postpositional heads can also be clefted. Compare the following—

- (51) *[hanumaan lankai-kku po-n-adu] [raaman siitaav-ai kaNDu-piDikk-a]-taan
Hanuman-N Lanka-D go-past-nom Rama-N Sita-A see-catch-inf-FOC
'It is (in order) that Rama find Sita that Hanuman went to Lanka.'
- (52) [hanumaan lankai-kku po-n-adu] [raaman siitaav-ai kaNDu-piDi-pp-ad-arku]-taan
Hanuman-N Lanka-D go-past-nom Rama-N Sita-A see-catch-fut-nom-for-FOC
'Hanuman went to Lanka so that Rama may find Sita.'
- (53) [hanumaan lankai-kku po-n-adu] [siitaav-ai kaNDU-piDikk-a]-taan
Hanuman-N Lanka-D go-past-nom Sita-A see-catch-inf-FOC
It was to save Sita that Hanuman went to Lanka.'

Further, the matrix verb is unable to check the case on the overt subject of the infinitival, contrary to what we have seen so far, unless the infinitival has been directly selected by a causative or similar case checking verb. In (54) the matrix causative tries to check accusative case on the infinitival subject but is unable to do so, but in (55) the causative that is part of the infinitival can check the accusative case feature on the subject—

- (54) ***[raaman-ai [siiiitaav-ai kaapaatt-a]]**[hanumaan lankai-kku pog-a vei-tt-aan]
Rama-A Sita-A save-inf Hanuman-N Lanka-D go-inf make-past-3sm
'Hanuman made Rama go to Lanka so that (he) may save Sita.'
- (55) **[raaman-ai [siiiitaav-ai kaapaatt-a]veikka]** [hanumaan lankai-kku po-n-aan]
Rama-A Sita-A save-inf make-inf Hanuman-N Lanka-D go-past-3sm
'Hanuman went to Lanka (in order) to make Rama save Sita.'

It appears that the purpose, cause-effect etc. clauses, though infinitival, behave unlike infinitival complements selected by matrix verbs. They are not transparent to most operations that can apply to infinitival complements. In fact, this separation is also signaled by their position at the periphery of the sentence. We suggest that in these constructions, the infinitival clause is not a TP but a CP with an empty COMP, despite the infinitival verb morphology. This accounts for

the independence of the infinitival clause with respect to feature checking properties. The functional, T heads of both clauses are not in a local relation (see below). Further, this clause may not be a strict complement of the matrix verb but rather, a parenthetical clause. This does not explain why a CP with infinitival morphology is able to check a nominative case on its subject. But the problem is perhaps not on the level of feature checking but on the level of characterizing infinitivals as behaving optionally as ‘nominalizations’.

At this point we depart from our discussion to make two comments. In the above, we have treated the causative as a V and assumed that it selects a TP as its complement. We also, assumed that it had a case feature that it could check on an embedded NP that carries an unchecked case feature. In many languages however, a causative is considered a small *v* that selects a small clause complement and the verb morphology does not correlate with an infinitival complement selection. In English for example, the infinitival marker ‘to’ is absent in causatives but present in other predicates that take an infinitival complement and check case on an embedded argument—

(56) I expect him to go

(57) I made him go

We need to justify our characterization of the causative verb. In Tamil, there are two ways to indicate causation. The one we have seen above, with a causative verb **veikka** ‘to make’. This verb does select an infinitival TP complement. The verb morphology on the embedded verb is indicative of this. The embedded verb also selects the full range of its complements (internal and external arguments). The case feature on one of these arguments can and in fact, *must* be checked by the causative predicate if required. The causative verb functions like other such predicates, example, **solla** ‘to say’. An alternative way to form causatives in Tamil, is to add a verbal suffix, i.e., to create a derived verbal stem. This is a somewhat restricted process in Modern Tamil. Examples include—

(58)	var-a	‘to come’	varu-vi	‘cause to come’
	keeTk-a	‘to hear’	keT-pi	‘cause to listen’
	paDikk-a	‘to study’	paDi-ppi	‘cause to learn’

Sample sentences with the derived and underived verb show the presence of an additional argument (the causee)—

(59) raaman lankai-kku va-nd-aan
 Rama-N Lanka-D come-past-3sm
 ‘Rama came to (Sri) Lanka.’

- (60) raaman lankai-kku hanumaan-ai varu-vi-tt-aan
 Rama-N Lanka-D Hanuman-A come-make-past-3sm
 'Rama made-come Hanuman to Lanka.'

In these cases, the internal structure of the causative does not include an embedded TP and the causative verb may be analyzed as including a small clause complement with the CAUSE as a matrix light verb.

The second comment we have to make has to do with suitability of embedding. There are some strong restrictions that are placed on the embedding of TPs within other TPs. Consider the following examples:

- (61) raaman [TPPRO lankai-kku pog-a] virumb-in-aan
 Rama-N Lanka-D go-inf want-past-3sm
 'Rama wanted to go to Lanka.'
- (62) *raaman [TPPRO raavaNan-ai teriy-a] virumb-in-aan
 Rama-N Ravana-A know-inf want-past-3sm
 'Rama wanted to know Ravana.'

(61), with an infinitival TP is grammatical while (62) is not. This difference is attributable to the 'kind' of predicate that is embedded – a nominative-accusative predicate (nominative infinitival) in the first and a DS-accusative predicate (DS infinitival) in the second. We know that the matrix verb and matrix T have no additional case features to check on an embedded NP. Consequently, an overt subject within the embedded clause in (61) will cause the derivation to crash. The null case and EPP features are checked by the non-finite T on the PRO subject. We expect both (61) and (62) to be grammatical since there are no unchecked features. However, it appears that a DS infinitival can be embedded beneath only another DS predicate, with or without an overt subject—

- (63) [raaman-ukku [TPPRO raavaNan-ai teriy-a] veND-um]
 Rama-D Ravana-A know-inf want -3sm
 'Rama wanted to know Ravana.'
- (64) [raaman-ukku [TPhanumaan-ukku raavaNan-ai teriy-a] veND-um]
 Rama-D Hanuman-D Ravana-A know-inf want -3sm
 'Rama wanted Hanuman to know Ravana.'

The case and phi-features on the overt subject of the infinitival TP are checked by the V. The subject NP subsequently raises to Spec, TP attracted by the EPP feature. The case on the object is checked by the embedded verb within vP. If instead of a null subject (PRO) an overt argument were present in Spec, TP of the DS infinitival in (62), then that sentence remains unacceptable.

Recall that this overt NP has its case feature checked by the predicate so there is no obvious feature-checking reason for this ungrammaticality. We demonstrate this in the following—

- (65) ***[hanumaan [siitaa-kku modiratt-ai piDikk-a] uttarav-iT-T-aan**
 Hanuman-N Sita-D ring-A like-inf order-say-past-3sm
 ‘Hanuman ordered Sita to like the ring.’

If the DS infinitival is replaced with an equivalent, nominative infinitival, the sentence becomes acceptable again (66). Recall, that an overt subject is not possible in a nominative infinitival Spec, TP since the null infinitival cannot check the NP’s (nominative) case feature *unless* the matrix verb is able to do so—

- (66) **raaman [TPPRO raavaNan-ai terindu-koLL-a] virumb-in-aan**
 Rama-N Ravana-A know-have-inf want-past-3sm
 ‘Rama wanted to know Ravana.’

We must point out that it is difficult in general to embed a DS infinitival predicate beneath a nominative matrix predicate. DS predicates are about experiencing feelings and possessing intangible qualities etc. and the verbs selecting infinitival TPs are usually manipulative or command-giving. The semantics of the two do not match very well. Nonetheless, it is still clear that these sentences are not just semantically-odd but outright ungrammatical. Semantic mismatch does not explain why a DS matrix predicate can select a DS infinitival while a nominative matrix cannot select a DS infinitival even when they mean roughly the same thing. It appears that the matrix predicate determines the kind of embedded predicate it can host. The descriptive generalization is that a DS predicate can host either a DS infinitival (with a null or an overt subject) or a nominative infinitival (with a null or an overt subject) and a nominative predicate can host a nominative infinitival only (with a null or an overt subject). We attribute this restriction to a case matching requirement between T’s in the following way. We assume that T [+tense] in a DS predicate can not only check a nominative case feature but is ‘affected’ by the (dative) NP in its Spec. It checks nominative case but its ability to host dative arguments has real consequences. It is therefore able to indirectly host a DS subject (both PRO and overt) in the lower T. PRO with null case is the default. A finite nominative predicate is able to check only nominative case and does not host a dative subject. It cannot therefore, indirectly host a DS subject in an embedded infinitival. This dependence between Ts is also a local relation. For example, a matrix DS predicate cannot host a DS null subject in the following—

- (67) **raaman-ukku [TPsiitaa [TPPRO hanumaan-ai puriy-a] virumb-a] veND-um]**
 Rama-D Sita-N Hanuman-A understand-inf like-inf want-3sn’
 ‘Rama wanted Sita to like to understand Hanuman.’

The immediately c-commanding T (T2) can only indirectly host a nominative argument. Thus, case is not only a local checking relation between a functional head and an NP but is mediated by

a c-commanding T. In the above, we have been quite loosely attributing case to PRO. More carefully, PRO is licensed by a T that is specified [-tense] which is itself in a local relation with the T that immediately c-commands it. This local relation limits the choice of the embedded predicate. This relationship between Ts will be a major concern when we discuss binding facts in Tamil (see section 1.7)

1.3 SUMMARY

Our concern in the preceding has been the internal feature-checking relations that obtain between T and V and their arguments. We discussed various predicates including those that take non-canonical or DS case-marked subjects. We discussed finite and infinitival complements and the limited long-distance case relations between a matrix V or T and an NP within the embedded clause. We now turn our attention to a finite construction in Tamil that is similar to finites in all respects but one, the subject is always the 2nd person. This construction, the imperative, is particularly important in the light of acquisition data.

1.4 IMPERATIVES

Tamil distinguishes between singular (negative and affirmative) and plural (negative and affirmative) imperative forms. The singular affirmative imperative form is generally identical with the bare stem of the verb. It is the same as the infinitive stem minus the infinitival suffix *-a* in most cases.²⁵, and examples are given in (68)—

(68)	taa	‘give!’	(tara	‘to give)
	poo	‘go!’	(poga	‘to go’)
	vaa	‘come’	(vara	‘to come’)
	paar(u)	‘see!’	(paarkka	‘to see’)
	tuukk(u)	‘carry!’	(tuukka	‘to carry)

The plural affirmative imperative form carries an appended second person honorific suffix and a plural marker *-(u)nga* (um+gaL). This form (as also the negative plural) can be interpreted either as singular, honorific imperative or as the plural imperative. Examples are given in (69)—

(69)	taanga	‘please give!’ or ‘(you all) give!’
	poonga	‘please go!’ or ‘(you all) go!’
	vaanga	‘please come!’ or ‘(you all) come!’
	paarunga	‘please see!’ or ‘(you all) see!’
	tuukkunga	‘please carry!’ or ‘(you all) carry!’

²⁵ There are some vowel differences including vowel length and vowel-insertion and consonant deletion, but these have to do with proper syllabification and cannot really help us distinguish between imperatives and true bare stems.

The singular imperative negative form includes the negative morpheme *-aat* and a euphonic suffix *-ee* attached to the infinitive stem—

- | | | |
|------|---------------|---------------|
| (70) | tar-aat-ee | ‘don't give!’ |
| | pog-aat-ee | ‘don't go!’ |
| | var-aat-ee | ‘don't come!’ |
| | paarkk-aat-ee | ‘don't see!’ |

The plural negative imperative form contains the negative morpheme *-aat* and a second person plural suffix *-iinga* (iir- gaL)—

- | | | |
|------|------------------|---|
| (71) | tar-aat-iinga | ‘please don't give!’ or ‘(you all) don't give!’ |
| | pog-aat-iinga | ‘please don't go!’ or ‘(you all) don't go!’ |
| | var-aat-iinga | ‘please don't come!’ or ‘(you all) don't come!’ |
| | paarkk-aat-iinga | ‘please don't see!’ or ‘(you all) don't see!’ |
| | tuukk-aat-iinga | ‘please don't carry!’ or ‘(you all) don't carry!’ |

It appears that the imperative is marked for number at least and by default the second person agreement feature as well. This is especially clear in the plural negative imperative form where the honorific/person suffix is identical to the inflectional suffix for second person plural agreement marking. Further, these forms are not simple concatenations of a bare verb and a negative auxiliary. Their form is uniquely determined. It is not possible to form imperatives with DS predicates, whether of the dative-accusative or the dative-nominative kind—

- | | | | | |
|------|-------------------|---------------------|------------------------|------------------|
| (72) | *piDii | ‘like!’ | (r ^h iDikka | ‘to like’ |
| | *piDikk-aat-ee | ‘don't like!’ | | |
| | *tevaippaDu | ‘need!’ | (tevaippaDa | ‘to need’ |
| | *tevaippaD-aat-ee | ‘don't need!’ | | |
| | *purii | ‘understand!’ | (puriya | ‘to understand’) |
| | *puri-aat-ee | ‘don't understand!’ | | |

An overt subject is seldom present in these constructions but when it is, it carries the *vocative* case (which in most cases is unmarked) with the accompanying intonational peak on the NP (usually to capture the attention of the person or for emphasis). Apart from the unexpressed subject, the verb permits the full range of its complements, including embedded non-finite, sentential complements. In fact, imperatives may themselves be selected as finite complements by other matrix verbs. In the following example, the imperative is selected by the matrix verb *solla* ‘to say’ and itself selects an infinitival TP. The matrix verb does not affect case relations within the imperative. The phonologically null, second person subject of the imperative controls PRO subject of the embedded infinitival—

- (73) [raaman [CP[TPsiitaa-kku modiratt-ai kaaTT-a] po enru] son-n-aan]
 Rama-N Sita-D ring-A show-imp go-imp that say-past-3sm
 ‘Rama said “Go show the ring to Sita!”.’

The imperative predicate itself may also check case on an NP in the infinitival complement—

- (74) raaman lakshmaNan-ukku [[hanumaan-ai siitaav-ai paarkk-a]
 Rama-N Lakshmana-D Hanuman-A Sita-A see-inf
 sollu enru] ezhud-in-aan
 say-imp that write-past-3sm
 Rama wrote to Lakshmana, “Tell Hanuman to see Sita!”.’

Given the properties outlined in the previous sections, it is quite clear that the internal structure of an imperative construction is practically identical to the nominative-accusative finite clauses discussed earlier. There are three identifiable differences: (a) that there is no overt subject NP present in Spec, TP, (b) the subject is always assumed to be second person (the number is signaled by the number morphology on the verb) and (c) there is no overt specification for tense. The imperative is always interpreted with relevance to the utterance context. In fact, infinitivals selected by the imperative are all interpreted as temporally identical. The null subject is always characterized as—

- (75) [–speaker, +addressee, α number]

Let us assume that Imperative indicates locutionary force, similar to negation etc. (Laka 1990, Leszek 1995). The characteristic features of this construction is that it carries the ϕ -features for the second person, number is optionally selected. We assume that it is situated above Neg.²⁶ Since imperatives are always finite (identified by the overt complementizer) we know that case and ϕ -feature checking must be completed internal to this imperative TP. The null subject we have seen so far is PRO. But the null imperative subjects are not non-referential, they are not controlled by a contextually salient entity and they are not arbitrary. It is *always* the addressee that is the subject. Therefore, the null subject cannot be PRO. Neither is the subject optionally dropped (by the phenomenon of *pro*-drop). It is *never* present. Let us assume that the IMP node bears the interpretive person and (optionally selected) number features. Let us also assume that it checks an IMP case feature on the subject and further that this feature must be obligatorily checked. The phonological matrix associated with the following features on an NP are null: [–speaker, +addressee, \pm number, IMP case]. Consequently, if an IMP head is part of the numeration, it must check the relevant ϕ - and case features on the external subject. The subject must raise to Spec, IMP (and consequently to Spec, T?). A DS subject that has its case features

²⁶It is unclear why this must be so, but we don’t have an answer for why imperative constructions exist. Our goal is to isolate their properties in the context of our discussion.

checked by the verb may land in Spec, IMP but the IMP case feature cannot be checked. The derivation will not be able to converge.

Why must this be? We have seen that the nominative and accusative case features may optionally be left unchecked. It is possible that the experiencer semantics of DS predicates makes an imperative use impossible. However, there are DS verbs such as **puriya** ‘understand’ and **teriya** ‘know’ which cannot occur as imperatives while their nominative equivalents **purindukolla** ‘understand’ and **terindukolla** ‘know’ can. Semantics does not explain this general restriction on DS predicates. Additionally, imperative clauses are always finite. There is no equivalent non-finite imperative (whatever that might mean). This also suggests that case features within an imperative are obligatorily checked. The importance of the imperatives will become clear in our discussion on acquisition data (see Chapter 3). Whatever the analysis of the subject position, it is important to note that for case purposes, the imperative clause functions as an independent unit and is associated with certain morphological and structural peculiarities.

1.5 VERBAL PARTICIPLES

Another frequently employed non-finite (tenseless) form of the verb is the ‘verbal participle’ (VbP). The internal structure of the VbP in the affirmative and negative are given below. The VbP affix is homophonous with the past tense morpheme. The vowel **-u** (or **-i**) is added for proper syllabification. In the negative, there is no VbP suffix. We find the negative affix (**-aat**) followed either by the vowel **-u** or the suffix **-mal**—²⁷

Affirmative:

(76)	verb stem + VbP affix + -u/i	paar-tt-u	‘see-past-aff’
		aDi-tt-u	‘beat-past-aff’
		poy-i	‘go-past-aff’
		tuu-ng-i	‘sleep-past-aff’

Negative:

(77)	verb stem + -aat + u	OR	verb stem + -aa + -mal
	parrk-aat-u		paark-aa-mal
	‘see-neg-aff’		‘see-neg-aff’
	tuung-aat-u		tuung-aa-mal
	‘sleep-neg-aff’		‘sleep-neg-aff’
	pog-aat-u		pog-aa-mal
	‘go-neg-aff’		‘go-neg-aff’

The VbP is used primarily to conjoin clauses and to embed complements of certain predicates. Frequently, there is an assumption of temporal precedence of the VbP ‘action’ with respect to the matrix ‘action’. Examples of conjunction and subordination with VbPs are given below. —

²⁷There are many details involved in the phonological and morphological characterization of these forms. For example, the **-i** may be a proper part of the stem. We do not see the **-iu** because the sequence **-iu** is not licit. This description is sufficient for our purposes here.

(78) hanumaan [lankai-kku poy-i] siitaa-kku modiratt-ai koDu-tt-aan
 Hanuman-N Lanka-0D go-vbp Sita-D ring-A gave-past-3sm
 ‘Hanuman went to Lanka and gave Sita the ring.’

(79) hanumaan [siitaa-kku modiratt-ai koDu-ttu] muDi-tt-aan
 Hanuman-N Sita-D ring-A gave-vbp finish-past-3sm
 ‘Hanuman gave (off) the ring to Sita.’

VbPs are most commonly used to embed predicates beneath auxiliary verbs (see next section). With non-auxiliary matrix verbs, the infinitive is more likely to be used.²⁸ The VbP is interpreted vis-à-vis the matrix clause. Its tense and mood are determined by the matrix. Thus—

(80) hanuman lankai-kku poyi siitaa-kku modiratt-ai kodu-pp-aan
 Hanuman-N Lanka-D go-vbp Sita-D ring-A give-fut-3sm
 ‘Hanuman will go to Lanka and (will) give the ring to Sita.’

In fact, VbPs selected by an imperative matrix are also interpreted as imperatives—

(81) raaman [[lankai-kku pooyi] modiratt-ai koDu] enru son-n-aan
 Rama-N Lanka-D go-vbp ring-A give-imp-2s that say-past-3sm
 ‘Rama said “Go to lanka and give the ring!”.’

Unless explicitly indicated (by an ‘even though’ construction), the verbal participle is construed as being in the scope of the matrix negative—

(82) hanumaan [lankai-kku poyi] modiratt-ai koDukk-av-illai
 hanuman-N Lanka-D go-vbp ring-A gave-inf-neg
 ‘Hanuman didn’t go to Lanka and give the ring.’
 (Hanuman neither went to Lanka nor gave the ring.)

(83) hanumaan [lankai-kku poyi-um] modiratt-ai koDukk-av-illai
 hanuman-N Lanka-D go-vbp-even ring-A gave-inf-neg
 ‘Even though Hanuman went to Lanka and he didn’t give the ring.’

²⁸This is predominantly true. There are a few cases where a verbal participle may be used in alternation with infinitivals. For example—

(a) raaman [siitaav-ai peesi] keT-T-aan
 Rama-N Sita-A speak-vbp hear-past-3sm
 ‘Rama heard Sita speaking.’

(b) raaman [siitaav-ai pees-a] keT-T-aan
 Rama-N Sita-A speak-inf hear-past-3sm
 ‘Rama heard Sita speak.’

Note that in both, the case on the external argument is checked by the matrix verb.

Even if it is independently negated, it is still affected by the matrix—

- (84) hanumaan [lankai-kku pog-aa-mal] modiratt-ai koDukk-av-illai
 Hanuman-N Lanka-D go-neg-vbp ring-A give-inf-neg
 ‘Hanuman didn’t give the ring without going to Lanka.’
 (Implication: Hanuman gave the ring by going to Lanka.)

From the above, we see that it is the matrix T that is critical for the interpretation of tense, locutionary force, mood, negation etc. The infinitival is also interpreted vis-à-vis the matrix. The question of course is whether the VbP and the infinitival are the same structurally. Predicates in both, are able to select the full range of complements including CPs. Both do not have an overt subject (on which they can check case). Neither carries agreement features. Their agent is the same as the matrix (except in the ECM cases, see below). Both are treated as a ‘local domain’ with respect to binding; i.e. the anaphoric pronoun **taan** cannot be bound by the local subject in the matrix verb—

- (85) *raaman [tann-ai paar-ttu] siri-tt-aan
 Rama-N self-A see-vbp laugh-past-3sm
 ‘Rama laughed seeing self.’
- (86) *raaman [tann-ai paarkk-a] virumb-in-aan
 Rama-N self-A see-inf want-past-3sm
 ‘Rama wanted to see self.’

We would like to argue that in fact the internal structure is different. While the infinitival is a full TP with at least a null subject in Spec, TP, a verbal participle is just VP—

- (87) Infinitival: [Subject [TPPRO (object) Verb_{INF}] V_{FIN}]
 VbP: [Subject [VP(object) Verb_{VbP}] V_{FIN}]

There are several reasons why this must be so. For one, the infinitival unlike the VbP is never in the scope of the negation of the matrix. However, the most critical difference has to do with the EPP feature. Infinitivals can host a PRO in Spec, TP which checks the EPP feature on T. Additional evidence for the EPP feature comes from the ECM and DS cases discussed earlier, where either the matrix predicate or the matrix T checks the case feature on an embedded overt subject or the embedded predicate checks the case internally. Examples include—

- (88) raaman [hanumaan-ai siitaa-kku modiratt-ai koDu-kka] vei-tt-aan
 Rama-N Hanuman-A Sita-D ring-A give-inf make-past-3sm
 ‘Rama made Hanuman give the ring to Sita.’

- (89) raaman [siitaa-kku **puttagatt-ai** tevaippaD-a] vei-tt-aan
 Rama-N Sita-D book-A need-inf make-past-3sm
 ‘Rama made Sita need the book.’

The causative ‘make’ checks the (accusative) case feature on the embedded subject in (88) and the (accusative) case feature on the embedded object in (89). The subject in (89) has its case feature checked internal to the VP. The DS predicate ‘need’ cannot check the case feature on the object, however ‘make’ can. In both, there is an ‘external’ subject in Spec, TP of the infinitival. In contrast, the verbal participle cannot host such an external argument. In (90) the object **puttagam** ‘book’, does not check its case with the embedded DS predicate. This could be offered as a reason why this derivation does not converge. However, the object could conceivably have its case feature checked by the matrix, but the sentence is still ungrammatical (91)—

- (90) *raaman [_{TP}siitaa-kku **puttagam** tevaippaT-Tu] vaang-in-aan
 Rama-N Sita-D bok-N need-vbp buy-past-3sm
 ‘Rama bought (it) because Sita needed the book.’

- (91) *raaman **puttagatt-ai** [_{TP}siitaa-kku tevaippaT-Tu] vaang-in-aan
 Rama-N Sita-D bok-N need-vbp buy-past-3sm
 ‘Rama bought (it) because Sita needed the book.’

Further, even if the embedded predicate could check the case feature on the object (**piDikka** ‘to like’ in (92) is such a predicate) the sentence is still ungrammatical. (93) without an overt subject is however, grammatical—

- (92) *raaman [_{TP}siitaa-kku puttagatt-ai piDi-ttu] vaang-in-aan
 Rama-N Sita-D book-A like-vbp buy-past-3sm
 ‘Rama bought (it) because Sita liked the book.’

- (93) raaman [_{VP}puttagattai piDi-ttu] vaang-in-aan
 Rama-N book-A like-vbp buy-past-3sm
 ‘Rama bought (it) because he liked the book.’

It appears that the VbP has the internal structure of a VP as was suggested in (87). In the following section, we offer additional evidence for this structure by discussing serializing auxiliary verbs in Tamil.

1.6 AUXILIARIES AND SERIAL VERBS

One of the most common uses of the VbP is in the context of use of auxiliary verbs. Auxiliaries vary in whether they take a VbP complement or an infinitival complement. Modal auxiliaries (for example, **muDi** ‘be able’, **veeNDu** ‘to want’, **maaTTu** ‘hang’, **poga** ‘go’,

kuuD ‘be possible’ etc.), the causative verb (which we have already seen), the passive auxiliary and the negative auxiliary select an infinitival complement and most of them affect the case-properties of their complements. For example, the modals are DS predicates and assign dative case to their subjects—

(94) raamanukku [siitaav-ai kaapaatt-a] muDiy-um
 Rama-D Sita-A save-inf can-3sn
 ‘Rama can save Sita.’

(95) siitaa raaman-aala kaapaat-a-paT-T-aaL
 Sita-N Rama-I save-inf-PASS-past-3sf
 ‘Sita was saved by Rama.’

(96) raaman siitaav-ai kaapaattav-illai
 Rama-N Sita-A save-inf-neg
 ‘Rama didn’t save Sita.’

There are a number of other auxiliaries in Tamil, which are added to indicate aspect (perfective, progressive, continuous) and certain attitudinal information. These auxiliaries however, select the VbP. The main verb appears in the VbP form—

(97) hanumaan siitaa-kku modiratt-ai koDu-ttu-viT-T-aan
 Hanuman-N Sita-D ring-A give-vbp-leave-past-3sm
 ‘Hanuman has given the ring to Sita.’

Many auxiliaries may be stacked together. Only the last auxiliary (rightmost) in a series of auxiliaries reflects agreement etc. All other auxiliaries also appear as VbPs—

(98) raaman ravaNan-ai konnu-poT-Tu-viT-Tu-koN-Du-iru-nd-aan
 Rama-N Ravana-A kill-vbp-put-vbp-leave-vbp-have-vbp-be-past-3sm
 ‘Rama was killing Ravana off.’ (Lit. ‘Rama was killing and putting Ravana.’)

In the above, there is only one agreement marking on the entire predicate complex. This is always on the rightmost verbal element (V or v). There is also only one location for the negative. The entire verbal complex will be in the scope of this negation. It is not possible to negate individual auxiliaries—

(99) raaman ravaNan-ai konnu-poT-Tu-viT-Tu-koN-Du-irukk-av-illai
 Rama-N Ravana-A kill-vbp-put-vbp-leave-vbp-have-vbp-be-inf-neg
 ‘Rama was not killing Ravana off.’ (Lit. ‘Rama was not killing and putting Ravana.’)

With reference to the binding domain, the sentence containing this predicate complex (if finite) is a single domain and pronouns cannot be bound within it—

- (100) *raaman_i avan-ai_i paar-ttu-viT-T-aan
 Rama-N he-A see-vbp-leave-past-3sm
 ‘Rama_i has seen him_i.’

There are other very specific properties about this verbal complex. The subject and object selection are determined by the main verb. The auxiliaries do not have any independent lexical meaning. They only add certain aspectual or attitudinal information. The complex itself functions as a ‘compound’ unit. Items cannot be scrambled and inserted between elements in the complex—

- (101) *raaman t konnu-u ravaNan-ai viT-T-aan
 Rama-N kill-vbp Ravana-A leave-past-3sm
 ‘Rama was killing Ravana off.’

If the whole sentence is passivized, then the entire verbal complex (and not just the main verb) is passivized with the passive auxiliary being appended at the end. The passive auxiliary then bears the agreement and other features—

- (102) ravaNan raaman-aala konnu-u-viD-a-paT-T-aan
 Ravana-N Rama-I kill-vbp-leave-inf-PASS-past-3sm
 ‘Ravana was killed off by Rama.’

Given these properties we can identify the internal structure of these verbal complexes as follows. Recall that we have adopted the notion that the external argument was selected by *v* and not by *V*. Auxiliaries in Tamil, are precisely *v* category elements. They may select an external argument only. We have already shown that the main verb (*V*) raises through *v*. *v* can be recursively generated and *V* raises to each *v* along with the material from any previous *vs* to which it may have raised. It is this head movement that causes the apparent effect of an unbreakable or affixal sequence. The verbal participle is in effect nothing more than an uninflected *v* or *V* category that is selected by another *v* and which by itself does not raise to *T*. We assume right adjunction of the heads. Thus, only the final or rightmost *v* is closest to *T* and when the whole complex adjoins to *T*, inflection follows that *v*.

We have to make one additional assumption. Since only one subject is selected in a sentence, we have to assume that *v*P_s can optionally not select an external argument. It is impossible to say in any real way, whether a subject is the subject of *v*P₁ or *v*P₂. However, if all *v*P_s selected a subject then there would be the problem of checking case on all such subjects. Once one such external argument raises to Spec, TP the others cannot. Such a derivation will therefore crash. The more problematic scenario arises with DS predicates. The internal dative-argument was assumed to raise to Spec, TP because of the EPP feature. Suppose that a *v*P that selects the DS predicate selects an external argument. That external argument will raise to Spec,

TP being the closest argument to Spec, TP (MLC). The dative marked NP cannot raise to Spec, TP. However, its case feature has already been checked so there should be no unchecked case features around. But such sequences are not permissible in Tamil—

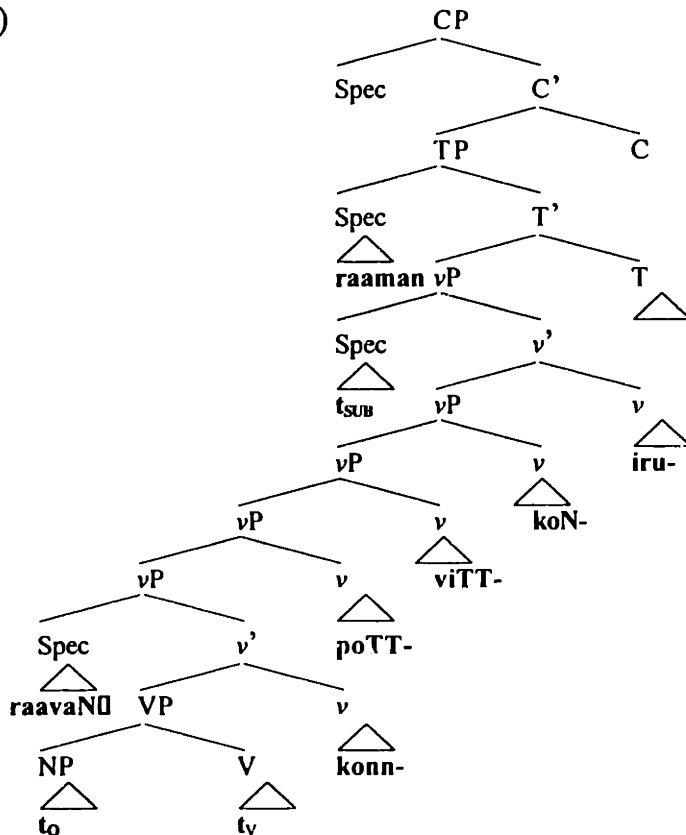
- (103) *raamaa raavaNan-ukku siitaav-ai piDikk-um
 Rama-N Ravana-D Sita-A like-3sn
 ‘Rama Ravana likes Sita.’

Even if auxiliaries are selected, it is the dative argument that is the subject—

- (104) raamaa-kku siitaav-ai piDi-ttu-viT-T-adu
 Rama-D Sita-A like-vbp-leave-past-3sn
 ‘Rama liked Sita.’ (Lit: ‘Rama liked off Sita.’)

These multiple subject scenarios can be ruled out by the θ -role selection and assignment procedures. The V+v complex may not be able to assign a θ -role given some lexical properties of the V that raises to v. If V does not have the necessary θ -assigning, lexical properties, the derivation where v selects an external argument will crash. Thus, the only possibility with respect to θ -assignment is to have only the dative argument and have it raise to Spec, TP to check the EPP feature. We have not specified what precisely the relevant θ -property might be. The issue of note is that we see again that vPs may have no Specs. The phrase marker for the sentence in (98) is given below—

- (105)



In this section we discussed the internal structure of compound or serializing auxiliaries. In the next section we consider another aspect of auxiliary use in Tamil, binding.

1.7 BINDING AND THE AUXILIARY KOL

In this section, we discuss the overlap between the binding theory and the syntactic property of subject-verb agreement. Cross-linguistically, much interest has been generated by both the binding theory and by the syntactic properties of case assignment and subject-verb agreement. However, in considering one family of languages, namely Dravidian, it has been seen that traditional definitions of Binding Conditions A, B and C do not satisfactorily explain the contradictory behaviour of the so-called anaphors. This problem is like and unlike the situations that obtain in languages such as Dutch which have two-kinds of anaphors - the reflexive and the pronominal. In Dravidian languages in general, there is only one anaphoric form, which appears to serve both purposes. Further, there is a system that uses a verbal auxiliary to signal reflexivity (among other properties, as we shall see later). Specifically, we would like to show that in Tamil the domain of application of Condition A is identical to the domain of subject-verb agreement and that in fact Condition A cases arise from the intersection of the conditions on subject-verb agreement and the property of co-reference. Several characteristic properties of the anaphor in Tamil follow from the account given here. Even more interestingly, typological variations between Dravidian languages bear out our conclusions. We begin by showing why binding alone does not account for the facts in Tamil. Given the preceding discussion on the properties of subject-verb agreement and case-assignment on subjects, we offer an analysis of the A-type behaviour of the anaphors under consideration. In discussing the property of reflexivity in Tamil, only the third person is generally indicated, since it is only here that we can draw a distinction between Conditions B and A with respect to the pronominal, i.e., the distributional differences between **avan** 'him' and **taan** 'self'. It is also appropriate to mention here, certain complex/reduplicated forms of the reflexives²⁹—

(106)	<u>Singular</u>	<u>Plural</u>
1st person	ennai-naan-ee	engal ai-naangal -ee
2nd person	unnai-nii-ee	ungal ai-niingal -ee
3rd person	tannai-taan-ee	tangal ai-taangal -ee
	avanai-avan-ee(etc.)	avargal ai-avar gal -ee
	avaL-ai-avaL-ee	

The forms in (106) may be assigned the following internal structure; the first person form is given as an example in (108)—

²⁹It should be pointed out that reciprocals are formed in a similar fashion. However, in the place of personal pronouns the indefinite pronoun **oru** 'one' is used. These are strictly locally-bound.

(107) pronoun (case-marked)³⁰—pronoun copy (nominative/dative)—emphatic particle

(108) enn + ai — naan + ø — ee
 1st ACC 1st NOM Emphatic

The first pronominal piece bears the case that is appropriate to the NP's syntactic position. In general, reduplication seems to facilitate a Condition A reading and these forms are dispreferred in long-distance binding cases. As a consequence, one sees very few nominative-marked first components. This pronominal is followed by a copy of the antecedent (i.e. the subject) along with the case marking. Finally, the emphatic clitic *-ee* is affixed.

The second kind of reduplicated anaphor appears only in the third person and is given in (109)—

(109) tan-tan self-self
 avan-avan he-he
 ava-ava they-they
 adu-adu it-it

The case-marking is appended to either both pieces or at the end. This second type entails a distributive reading rather than an emphatic reading. These forms are not of real concern in the rest of the paper, however, since we will be restricting our attention to the simple anaphor.

1.7.1 Properties of *taan*

Several of the following properties of **taan** have been discussed at length in the literature. We shall list each of the properties and binding facts appropriate to this anaphor/pronominal. The antecedent of **taan** must be the subject of a sentence. This is shown in (110) where an indirect object cannot bind the anaphor—

(110) raaman siitaa-kku tann-uDaia puttagatt-ai koDu-tt-aan
 Rama-N Sita-D self-G book-A give-past-3sm
 'Ramaj gave self_i/*_j book to Sitaj.'

With the second type of reduplicated anaphor (discussed earlier), it is possible to construe an indirect or a direct object as an antecedent. However, in these sentences no other interpretation is possible and only a distributive reading is available—

(111) avaL avar-gaL-ukku tanga-tanga viiTT-ai kaaNbi-tt-aaL
 she-N they-pl-D self-G-self-G house-A show-past-3sf
 'She showed them_i (each of) their_i house.'

³⁰All the forms in (1) are shown with the accusative case-marker. The case can of course, vary.

- (112) avaL avar-gaL-ai tanga-tanga viiTTu-kku anuppin-aaL
 she-N they-pl-A self-G-self-G house-D sent-3sf
 ‘She sent them_i to (each of) their_i house.’

However, when the subject is also in the plural then the preferred reading is one where the subject binds the anaphor; the one where the object binds the anaphor is also available³¹—

- (113) uurmaL avar-gaL-ukku tanga-tanga viiTT-ai kaan bi-tt-anar
 village-people they-pl-D self-G-self-G house-A show-past-3p
 ‘The people_i of the village showed them_j (each of) their_{i/?j} house.’

The antecedent may be ‘long-distance’ and any one of the c-commanding subjects may serve as the antecedent. Thus, **taan** can also occur freely in the subject position of an embedded clause—

- (114) raaman siitaa taan muTTaaL-nnu sonn-aaL-nnu ninaicc-aan
 Rama-N Sita-N self-N idiot said-3sf-that thought-3sm
 ‘Rama_j thought that Sita_j said that self_{i/j} is an idiot.’

It also appears that **taan** must be c-commanded by the antecedent and the ungrammatical interpretation in (10) is because the anaphor is not c-commanded by the antecedent³²—

- (115) siitaav-uDaia tozhi tan araiy-ile paDik-kir-aaL
 Sita-G friend-N self-G room-L reads-3sf
 ‘Sita’s_j friend_i is reading in self’s_{j/*j} room’

However, Tamil is a language that permits permutations of the phrasal constituents of a sentence, so this condition needs to be met at some initial level³³—

- (116) [t [siitaav-ai taan paar-t-eeen-nnu] son-n-aan] raaman
 Sita-A self-N see-past-1s-that say-past-3sm Rama-N
 ‘Rama_j said that self_{i/*j} saw Sita_j.’

It is not possible for **taan** to refer to extra-sentential/discourse-based antecedents; in other words, the anaphor must be bound intra-sententially. In Old Tamil, **taan** existed as an independent (i.e. non-bound) pronominal form, meaning, “one”, “someone” (indefinite subject) or “thymself” (2nd

³¹One other instance of binding by non-subjects includes sentential subjects. It is possible for the anaphor to be bound by the object NP “John”—

(a) meri-kku tann-ai piDikk-alle-ngra seidi jon-ai varut-tiy-adu
 Mary-D self-A like-neg-that news-N John-A worry-past-3sn
 ‘The news that Mary_j doesn’t like self_{i/j} worried John_j.’

These cases, similar to those in Japanese (discussed in Aikawa 1993) could be instances of co-reference.

³²See below for a contrast with the pronoun with respect to the c-command condition.

³³Or under reconstruction or via the trace of the moved NP. (See Chapter 2.)

person honorific), but this use is rare in Modern Tamil and is found only in very limited contexts, such as proverbs and we shall set these aside—

- (117) tan vinai tannaic cuD-um
 one’s action-N one-A burn-fut
 ‘One will be affected by one’s deeds.’

As was pointed out earlier, **taan** lacks the phi-features of gender but is marked for person and number, and it must be bound by an animate noun—

- (118) *bomma tan-uDaia poTTiy-il iru-kk-u
 doll-N self-G box-L be-pres-3sn
 ‘The doll_i is in self’s_j box.’

It is possible to have more than one instance of the anaphor bound by the same antecedent; in fact this is the preferred reading. Thus in (119) the interpretation that “Sita told her friend that Rama liked her” is the most readily available one. The other possibility, “Sita told her friend that Rama liked himself” has to be facilitated by the use of reduplicated anaphors or by using local binding strategies—

- (119) siitaa tan tozhiy-iDam raaman-ukku tann-ai piDikk-um-nnu son-n-aaL
 Sita-N self-G friend-L Rama-D self-A like-3sn-that say-past-3sf
 ‘Sita_i told self’s_j friend that Rama_j liked self_i/?j.’

The converse does not hold in Tamil. A single anaphor cannot be bound by a split antecedent—

- (120) *raaman siitaa-kiTTe tang-aL-ai pattiyavishayatt-ai son-n-aan
 Rama-N Sita-near self-pl-A about information-A say-past-3sm
 ‘Rama_j told Sita_i the information about self_i.’

taan cannot be bound by the subject within the CP containing it³⁴—

- (121) *siitaa taann-ai paar-tt-aaL
 Sita-N self-A see-past-3sf
 ‘Sita_i saw self_i.’

Within a ‘possessive’ NP however, it can be bound by the subject (assuming at this point that genitive case is assigned by the head N via Spec-Head agreement)—

³⁴This property sets **taan** apart from the Japanese anaphor **zibun** which can be locally bound and but which can also be discourse bound.

- (122) raaman tann-uDaia naay-ai aDi-tt-aan
 Rama-N self-G dog-A beat-past-3sm
 ‘Rama_j beat self_i’s_j dog.’

This behaviour parallel’s that of pronouns in English and other languages. Generally speaking, where the direct binding of **taan** is not licit, the binding of **taan** in a possessive-NP should be possible. The specification of the binding domain of **taan** should account for these cases as well. This property of not being bound within the local CP (condition B) can be further tested with the use of *wh*- and quantifier phrases. In (123) and (124) the *wh*- and *Q*- phrases (respectively) cannot bind the anaphor while in (125) and (126) they can, since they are not contained in the local CP—

- (123) *yaaru tannai aDi-tt-aa?
 who-N self-A beat-past-3p
 ‘Who_j beat self_i?’

- (124) *yaar-o tann-ai aDi-tt-aa
 who-Q clitic self-A beat-past-3p
 ‘Someone_j beat self_i.’

- (125) yaaru raaman tann-ai aDi-tt-aan-nnu son-n-aa?
 who-N Rama-N self-A beat-past-3sm-that say-past-3p
 ‘Who_j said that Rama_j beat self_i/_j? .’

- (126) yaar-o raaman tann-ai aDi-tt-aan-nnu sonn-aa
 who-Q clitic Rama-N self-A beat-past-3sm-that say-past-3p
 ‘Someone_j said that Rama_j beat self_i/_j.’

These cases are particularly relevant since they rule out the possibility of coreference. The *wh*- and *Q*- phrases are non-referential and any construal of the anaphor with the *wh*- and *Q* phrases is the result of binding. As the examples point out, this is clearly a non-local process.

1.7.2 Properties of *avan*

At this point it will help to contrast the behaviour of **taan** with that of the other third person pronoun. **avan** ‘he’, **avaL** ‘she’ and **adu** ‘it’ cannot be bound locally, by which we mean that a pronoun and its antecedent cannot occur within the same CP. This behaviour parallels that of **taan**. However, unlike **taan**, the pronoun can take discourse-based antecedents—

(127) raaman avan-ai paar-tt-aan
 Rama-N he-A see-past-3sm
 ‘Rama_i saw him_{i/j}.’

Within a possessive-NP, the pronoun may be bound by the subject or some other NP—

(128) raaman avan-uDaia puttagatt-ai paar-it-aan
 Rama-N he-G book-A see-past-3sm
 ‘Rama_i saw his_{i/j} book.’

There are no constraints on the antecedent of these pronouns; they can co-refer with non-subjects (129), inanimate NPs (130) and are fully specified for the phi-features of person, number and gender. In other words, these are the textbook case of B-type pronouns—

(129) raaman siitaa-kku avan-uDaia puttagatt-ai koDu-t-aan
 Rama-N Sita-D he-G book-A give-past-3sm
 ‘Rama_i gave self^{’s_{i/j/k}} book to John_j.’

(130) raaman bommai adan-uDaia poTTiy-il irukk-u-nnu son-n-aan
 Rama-N doll-N it-G box-L is-3sn-that say-past-3sm
 ‘Rama said that the doll_i is in its_i box.’

Co-reference is possible when the pronoun and its antecedent occur in different CPs. C-command is not directly relevant. Consider the sentence we discussed earlier—

(131) siitaav-uDaia tozhi tan araiy-ile paDik-kir-aaL
 Sita-G friend-N self-G room-L read-pres-3sf
 ‘Sita^{’s_j} friend_i is reading in self^{’s_{i/j/*j}} room.’

While **taan** was ruled out in this case under the interpretation ‘Sita’s room’ rather than ‘Sita’s friend’s room’, the pronoun is perfectly acceptable if it is construed as being co-referential with the NP ‘Sita’ contained in a possessive NP—

(132) siitaav-uDaia tozhi ava araiy-ile paDik-kir-aa
 Sita-G friend-N she-G room-L read-pres-3sf
 ‘Sita^{’s_j} friend_i is reading in self^{’s_{i/j/k}} room.’

Also, as with **taan** wh- and Q phrases cannot bind the pronoun in the local CP—

(133) yaaru avan-ai aDi-tt-aa?
 who-N he-A beat-past-3p
 ‘Who_j beat him_{i/j}?’

(134) *yaar-o* *avan-ai* *aDi-tt-aa*
 who-Q clitic he-A beat-past-3p
 ‘Someone_i beat him*_j.’

Again, this is permitted long distance; the pronoun can also take a discourse-referent; this is indicated by the index *k*—

(135) *yaaru* *raaman* *avan-ai* *aDi-cc-aan-nnu* *son-n-aa?*
 who-N Rama-N he-A beat-3sm-that say-past-3p
 ‘Who_i said that Rama_j beat him_i/*_j/_k?’

(136) *yaar-o* *raaman* *avan-ai* *aDi-cc-aan-nnu* *son-n-aa*
 who-Q clitic Rama-N he-A beat-3sm-that say-past-3p
 ‘Someone_i said that Rama_j beat him_i/*_j/_k.’

Surface word order changes seem to preclude some co-referential possibilities. Why this must be so with these pronouns but not with *taan* is unclear —

(137) *raaman-uDaia* *manaivi* *a-van-ai* *kiLL-in-aa*
 Rama-G wife-N he-A pinch-past-3sf
 ‘Rama’s_i wife pinched him_i/_k.’

(138) *a-van-ai* *kiLL-in-aa* *raaman-uDaia* *manaivi*
 he-A pinch-past-3sf Rama-G wife-N
 ‘Rama’s_i wife pinched him*_i/_k.’

Finally, the pronoun can be bound by a split antecedent—

(139) *raama* *siitaa-kiTTe* *avaaL-ai* *pattiya* *vishayatt-ai* *son-n-aan*
 Rama-N Sita-near they-pl-A about information-A say-past-3sm
 Rama_j told Sita_j the information about them_j

Let us summarize the properties of *taan* and *avan* discussed above—

(140) *Shared Properties:*

<u>Property</u>	<u>taan</u>	<u>avan</u>
Condition B ³⁵	Yes	Yes
Poss. NP and local binding	Yes	Yes
Poss. NP and long-distance	Yes	Yes
Local binding by wh-/Q	No	No

³⁵At this juncture, this only refers to non-binding within the local domain. We discuss the exact specification of domains shortly.

(141) *Differing properties:*

<u>Property</u>	<u>taan</u>	<u>avan</u>
Subject-oriented	Yes	No
Animacy of antecedent	Yes	No
Binding by non-subjects	No ³⁶	Yes
Discourse referent	No	Yes
Phi-features	[- gender]	Fully specified
C-commanding antecedent	Yes	No
Split antecedent	No	Yes

From the above, it is obvious that the differences between **taan** and **avan** boil down to (a) the requirement of an intra-sentential antecedent and (b) the constraints on suitable antecedents. The first may be attributed to the property of being underspecified for the feature of gender. It is the second that is of concern to us, especially the property of being subject-oriented. So far as the domain of binding goes, it appears that both the anaphor and the pronoun need to be “free” within the simple CP or NP that they occur in. The evidence for the impossibility of local binding with *wh*- and *Q* phrases is especially crucial. This is a classic case of a Condition B type behaviour. This quasi-anaphoric and quasi-pronominal behaviour of **taan** has been a problem under the traditional definitions of Binding Conditions.

1.7.3 Auxiliary *kol*

We have discussed the properties of **taan** that make it look like a B-type pronoun but we have made no mention of how reflexive constructions are built in Tamil. As we pointed out earlier, there are no special “complex” anaphors equivalent to the “self” anaphors in other languages. The closest counterparts are the reduplicated anaphors we discussed earlier. However, there is another strategy that Tamil employs. Local binding of **taan** is licensed/mandated when there is a special auxiliary present, which generally bears the agreement and tense markers. Thus—

(142) raaman tann-ai aDiccuk-ko-ND-aan
 Rama-N self-A beat-have-past³⁷-3sm
 ‘Rama_j beat self_j.’

In fact, when the auxiliary is present, **taan** must be bound by the local subject; long-distance antecedents are ruled out—

(143) siitaa raaman tann-ai aDiccuk-ko-ND-aan-nu son-n-aa
 Sita-N Rama-N self-A beat-have-past-3sm-that say-past-3sf
 ‘Sita_j said that Rama_j beat self*_{i/j}.’

³⁶Except for the reduplicated cases (with a distributive reading) where the subject is singular.

³⁷The auxiliary is translated as “have”.

As we might expect, *wh*- and *Q* phrases can now locally bind **taan** as well—

(144) *yaar tann-ai aDiccuk-ko-ND-aa?*
 who-N self-A beat-have-past-3p
 ‘Who_j beat self_i?’

(145) *yaar-o tann-ai aDiccuk-ko-ND-aa*
 who-Q clitic self-A beat-have-past-3p
 ‘Someone_j beat self_i.’

The other properties of **taan** which deal with constraints on possible antecedents — animacy, subject-orientation, *c*-command, intra-sentential antecedent requirement — obtain in these cases as well. What changes in the presence of the auxiliary is the binding domain.

The auxiliary **koL**, meaning ‘to have’, can occur as a main verb in very limited contexts in Modern Tamil (it was put to much more productive use in Old Tamil)—

(146) *inda arai nooru peer-ai koLL-um*
 this room-N one hundred people-A have-fut-3sn
 ‘This room will hold one hundred people.’

However, its use as an auxiliary in either the finite or the non-finite form is very widespread. An obvious problem is the non-exclusive use of the auxiliary, i.e., its use in other than reflexivizing contexts. On close inspection it appears that non-finite (participial) forms of the auxiliary are used to signal aspectual meaning: progressive, simultaneous/sequential, instrumental etc.—

(147) *avan putt-gatt-ai paDittuk-koNDu-iru-nd-aan*
 he-N book-A read-have-be-past-3sm
 ‘He was reading a book.’

(148) *siitaa kaay-ai veTTik-koND-ee pes-in-aa*
 Sita-N vegetable-A cut-have-cont. speak-past-3sf
 ‘Sita spoke while cutting the vegetables.’

(149) *siitaa kattiy-aik koNDu kaay-ai narukk-in-aa*
 Sita-N knife-A with vegetables-A cut-past-3sf
 ‘Sita cut the vegetables with a knife.’

The use of the auxiliary in the finite form enables a reflexive reading, a reciprocal reading, a self-endeavour reading and a benefactive reading among others. The auxiliary occurs with a variety of intransitive and transitive verbs. The use of **koL** in the first two ways also entails the presence of a coindexed anaphoric pronoun or a reciprocal—

(150) avaa oruttar-ai-oruttar paartuk-ko-ND-aa
 they-N one-A-one-N see-have-past-3p
 They looked at each other

In the latter two ways, the coindexed co-argument is not required. The benefactive reading constitutes what is more traditionally called, the middle voice reading (seen in Sanskrit and Greek and probably Icelandic)—

(151) raama saadam samaitt-aan
 Rama-N rice-A cooked-3sm
 ‘Rama cooked rice.’

(152) raama saadam samaittuk-ko-ND-aan
 Rama-N rice-A cook-have-past-3sm
 ‘Rama cooked rice (for himself).’

The auxiliary can also signal that the action was undertaken/accomplished by the subject alone or with a consequence that affects the subject alone or affecting the subject physically; what we call a ‘self-endeavour’ reading—

(153) siitaa ellaa tuNiyai-um toccuk-ko-ND-aaL
 Sita-N all clothes-Qu wash-have-past-3sf
 ‘Sita (herself) washed all the clothes.’

(154) siitaa naay-aik kaTTik-ko-ND-aaL
 Sita-N dog-A tie-have-past-3sf
 ‘Sita hugged the dog.’

(155) siitaa avan-aik kalyaaNam paNNik-koND-aaL
 Sita-N he-A marriage do-have-past-3sf
 ‘Sita married him.’

There are a number of lexical meaning differences given the presence or absence of **koL**, and these are interesting as well—

(156) siitaa raaman-aip piDi-tt-aaL
 Sita-N Rama-A catch-past-3sf
 ‘Sita caught Rama.’

(157) siitaa raaman-aip piDiccuk-ko-ND-aaL
 Sita-N Rama-A catch-have-past-3sf
 ‘Sita held on to Rama.’

- (158) siitaa raaman kiTTa nin-r-aaL
 Sita-N Rama-N near stand-past-3sf
 ‘Sita stood near Rama.’
- (159) siitaa raaman kiTTa ninnuk-ko-ND-aa
 Sita-N Rama-N near stand-have-past-3sf
 ‘Sita placed herself near Rama.’
- (160) siitaa kuzhanday-ai paaru :t-aa
 Sita-N child-A see-past-3sf
 ‘Sita saw/looked at the child.’
- (161) siitaa kuzhanday-ai paartuk-ko-ND-aa
 Sita-N child-A see-have-past-3sf
 ‘Sita looked after/cared for the child.’

All the above instances with a non-coindexed co-argument or the intransitive cases (stand, sit, lie down etc.), whatever the specific meaning, show subject-orientation (in some extended sense) when the auxiliary **koL** is present.

From the examples above, it is seen that the auxiliary is not exclusive to the reflexive/reciprocal contexts. However, in all instances the subject is somehow implicated in the action.

1.7.4 A-Binding and Feature Checking

Two kinds of analyses have been offered in the literature. One (Amritavalli 1984) considers the anaphoric pronoun and auxiliary to be a discontinuous complex form in much the same way that ‘sichselbst’ is. However as was seen above, the auxiliary can occur without the anaphoric pronoun, i.e. with either other lexical arguments or with intransitive verbs. In fact, two or more properties of the auxiliary may surface in a single sentence. Thus, the sentence below has two interpretations—

- (162) siitaa tann-ai paartuk-ko-ND-aaL
 Sita-N self-A see-have-past-3sf
 (i) Sita looked at herself (in the mirror, for instance)
 (ii) Sita looked after/took care of herself

This suggests that these two morphemes have independent functions and ought not to be viewed as one (albeit discontinuous) piece.

Following Reinhart and Reuland's (R&R) (1993) account of reflexivity, Lidz (1994, 1995) analyzing data from Kannada, takes **koL** to be a reflexivizer. R&R argue that reflexivization is not a property of the pronouns but rather a property of the predicates. Therefore, reflexive pronouns reflexive-mark the predicates that they are an argument of. R&R divide the class of anaphors into morphologically complex (SELF) anaphors and morphologically simple (SE) anaphors. Both kinds are referentially dependent but only the first kind can reflexive-mark their predicates. Since Condition A, restated in R&R's terms, is a condition on the reflexive-marking of reflexive predicates—

(163) Condition A: A reflexive-marked syntactic predicate is reflexive

complex anaphors will always be locally bound. Condition B is a statement of the reflexivity of a semantic predicate—

(164) Condition B: A reflexive semantic predicate is reflexive-marked.

Both conditions regulate the domain of reflexivity. A predicate is defined as *reflexive* if two of its arguments are coindexed and a predicate is reflexive-marked if and only if either the predicate is inherently reflexive or if one of its arguments is a SELF anaphor. These conditions account for the (un) grammaticality of the following sentences—

(165) He_i saw himself_i

(166) *He_i saw him_i

(167) Max wast zich

In (165), the predicate is reflexive (coindexed co-arguments) and it is reflexive-marked; there is no binding condition violation. (166) violates condition A in that a reflexive-predicate is not reflexive-marked. In (167) the predicate is inherently reflexive and therefore reflexive-marked, its arguments are coindexed so this is licit as well. This amounts to saying that if the co-arguments of a predicate are coindexed, then one argument must be a SELF-anaphor to meet condition A, and if one of the co-arguments is a SELF-anaphor then it must be coindexed with another argument of the predicate.

In Lidz's analysis, reflexivity is licensed by the auxiliary and therefore identity between the two arguments of the verb (the subject and the object) is ruled acceptable. In the absence of the auxiliary, such identity will be in violation of condition A and will thus be ruled out. The long-distance cases follow because they do not violate either condition.

If **koL**'s function is that of reflexive-marking the predicate, one might expect that inherently reflexive predicates in Tamil do not take this marking. This is not true. Generally, predicates show up with the auxiliary whenever there is local or anaphoric binding. There are a few predicates that never take **koL** but this may be for independent reasons. They do not seem

to permit auxiliaries of any kind and there are others such as ‘believe’, ‘desire/want’ etc., predicates that deal with the internal or emotional state of a being that also do not take the auxiliary or do so optionally. One might expect such intrinsic verbs to be obligatorily marked with the auxiliary—

(168) raaman tann-ai veru-tt-aan / *veruttuk-ko-ND-aan / *veruttu-viT-T-aan
 Rama-N self-A hate-past-3sm / hate-have-past-3sm / hate-leave-past-3sm
 ‘Ramaj hated self_i.’

(169) raaman tann-ai gaanatt-il marandu-viT-T-aan / *marandu-ko-ND-aan
 Rama-N self-A song-L forget-leave-past-3sm forget-have-past-3sm
 ‘Ramaj forgot self_i in song.’

(170) raaman tann-ai (taan-e) namb-in-aan / nambik-ko-ND-aan
 Rama-N self-A believe-past-3sm believe-have-past-3sm
 ‘Ramaj believed self_i.’

One could assume that all predicates that are reflexive (that have coindexed co-arguments) must be reflexive-marked with the auxiliary. Lidz seems to think that it is so, in Kannada. One might expect then, that **koL** appears only in reflexivizing contexts. This is indeed not the case as we saw above at length. The auxiliary co-occurs with intransitive predicates and with transitive predicates without coindexed co-arguments. While some of these are equivalent to intrinsically reflexive predicates of other languages (for example, ‘behave oneself’ is **naDandu koLLa**) a bulk of these cannot be accounted for as intrinsic reflexives. Further, one might expect to find coindexed co-arguments only in sentences where they have been licensed by the reflexive-marking auxiliary. This is not the case either. In DS constructions, for example, the auxiliary is not present³⁸ but a locally-bound reading is available (note that a long-distance reading is also available)³⁹—

(171) siitaa raaman-ukku tann-ai puriyav-illai-nnu son-n-aaL
 Sita-N Rama-D self-A understand-neg⁴⁰-that say-past-3sf
 ‘Sita_j said that Ramaj does not understand self_{i/j}.’

³⁸Given the account thus far there is nothing that rules out pronouns (coindexed) from freely varying with **taan** since the reflexive-marking task has been attributed to the auxiliary. This is incorrect—

(a) raaman tann-ai / *avan-ai paart-tuk-koN-D-aan
 Rama-N self-A he-A see-vbp-have-past-3sm
 Ramaj saw self_i / him_j

If Lidz also believes in the Chain Condition in R&R, then that will independently rule out pronouns from being illicitly bound. The use of pronouns in these contexts is not accounted for by Condition B.

³⁹In fact either **taan** and **avan** can appear in this context and be co-referential with the subject.

⁴⁰The negative auxiliary in Tamil is morphologically defective and undistinguished for the entire agreement paradigm. Here it obscures the fact that ‘like’ is a DS-predicate and the subject surfaces in the dative.

In fact, the auxiliary is ruled out—

- (172) *raaman-ukku tann-ai purindu-koLL-um
 Rama-D self-A understand-have-3sn
 ‘Rama_i understands self_i.’

Interestingly, the auxiliary surfaces in a non-DS case equivalent of the verb—

- (173) raaman tann-ai purindu-ko-ND-aan
 Rama-N self-A understand-have-past-3sm
 ‘Rama_i understood self_i (self-realization).’

There are a few such DS/non-DS pairs of verbs with very little meaning difference⁴¹. This mismatch in the domains of appearance of the auxiliary, the coindexed co-arguments and agreement markers strongly suggests that analyzing the auxiliary as a reflexivizer does not account for the full range of facts.

To complete the picture it should be mentioned that as with finite embedded and participial clauses, ECM constructions and infinitival complements do permit the auxiliary with a resulting reflexive interpretation; we place special emphasis on the infinitival complements—

- (174) raaman [PRO tann-ai *aDikk-a / aDi-ttuk-koLL-a] virumb-in-aan
 Rama-N self-A beat-inf / beat-vbp-have-inf want-past-3sm
 ‘Rama_i wanted to beat self_i.’

- (175) raaman [tann-ai velai-seyy-a] *vei-tt-aan / veittuk-ko-ND-aan
 Rama-N self-A work-do-inf make-past-3sm / make-have-past-3sn
 ‘Rama_i made himself_i do work.’

In (174), the auxiliary must be present within the infinitival if the anaphor is to be locally bound. The local antecedent of the anaphor is PRO. In (175) the antecedent is the matrix subject. The auxiliary must therefore, be selected by the matrix predicate. A reflexive in the lower predicate is not sufficient. Note that the lower predicate can be marked with the auxiliary but it does not indicate ‘local binding’. The lower predicate will mean something different as in the lexical pairs we discussed earlier.

We may summarize the problem at hand as follows: (a) **koL** facilitates a reflexive reading among others (b) there is a relation between **koL** and finiteness or nominative case (except in the infinitival/control cases) (c) **taan**’s binding domain is at least partially determined by the auxiliary. How do we explain these overlaps?

⁴¹ These lexical pairs ostensibly assign the same θ -roles.

The long-distance co-reference properties of **taan** parallel the behaviour of **avan** in all respects but one, that they *must* be bound by an antecedent subject. We attribute this (following Aikawa 1993 and others) to obviation (Principle B) along with a raising of **taan** to some local phi-specification location, which is T. The lack of <gender> specification motivates the raising of **taan** to T by head movement. It is interesting to note here that the long-distance binding of **taan** is unbounded only in so far as all the antecedent subjects are third person subjects (see Jayaseelan 1997 for similar data on Malayalam). If one of the matrix subjects, let us call it S, is not a third person subject, then any third person subject(s) that may c-command S cannot bind a **taan** embedded beneath S. This along with our data on DS predicates (where only a DS predicate could host a DS infinitival) suggests that Ts are locally referential. It also suggests that an infinitival T is quite severely constrained by a matrix finite T.

Let us turn to the local binding situation which is also the domain of feature checking. Given the analysis in the earlier section we know that **koL**- ‘have’ is a non-DS verb that selects an external argument (nominative case-marked) and itself bears the agreement and tense inflections. Recall that we assume that **taan** raises to T (covertly) to check its phi-(gender)-feature. In this position in T it will also be in the same site as *v* and V. If the phi-features are checked on T and NP, let us assume that they are also checked on the anaphor. Additionally, T must also check the case feature on the ‘subject’ (null or otherwise). If **koL** is part of the numeration, it must also raise to T to have the same phi-features checked on it. The raising of **koL** and **taan** to T along with the phi- and case feature checking on the subject is what, we assume, brings the two arguments into a local binding relationship. All of these conditions must obtain. If **koL** cannot raise to T (being in a lower *v*P) then the local binding derivation will not converge. Thus in DS predicates, the case and phi-features of the subject are not checked by T and if **koL** is part of the numeration, it has to play a different role from the one as a local binding facilitator; for example, as an aspect indicator. In the converse case where there is no **taan** in the numeration but only a **koL** again, no local binding is possible but subject oriented readings are available (self-endeavour, benefactive etc.). This subject orientation appears to be a strong property of the auxiliary **koL** in T. That may be a lexically inherent property of **koL**. In predicates that check accusative case on an embedded subject/object, we assume that the object **taan** of the infinitival raises to the matrix T covertly. The matrix T checks the relevant case and phi-features and if **koL** also raises to the matrix T from the matrix *v*P (being a part of the numeration), then local binding will obtain between the matrix subject and lower object. Within infinitives, we saw that the auxiliary is generated on the infinitive. The T of the infinitival checks null case on PRO. As in finites we assume that the anaphor raises to T. But this is not sufficient for local binding. The auxiliary **koL**, must also raise to T (infinitival). However, there are no relevant phi-features on the T. We assume that the null case checking also establishes a (phonologically) null-phi-feature checking on **taan** and **koL** as well, enabling local binding. Alternatively, we may assume that both **taan** and **koL** raise to the matrix T in search of phi-features. Recall that this is not unusual in the context of referentiality between Ts. Since the matrix T determines the locutionary force, tense, mood etc. of the embedded infinitival, **taan** and **koL** raising will be equally permissible. Again, this raising is not an unbounded process and is limited to an immediately antecedent finite T. Finally, consider, the DS infinitival with a DS

subject in Spec, TP. The embedded subject **hanumaan** ‘Hanuman’ has its case feature checked internal to a VP, as does the matrix subject. The embedded object has its case feature checked by the lower verb as well—

- (176) raaman-ukku [hanumaan-ukku siitaav-ai teriy-a] veND-um
 Rama-D Hanuman-D Sita-A know-inf want-3sn
 ‘Rama wants Hanuman to know Sita.’

If the object were an anaphor, there is only one possible interpretation, that ‘Rama_i wants Hanuman to know him_i’ and not that ‘Rama wants Hanuman_i to know himself_i.’

- (177) raaman-ukku [hanumaan-ukku tann-ai teriy-a] veND-um
 Rama-D Hanuman-D self-A know-inf want-3sn
 ‘Rama_i wants Hanuman_j to know self_{i/*j}.’

The auxiliary cannot be generated on either the local or the matrix verb, as we might expect—

- (178) *raaman-ukku [hanumaan-ukku tann-ai teriy-koLL-a] veND-um
 Rama-D Hanuman-D self-A know-have-ini want-3sn
 ‘Rama_i wants Hanuman_j to know self_{i/*j}.’

- (179) *raaman-ukku [hanumaan-ukku tann-ai teriy-a] veND-koLL-um
 Rama-D Hanuman-D self-A know-inf want-have-3sn
 ‘Rama_i wants Hanuman_j to know self_{i/*j}.’

There is no case and phi-feature checking between the subject, the anaphor and the verb in either T. Consequently, there can be no local binding relation.

In the verbal participial complements, the feature-checking domain is the only one where the auxiliary can be generated. The structure of the VbP we argued, was a VP or a vP but not a TP (see section 1.5). Given its internal structure—

- (180) [_{TP}Subj [_{vBP}NP_{ANAPHOR} V] V_{FIN}]

the only T that the anaphor can raise to, is the T that attracts the higher verb. The anaphor must raise for phi-specification to this T. T checks its phi-features as well as those on the verb and the subject along with the case feature on the subject. The anaphor is held in a binding relation with the subject and consequently, the auxiliary is generated. We have shown, in the above, that the domain of the auxiliary in all cases is tied to the feature checking domain, specifically to case and phi-feature (but not EPP) checking.

Finally the non-finite, participial uses of the auxiliary **koL** as an aspectual auxiliary are separate from its use in local binding. In fact, we believe that there are two separate functions of the same lexical item. If **koL** is unable to phi-agree with the local (or an antecedent T in the case of infinitivals) then local binding is not possible. The only possible interpretation is that of **koL** as an aspect marker. If **koL** can phi-agree with the verb, then local binding may be possible and at least a subject oriented is mandated. This subject orientation is then, a peculiarity of this lexical item. Why this is so is unclear, but it appears to be robust property of languages that choose to use the same simple pronominal form as anaphors and pronouns.

We entered the discussion on binding and auxiliaries to show that the checking domain is implicated in more than case and agreement. It is also implicated in local binding in Tamil. We showed that subject-verb agreement and properties of the anaphor/pronoun are linked quite intricately and the domain of local-binding is identical to the domain of overt subject-T case- and phi-feature checking. This appears to be a peculiar aspect of a subset of Dravidian languages. This not only accounts for the duality in the behaviour of the anaphoric pronoun but also Tamil's strategy of using the same verbal affix to indicate all aspects of subject-orientation. We can make a clear prediction about this link between agreement and binding. If within the Dravidian family subject-verb agreement were to become unavailable then this strategy of binding should also be unavailable. This is exactly right. Malayalam, separated from its sister Tamil barely 500 or so years ago, has lost overt subject-verb agreement. It has also lost Tamil's local-binding strategy and the auxiliary in these contexts. It has had to introduce a clear A-type anaphor. However, the non-finite, aspectual use of the auxiliary is still available.

1.8 CONCLUSION

In this chapter we discussed case and agreement facts in Tamil and discussed the mechanisms of feature-checking that account for the facts. We considered simple finites including the nominative-accusative and the DS case predicates, as well as non-finites, verbal participles, infinitivals and ECM constructions. We also discussed auxiliaries and serializing of verbs in Tamil and discussed the facts pertaining to feature-checking in those cases as well. Finally, we discussed the related issue of A-binding in Tamil which is tied intricately to the domain of feature-checking. In particular we showed that the case-checking domain includes more than the local TP (in infinitivals and ECM predicates) but this was still a local relation which does not violate conditions on locality.

In the next chapter we consider word order restructuring of phrasal elements and discuss the facts about free word order in Tamil.

CHAPTER 2: SCRAMBLING

2.0 INTRODUCTION

In Tamil, maximal projections such as NPs, CPs can be moved from what is assumed to be their base-generated position to other positions (to be specified). The default word order is taken to be S(IO)OV (see section 2.2). Thus, if there are four elements in the sentence any one of twenty four combinations is possible and grammatical. The question is why this must be so. It has been suggested that languages with such “flexible” word order arrangements have a flat or non-configurational structure (Hale for Warlpiri), and phrasal constituents are hierarchically undifferentiated (at some syntactically relevant level). More recent studies on scrambling (Corver and van Riemsdijk 1994, Mahajan 1990, 1995, Saito 1990, 1989, Webelhuth 1989) discuss syntactic movements which are hierarchy-sensitive and point to differences between the movements involved in the scrambling operation using diagnostic tests which involve weak crossover, reconstruction, quantifier-scope and binding properties. These studies postulate two kinds of movement - movement to argument (A) positions clause-internally and to non-argument positions (A-bar) clause-externally⁴². In the languages discussed (German, Hindi, Japanese) we find both kinds of operations depending on the “distance” of extraction. This does not, however, tell us why a language exhibits such word order properties. Further, it is unclear if there are strong semantic/interpretive differences between the base-ordered and the order-shifted sentences. We would like to show that “scrambling” in Tamil subsumes several kinds of syntactic movements with specific syntactic properties, and further, that there are specific semantic/interpretive consequences to such movements. We begin by arguing that “scrambling” in Tamil is hierarchy-sensitive and therefore must be considered as a syntactic process, not a stylistically motivated or optional process. We then discuss the actual syntactic and semantic properties of such extraction/movement.

2.1 AGAINST A NON-CONFIGURATIONAL ANALYSIS

In the following, we offer several reasons why it makes sense to talk about a basic word order versus derived word orders: (I) The basic word order (SOV) has no special semantic properties associated with it. In the default case, a sentence with this word order counts as a statement.⁴³ However, an order-shifted sentence (for example, an OSV or IOSOV order) signals that the initial NP (in the preceding, O and IO respectively) is a *topic* in each case. When the sentence is order-shifted to the right (for example, an SVO or SOVIO), the NP to the right of the

⁴² See Webelhuth for arguments on movements to mixed positions - with both A and A-bar properties. See also Browning and Karimi, 1994 for similar arguments for Persian.

⁴³This is not entirely true since a construction with a topicalized subject would have the SOV order.

verb is considered to be a *focused* element. The sentence in (1) is the *base* (order) sentence, the sentence in (2) shows a *topicalized* construction and the sentence in (3) a *focused* sentence—

(1) shakuni dharmaa-kku daayatt-ai koDut-tt-aan
 Shakuni-N Dharma-D dice-A give-past-3sm
 ‘Shakuni gave the dice to Dharma.’

(2) **daayatt-ai** shakuni dharmaa-kku t kodu-tt-aan
 dice-A Shakuni-N Dharma-D give-past-3sm
 O S IO VERB
 ‘As for the dice, Shakuni gave it to Dharma.’

(3) shakuni dharmaa-kku t kodu-tt-aan **daayatt-ai**
 Shakuni-N Dharma-D give-past-3sm dice-A
 S IO VERB O
 ‘It is the dice that Shakuni gave to Dharma.’

This is of course only part of the story. We have said nothing about the scrambling of objects over each other, i.e., the difference between S-IO-O-V and S-O-IO-V word orders, nor anything about the scrambling of more than one NP to the right or left. We will return to these cases later.

(II) The second piece of evidence derives from VP ellipsis constructions. In Tamil, the “elided” structure has to be an appropriate sub-branch of the VP-structure including the V. Complements of V do not behave as if they are hierarchically equal to the V. In the sentence in (4) the entire VP has been elided, correctly—

(4) shakuni daayatt-ai dharmaa-kku koDu-tt-aan, duryodhanan-um taan
 Shakuni-N dice-A Dharma-D give-past-3sm Duryodhana-also focus
 ‘Shakuni gave the dice to Dharma, Duryodhana (did) too.’

In (5) and (6) the verb and one of its complements have been elided, incorrectly—

(5) *shakuni daayatt-ai dharmaa-kku koDu-tt-aan duryodhanaa bhimaa-kku
 Shakuni-N dice-A Dharma-D give-past-3sm Duryodhana-N Bhima-D
 ‘Shakuni gave the dice to Dharma and Duryodhana to Bhima.’

(6) *shakuni daayatt-ai dharmaa-kku koDu-tt-aan duryodhanan raajyatt-ai
 Shakuni-N dice-A Dharma-D give-past-3sm Duryodhana-N kingdom-A
 ‘Shakuni gave the dice to Dharma and Duryodhana his kingdom.’

The grammatical way to form the ellipsed structures in (5) and (6) is to build the corresponding co-ordinate NP structures in (7) and (8) within the TP with the appropriate plural agreement on the verb—

(7) [[shakuni dharmaa-kku-m] [duryodhanan bhimaa-kku-m]] daayatt-ai
 Shakuni-N Dharma-D-and Duryodhana-N Bhima-D-and dice-A
 koDu-tt-aar-gaL
 give-past-3pl
 ‘Shakuni gave the dice to Dharma and Duryodhana to Bhima.’

(8) [[shakuni daayatt-ai-um][duryodhanan raajyatt-ai-um]] dharmaa-kku
 Shakuni-N dice-A-and Duryodhana-N kingdom-A Dharma-D
 give-past-3pl
 koDu-tt-aar-gaL
 ‘Shakuni gave the dice to Dharma and Duryodhana the kingdom.’

(III) There is a process of gemination of the initial stop consonant of a word within the VP (first pointed out by Christdas). The rule applies between a preceding, vowel-final word and a following, consonant-initial word so long as they are direct constituents of the VP. In (9) the geminated consonants are indicated in bold—

(9) shakuni dharmaa-kku **t** daayatt-ai **k** kodu-tt-aan
 Shakuni-N Dharma-D dice-A give-past-3sm
 ‘Shakuni gave the dice to Dharma.’

The environment for the application of this rule includes the following, O-V, IO-V, O-IO and O-Adv-V but not S-O, S-V, Adv-V (IP linked adverb), V-O, V-IO and O-S-V. This process of consonant gemination is a VP internal process and is sensitive to the hierarchical position of the verb. Thus, NPs scrambled across to the right have ‘escaped’ from the domain of the verb and are not subject to the rule anymore. Likewise, objects scrambled over the subject to the topic position are also outside the scope of the VP. If Tamil did have a flat structure, it would be hard to explain why these restrictions exist.

(IV) The fourth argument for hierarchical-sensitivity to Tamil involves the binding properties of certain anaphoric-pronouns, control of (null) infinitival subjects and Condition C effects. The anaphoric-pronouns are subject-oriented and are never bound by other (object) NPs. For this preferential antecedent selection, the subject must be in a privileged (or high enough) position for the asymmetry to obtain. If Tamil did have a flat structure it is unclear why objects do not successfully bind reflexives—

(10) shakuni dharmaa-kku tan daayatt-ai koDu-tt-aan
 Shakuni-N Dharma-D self-G dice-A give-past-3sm
 ‘Shakuni_i gave Dharma_j his_i/*_j dice.’

Further, referential NPs cannot be bound by antecedent pronouns—

- (11) avan-ukku shakuni-ai piDikk-aa-du
 he-D Shakuni-A like-neg-3sn
 *‘He_i does not like Shakuni_j.’

Similarly, control of null subjects of infinitivals is by either the matrix subject (12) or the matrix object (13) (depending on the predicate). Such referentiality also indicates hierarchical sensitivity—

- (12) shakuni [PRO dharman-ai jeikka] muyarci sei-d-aan
 Shakuni-N Dharma-A to win try do-past-3sm
 ‘Shakuni tried to beat Dharma.’

- (13) duryodhanan-ukku shakuni [PRO dharmav-ai tokkaDikka] veNDum
 Duryodhana-D Shakuni-N Dharmaa-A to beat want-3sn
 ‘Duryodhana wants Shakuni to beat Dharma.’

(VI) Unlike other (arguably) free word order languages (for example Warlpiri) there are no discontinuous constituents in Tamil. Inner constituents of a phrase cannot be separated out and occur in different parts of the sentence.

(VII) Finally and perhaps most persuasively, extractions that permute word order strictly observe island conditions. In (14) we see a relative clause construction and in (15) and (16) we show that attempts to extract out of the island to the right and left (respectively) leads to ungrammaticality—

- (14) arjuna [[shakuni-kku raajyatt-ai koDu-tt-a] dharmav-ai] tiTT-in-aan
 Arjuna-N Shakuni-D kingdom-A give-past-adj Dharma-A scold-past-3sm
 ‘Arjuna scolded Dharma who gave his kingdom to Shakuni.’
- (15) *arjuna [_{NP}[_{IP} t raajyatt-ai koDu-tt-a] dharmav-ai] tiTT-in-aan **shakuni-kku**
 (16) ***shakuni-kku** arjuna [_{NP}[_{IP} t raajyatt-ai koDu-tt-a] dharmav-ai] tiTT-in-aan

In (17), there is a sentential subject. Similar extraction out of this island is unacceptable as well, as is shown in (18)—

- (17) [dharmaa shakuni-kku raajyatt-ai toT-r-adu] avamaanam aa-cc-u
 Dharma-N Shakuni-D kingdom-A lose-past-nom shameful be-past-3sn
 ‘It was shameful that Dharma lost the kingdom to Shakuni.’
- (18) *[_{TP} dharmaa shakuni-kku t toT-r-adu] avamaanam aa-cc-u **raajyatt-ai**

Now we have sufficient grounds for believing that non-SOV word orders are indeed derived by overt or S-structure movement of XP constituents. It remains for us to identify the syntactic properties of such extraction, be it clause internal or clause external, and what effects, if any, such permutations have on binding, antecedent choice and weak crossover properties and what the characteristics are of the landing site. In the following, we first consider clause internal or local scrambling and discuss each of these properties in turn. We then turn our attention to clause external or long distance scrambling. Examples include extractions to the right and to the left, both of which are argued to be present. We will take up the discussion on any asymmetries between these movements much later. (Mahajan 1995)

2.2 EVIDENCE AGAINST 'SOV' AS A DERIVED WORD ORDER

In the context of much recent discussion about a single universal word order we must question this tacit acceptance of SOV as the basal word order, especially since every combination of phrasal constituents is attested. It has been argued by Haider (1993), Kayne (1994) and Zwart (1993) that SOV orders are derived from basic (universal) SVO orders. Mahajan (1995) also offers evidence from the asymmetric behaviour of left-moved and right-moved phrases that Hindi also does not have overt rightward movement and that the apparent right-moved phrases are stranded as a result of raising of the rest of the TP. We offer some evidence here why this analysis is not desirable for Tamil. (I) Tamil is strictly head-final at all levels of phrasal structure except at the level of phrasal constituents. It is unclear why it must not be head final at that level alone. (II) There are no asymmetries in the behaviour of right and left extracted elements. Their syntactic properties are identical. (III) Phrasal reordering yields interpretive differences while the basic order does not. More specifically, SVO orders are semantically marked (with focus properties) but SOV orders have no such specific semantic properties. (IV) Acquisition data provides robust evidence of SOV orders and head-final phrase structure at all levels. Order-shifted sentences are similarly, semantically marked. (V) Extraction of NP observes constraints on syntactic movements and can be identified with specific syntactic properties pertaining to the landing site etc. (VI) Finally, NPs can be extracted long-distance across many clauses, to the right and to the left, and it is unclear why such large structures should raise. An NP-stranding analysis is not viable in this context. A simple NP-movement analysis captures the syntactic facts correctly.

2.3 CLAUSE-INTERNAL SCRAMBLING

2.3.1 Weak Crossover Effects

It has been shown that co-reference between a pronoun and the trace of a wh-word or quantifier where the pronoun c-commands the trace of the wh-word or quantifier creates strong ungrammaticalities. This phenomenon has been called *strong crossover*—

- (19) *Who_i does he_i think t_i played dice?
 (20) *Who_i did he_i stake t_i?

It has also been shown that weaker ungrammaticalities are caused when the pronoun is contained within the subject DP and this phenomenon has been called *weak crossover* (WCO) (Higginbotham 1983, Reinhart 1983)—

- (21) Who_i did his_i brother stake t_i?

Creation and suppression of weak crossover effects have been used as diagnostic tests in discussions of scrambling (Gurtu, 1986, Hoji and Saito, 1983) to identify the *type* of movement involved in the scrambling operation. It has been noted that in Hindi and Japanese, for example, sentences with *wh-* and quantifier phrases *in situ* show WCO effects. This phenomenon is illustrated by the following examples taken from Mahajan p25-28. Examples of *wh-* and quantifier phrases for a transitive clause are given in (22) and (23) and those for ditransitive clauses are shown in (24) and (25)—

- (22) *uskii_i bahin kis-ko_i pyaar kartii thii
 his sister(SU) who(DO) love do-imp-f be-pst-f
 ‘Who_i does his_i sister love?’

- (23) *unkii_i bahin sab-ko_i pyaar kartii thii
 their sister(SU) everyone(DO) love do-imp-f be-pst-f
 ‘Their_i sister loved everyone_i.’

- (24) *raaja-ne uske_i pitaa-ko konsii daasii_i loTaa dii
 king(SU) her father(IO) which maid(DO) return give-pst-f
 ‘Which maid_i did the king return to her_i father.’

- (25) *raaja-ne unke_i pitaa-ko sab daasiyaaN_i loTaa diiN
 king(SU) their father(IO) all maids(DO) return give-pst-f-pl
 ‘The king returned all the maids_i to their_i father.’

It has been shown (Gurtu 1986, Mahajan 1990) that NP-fronting, for example, object over subject, can suppress these WCO effects and that the fronted NP is able to bind an anaphor that it previously couldn’t, from its new position. This appears to be true of objects raised over subjects, as well as direct objects raised over indirect objects. The examples above are repeated here with NP-fronting. Note that the WCO effects do not show up any more—

- (26) kis-ko_i [uskii_i bahin to pyaar kartii thii]
 who(DO) his sister(SU) love do-imp-f be-pst-f
 ‘Who_i does his_i sister love?’

- (27) sab-ko_i [unkii_i bahin t_{IO} pyaar kartii thii]
 everyone(DO) their sister(SU) love do-imp-f be-pst-f
 ‘Their_i sister loved everyone_i.’
- (28) raaja-ne konsii daasii_i uske_i pitaa-ko t_O loTaa dii
 king(SU) which maid(DO) her father(IO) return give-pst-f
 ‘Which maid_i did the king return to her_i father.’
- (29) *raaja-ne sab daasiyaaN_i unke_i pitaa-ko t_i loTaa diiN
 king(SU) all maids(DO) their father(IO) return give-pst-f-pl
 ‘The king returned all the maids_i to their_i father.’

It is therefore argued that scrambled objects move to argument positions from which they can bind (argued to be Spec, AGRsP) in Hindi and that they do not *reconstruct* from this position to their base position.

We apply the same test to Tamil. Let us now consider the sentences with quantifiers and wh-phrases and discuss the effects of such word order permutation on WCO. We discussed earlier the basic binding facts and we will use the regular third person pronoun in these cases as well. In the following sets of examples, we show sentences with wh-phrases *in situ* and then the order permuted sentences (30) and likewise, sentences with quantifier phrases *in situ* and then the order permuted sentences (31)—^{44 45}

- (30) *avan-uDaia_i aNNaa yaar-ai_i daayatt-il toT-r-aan
 he-G brother-N who-A dice-L lose-past-3sm
 ‘Who_i did his_i brother lose in the game of dice.’
- (30a) *yaar-ai_i [avan-uDaia_i aNNaa t_i daayatt-il toT-r-aan]
 (30b) *[t_i yaar-ai_i daayatt-il toT-r-aan] **avan-uDaia_i aNNaa**
- (31) *avan-uDaia_i aNNaa ellaar-ai-um_i daayatt-il toT-r-aan
 he-G brother-N who-A dice-L lose-past-3sm
 ‘His_i brother lost everyone_i in the game of dice.’
- (31a) *ellaar-ai-um_i [avan-uDaia_i aNNaa t_i daayatt-il toT-r-aan]
 (31b) *[t_i ellaar-ai-um_i daayatt-il toT-r-aan] **avan-uDaia_i aNNaa**

⁴⁴In the following the (a) and (b) sentences indicate the word order variations to the left and to the right. The first sentence in each set indicates the unmarked word order. Further, the ungrammaticality obtains only under the stated co-indexation. Otherwise, these sentences are fine. We give both left and right-moved sentences because we would like to treat them on a par. Why that is preferred will be the topic of discussion later in the chapter.

⁴⁵We must point out, however, that the reduplicated form of the pronoun permits coreference with the quantifier/wh-phrase and that there are no WCO effects—

- (a) ellaar-ai-um_i [avaa-avaaL-uDaia_i aNNaa t_i toT-r-aan]
 everyone-A they-they-G brother-N lose-past-3sm
 ‘Their brother lost everyone.’

We see that neither the extraction of the object nor the extraction of the subject causes the suppression of WCO effects. Local word order permutations do not appear to eliminate WCO violations in a sentence. What obtains in the base word order remains true after word order permutations. In the next four sets of examples we examine object-indirect object scrambling with respect to *wh*-phrases and quantifiers. There is also a difference in the behaviour of *D*-linked and non *D*-linked *wh*-phrases and quantifiers. In the *D*-linked cases there are no WCO effects across the board. Compare (32) with (33) with *wh*-phrases, and (34) with (35) with quantifier-phrases, and compare the two kinds—⁴⁶

Wh-phrases, D-Linked:

(32) draupadi avan-uDaia_i maamaa-kku enda kauravan-ai_i anupp-in-aaL
 Draupadi-N he-G uncle-D which Kaurava-A send-past-3sf
 ‘Which Kaurava_i did Draupadi send to his_i uncle?’

(32a) draupadi enda_i kauravan-ai_i avan-uDaia_i maamaa-kku t_i anupp-in-aaL
 (32b) enda_i kauravan-ai_i [draupadi avan-uDaia_i maamaa-kku t_i anupp-in-aaL]
 (32c) enda_i kauravan-ai_i avan-uDaia_i maamaa-kku [draupadi t^{IO}_i t^O_i anupp-in-aaL]
 (32d) enda_i kauravan-ai_i [draupadi t^{IO}_i t^O_i anupp-in-aaL] avan-uDaia_i maamaa-kku
 (32e) [draupadi t^{IO}_i t^O_i anupp-in-aaL] avan-uDaia_i maamaa-kku yaar-ai_i

Wh-phrases non-D-Linked

(33) *draupadi avan-uDaia_i maamaa-kku yaar-ai_i anupp-in-aaL
 Draupadi-N he-G uncle-D who-A send-past-3sf
 ‘Who_i did Draupadi send to his_i uncle?’

(33a) *draupadi yaar-ai_i avan-uDaia_i maamaa-kku t_i anupp-in-aaL
 (33b) *yaar-ai_i [draupadi avan-uDaia_i maamaa-kku t_i anupp-in-aaL]
 (33c) *yaar-ai_i avan-uDaia_i maamaa-kku [draupadi t^{IO}_i t^O_i anupp-in-aaL]
 (33d) *yaar-ai_i [draupadi t^{IO}_i t^O_i anupp-in-aaL] avan-uDaia_i maamaa-kku
 (33e) *[draupadi t^{IO}_i t^O_i anupp-in-aaL] avan-uDaia_i maamaa-kku yaar-ai_i

Quantifier phrases D-Linked:

(34) dharma avaaL-uDaia_i maamaa-kku ellaa_i sagodar-ar-ai-um toT-r-aan
 Dharma-N they-G uncle-D all brothers-pl-A-QP lose-past-3sm
 ‘Dharma lost all_i (his) brothers to their_i uncle.’

(34a) dharma ellaa_i sagodar-ar-ai-um avaaL-uDaia_i maamaa-kku t_i toT-r-aan
 (34b) ellaa_i sagodar-ar-ai-um [dharma avaaL-uDaia_i maamaa-kku t_i toT-r-aan]
 (34c) ellaa_i sagodar-ar-ai-um avaaL-uDaia_i maamaa-kku [dharma t^{IO}_i t^O_i toT-r-aan]
 (34d) ellaa_i sagodar-ar-ai-um [dharma t^{IO}_i t^O_i toT-r-aan] avaaL-uDaia_i maamaa-kku
 (34e) [dharma t^{IO}_i t^O_i toT-r-aan] ellaaisagodar-ar-ai-um avaaL-uDaia_i maamaa-kku

⁴⁶In these data sets we have more word order permutations, but the basic facts remain the same.

Quantifier phrases non-D-Linked:

(35) *dharma avaaL-uDaia_i maamaa-kku ellaar-ai-um_i toT-r-aan
 Dharma-N they-G uncle-D everyone-A-QP lose-past-3sm
 ‘Dharma lost everyone_i to their_i uncle.’

- (35a) *dharma **ellaar-ai-um_i** avaaL-uDaia_i maamaa-kku t_i toT-r-aan
 (35b) ***ellaar-ai-um_i** [dharma avaaL-uDaia_i maamaa-kku t_i toT-r-aan]
 (35c) ***ellaar-ai-um_i** **avaaL-uDaia_i maamaa-kku** [dharma t^{IO}_i t^O_i toT-r-aan]
 (35d) ***ellaar-ai-um_i** [dharma t^{IO}_i t^O_i toT-r-aan] **avaaL-uDaia_i maamaa-kku**
 (35e) *[dharma t^{IO}_i t^O_i toT-r-aan] **ellaar-ai-um_i avaaL-uDaia_i maamaa-kku**

It is not entirely clear why the D-linked phrases do not cause WCO. One possible reason could be that wh- or Q- component of the phrase is not directly c-commanded by the pronoun. Or it could be the partial referentiality of the phrase. It could also be that D-linked phrases do not undergo wh- and Quantifier Raising but their non-D-linked counterparts do. (See also Cheng, 1991 and Hale 1994, also Cheng, pc.). In all other cases, scrambling does not suppress WCO effects in Tamil (unlike Hindi). There appears to be no asymmetry between the movement to the right and the left. It appears that in both cases there is no local A-position that the wh-/Q-phrase can move into such that it can then successfully bind the pronoun and override WCO effects.

2.3.2 Reflexive Binding

A corollary to the discussion on WCO is reflexive binding. If fronted NPs can bind pronouns, can they also serve as binders of reflexives from their new A-positions? Mahajan argues that they can in Hindi and we include examples from his dissertation (p.32) where he shows the ungrammatical sentence in (36) followed by the grammatical, NP-fronted sentence in (37)—

(36) */???[apne_i baccoN-ne mohan-ko_i ghar se nikaal diyaa
 self's children(SU) Mohan(DO) house from throw give-perf
 ‘Self’s_i children threw Mohan_i out of the house.’

(37) mohan-ko_i ?[apne_i baccoN-ne t₀ ghar se nikaal diyaa
 Mohan(DO) self’s children(SU) house from throw give-perf
 ‘Self’s_i children threw Mohan_i out of the house.’

Mahajan also shows that direct objects may be fronted over indirect objects and bind a reflexive contained in the latter. Conversely, if a direct object contains a reflexive that was bound by the indirect object, NP-fronting of the direct object will destroy that binding relation. Compare (38) and (39) (also from Mahajan p.33). In (39) the indirect object ‘tiger’ is unable to bind the reflexive within the fronted direct object—

(38) raam-ne_i sher_j apne_{i/j} baccoN-ko dikhaayaa
 Ram(SU) tiger-m self's children(DO) show-perf-m
 'Ram showed the tiger to self's_{i/j} children.'

(39) raam-ne_i apne_{i/*j} baccoN-ko sher_j dikhaayaa
 Ram(SU) self's children(DO) tiger-m show-perf-m
 'Ram showed the tiger to self's_{i/*j} children.'

In Tamil, an anaphoric-pronominal element, for example **taan**, is not permitted in (40) since there is no suitable antecedent that can bind it. (See discussion in section 1.7). However, the non-anaphoric pronoun, for example **avan**, contained within the DP *can* be co-referential with the object, optionally, as is shown in (41)—

(40) *tann-uDaia_i aNNaa bhimaav-ai_i daayatt-il toT-r-aan
 self-G brother-N Bhima-A dice-L lose-past-3sn
 'Self_i's brother lost Bhima_i in the game of dice.'

(41) (?)avan-uDaia_i aNNaa bhimaav-ai_i daayatt-il toT-r-aan
 he-G brother-N Bhima-A dice-L lose-past-3sm
 'His_i brother lost Bhima_i in the game of dice.'

This reading is facilitated if the object is scrambled over the subject to a sentence-initial position or if the subject is scrambled to a post-verbal position. *Linear precedence* of the antecedent appears to enable the co-referential reading with the object—

(42) **bhimaav-ai_i** [avan-uDaia_i aNNaa t_i daayatt-il toT-r-aan]
 Bhima_i-A he_i-G brother-N dice-L lose-past-3sm
 'His_i brother lost Bhima_i in the game of dice.'

(42a) bhimaav-ai_i t_i daayatt-il toT-r-aan] **avan-uDaia_i** **aNNaa**
 Bhima-A dice-L lose-past-3sm he_i-G brother-N
 'His_i brother lost Bhima_i in the game of dice.'

The question to ask is whether this movement makes a difference to the binding of the anaphoric pronoun **taan**, whether it can be co-referential with an object scrambled to a position higher than the pronoun—

(43) ***bhimaav-ai_i** [tann-uDaia_i aNNaa t_i daayatt-il toT-r-aan]
 Bhima-A self-G brother-N dice-L lose-past-3sn
 'Self_i's brother lost Bhima_i in the game of dice.'

- (44) * [t_i bhimaav-ai_i daayatt-il toT-r-aan] tann-uDaia_i aNNaa
 Bhima-A dice-L lose-past-3sn self-G brother-N
 ‘Self_i’s brother lost Bhima_i in the game of dice.’

The raising of the object above the subject or moving the subject to the end of the sentence does not create a new binder for the anaphor contained within the subject. Likewise, in the ditransitive cases, the object is unable to bind a reflexive contained within the indirect object from its new position—

- (45) dharma_i draupadi-ai_j tann-uDaia_{i/*j} maamaa-kku t_j toT-r-aan
 Dharma-N Shakuni-D self-G uncle-A lose-past-3sm
 ‘Dharma_i lost Draupadi_j to self’_{s_{i/*j}} uncle.’

It is important to ask the converse question. If moved NPs do not become binders by virtue of their new position, do reflexives ‘escape’ from a binder as a result of this extraction? In Hindi, Mahajan shows that if the object raises to a position above the subject, it can only be bound by the subject and not (any more) by the indirect object. Compare (46) and (47). In the former, both the subject and the indirect object could bind the reflexive in the object, but not once the object NP has been fronted. If the object raises above the subject it can still be bound by the subject (48). He uses these examples to argue that moved NPs only reconstruct when they raise to non-argument positions and that in fact the position above the subject could be a non-argument position while the one below the subject is always an argument position—

- (46) raam-ne_i mohan-ko_j apnii_{i/j} kitaab loTaaii
 Ram(SU) Mohan(IO) self’s book-f(DO) return-perf-f
 ‘Ram_i returned self’_{s_{i/j}} book to Mohan.’
- (47) raam-ne_i apnii_{i/*j} kitaab mohan-ko_j loTaaii
 Ram(SU) Mohan(IO) self’s book-f(DO) return-perf-f
 ‘Ram_i returned self’_{s_{i/*j}} book to Mohan.’
- (48) apnii_{i/*j} kitaab raam-ne_i mohan-ko_j loTaaii
 self’s book-f(DO) Ram(SU) Mohan(IO) return-perf-f
 ‘Ram_i returned self’_{s_{i/*j}} book to Mohan.’

We have already seen that with respect to binding, and again unlike Hindi, word order changes do not create new binders. We now show that neither do they undo extant binding relations. In the following set of data include instances of both leftward and rightward movements, as well as raising over the subject and the indirect object. In all instances it is always and only the subject that binds the anaphor irrespective of the surface positions of the antecedent and the anaphor—

(49) dharmai shakuni-kku; tann-uDaia_{i/*j} sagodar-ar-ai toT-r-aan
 Dharma-N Shakuni-D self-G brothers-A lose-past-3sm
 ‘Dharma lost his brothers to Shakuni.’

(49a) [dharmai tann-uDaia_{i/*j}sagodar-ar-ai shakuni-kku; t⁰ toT-r-aan]

(49b) tann-uDaia_{i/*j}sagodar-ar-ai [dharmai shakuni-kku; t⁰ toT-r-aan]

(49c) [t^S shakuni-kku; tann-uDaia_{i/*j} sagodar-ar-ai toT-r-aan] dharmai

(49d) tann-uDaia_{i/*j}sagodar-ar-ai t^S shakuni-kku; t⁰ toT-r-aan dharmai

This further supports the thesis that local movement in Tamil is always reconstructed and binding relations etc. are determined by the base SOV word order. We look at two more diagnostic tests before outlining the properties of long-distance movement.

2.3.3 Reconstruction and Condition C effects

Condition C violation occurs if a pronoun c-commanding a fully referential NP is co-referential with it. Thus—

(50) *He_i loves John_i.

(51) *She_i wants to see Mary_i.

Like suppression of WCO effects, NP-fronting has also been shown to undo Condition C effects in Hindi by Mahajan. Compare (52) and (53)—

(52) *mE-ne use_i raam_i ki kitaab dii
 I(SU) him(IO) Ram gen book-f give-perf-f
 ‘I gave to him_i Ram’s_i book.’

(53) mE-ne raam_i ki kitaab use_i dii
 I(SU) Ram gen book-f him(IO) give-perf-f
 ‘I gave Ram’s_i book to him_i.’

Again, in Tamil, word order changes do not undo Condition C effects with an anaphor—

(54) *dharmai tan-ukku_i shakuni-uDaia_i daayatt-ai koDu-tt-aan
 Dharma-N self-D Shakuni-G dice-A give-past-3sm
 ‘Dharma gave Shakuni’s_i dice to self_i.’

(55) *dharmai shakuni-uDaia_i daayatt-ai tan-ukku_i koDu-tt-aan
 Dharma-N Shakuni-G dice-A self-D give-past-3sm
 ‘Dharma gave Shakuni’s_i dice to self_i.’

It may be argued that this ungrammaticality is due to the subject-oriented nature of the anaphor. However if a pronoun were used, as we showed earlier in the discussion of binding, then it would appear that Condition C effects are suppressed. Consider the above with a pronoun in the place of the anaphor—

- (56) ?dharma avan-ukku_i shakuni-uDaia_i daayatt-ai koDu-tt-aan
 Dharma-N he-D Shakuni-G dice-A give-past-3sm
 ‘Dharma gave Shakuni’s_i dice to him_i.’
- (57) dharma shakuni-uDaia_i daayatt-ai avan-ukku_i koDu-tt-aan
 Dharma-N Shakuni-G dice-A he-D give-past-3sm
 ‘Dharma gave Shakuni’s_i dice to him_i.’

Co-reference is more *likely* in the latter and somewhat harder to get in the former. Other permutations, so long as the referential NP is to the left of the pronoun, will also *facilitate* the coreferential reading. However, we do not believe that this effect has anything to do with the *structural* positioning of the antecedent for two reasons. First, while the co-referential reading is more *likely* in (57) it is neither obligatorily present in (57) nor is it obligatorily ruled out in (56). Second, even when the pronoun is contained in the possessive phrase, there is still a preference for the pronoun to follow the referential NP. We discussed these in the section on WCO effects and the relevant examples are recapitulated here—

- (58) ?avan-uDaia_i aNNaa bhimaav-ai_i daayatt-il toT-r-aan
 he-G brother-N Bhima-A dice-L lose-past-3sm
 ‘His_i brother lost Bhima_i in the game of dice.’
- (59) **bhimaav-ai_i** [avan-uDaia_i aNNaa t_i daayatt-il toT-r-aan]
 Bhima_i-A he_i-G brother-N dice-L lose-past-3sm
 ‘His_i brother lost Bhima_i in the game of dice.’

The pronoun does not c-command the referential NP. Therefore, Condition C is not relevant. But the leftness preference still obtains. We conclude that if Condition C is in violation in the base word order it continues to be in violation in order-permuted counterparts of the base sentence.

2.4.4 Quantifier Scope and Reconstruction

There has been much recent discussion on quantifier scope with respect to extraction. There is a difference between the narrow-scope and wide-scope interpretation

possibilities of an object quantifier given its surface position. The following sentence is ambiguous between two interpretations⁴⁷—

- (60) Every policeman beat someone.
 (60a) There is some person such that every policeman beat that person (wide scope object)
 (60b) For every policeman there is some person such that the policeman beat that person (narrow scope object)

But in the extracted version in (61), only one of the readings is possible anymore—

- (61) There is someone_i that every policeman beat *t_i*.

This fact has also been used to argue that the quantifier has been raised to an argument position from which it does not reconstruct. Thus, QR from this new position will not yield the same scope ambiguities as those obtained from the base position of the moved phrase.

In Tamil, in sentences such as the following, the most salient reading is the one where the subject has scope over the object, i.e., Tamil also appears to be a rigid scope language. We use an NP with a numerical quantifier in the subject position in place of the universal quantifier **ellaarum**, because the latter lends itself to a *group* rather than an *individual* reading (unlike the universal quantifier ‘everyone’ in English)—

- (62) muuNu peer ella poliskaaran-ai-um paar-tt-aa
 three people-N all policemen-A-Qu see-past-3p
 ‘Three people saw all the policemen.’

When the order of the elements is permuted, there is no change in the scope relations—

- (63) **ella** **poliskaaran-ai-um** muuNu peer **t_{QP}** paar-tt-aa
 all policemen-A-Qu three people-N see-past-3p
 ‘Three people saw all the policemen.’

⁴⁷In Japanese, it has been noted that the base order of elements provides an unambiguous reading of the quantifiers and Japanese is known as a rigid scope language (Saito 1990)—

- (a) dareka-ga daremo-o aisiteiru
 someone-N everyone-A love
 ‘There is a person who loves everyone.’

However, when the object quantifier is extracted, the scope ambiguity emerges—

- (b) daremo-o dareka-ga aisiteiru
 everyone-A someone-N love
 ‘Everyone loves someone’, or ‘Someone loves everyone’.

The scope of the scrambled NP is construed either from its new position or by the optional QR-ing of the nominative quantifier which lends it a wide scope reading.

However, in the following Tamil example, the most salient reading is a narrow-scope reading interestingly enough—

- (64) muuNu peer jaar-ai-o paar-tt-aa
 three people-N him-A-Qu see-past-3p
 ‘Three people saw someone.’
 There is some y such that for each of three x, x saw y.

In the extracted case too, it is the same reading that obtains. There is no other *restriction* of interpretation—

- (65) jaar-ai-o [muuNu peer t_{QP} paar-tt-aa]
 him-A-Qu three people-N see-past-3p
 ‘Three people saw someone.’
 There is some y such that for each of three x, x saw y.

It is unclear why the wide scope reading of the object quantifier is the most salient in (65). We suspect that the specificity effects of the accusative case marking on the object cause it. The important fact to note is that the scrambling of phrases does *not* undo or modify the scope relations. There is, in addition, a well-used system of reduplication that facilitates a distributive reading. In fact, reciprocals in Tamil are such reduplicated structures and this enables the other, distributive or pair-list reading—

- (66) muuNu peer jaar-jaar-ai-o paar-tt-aa
 three people-N some-someone-A-Qu see-past-3sm
 ‘Three people saw someone.’
 For three x, there is some y such that x saw y.

In fact it is also possible to reduplicate the subject quantifier. In the above, reduplication of ‘three people’ indicates groups of three. ‘The distributive reading ‘each’ is obtained by reduplicating the numerical quantifier **oruttar** ‘one person’—

- (67) mum-muuNu peer jaar-ai-o paar-ttaa
 three-three people-N someone-A-Qu see-past-3sm
 ‘Three people saw someone.’
 There is some y such that for each of three x, x saw y.

- (68) ov-orutar-um jaar-ai-o paar-ttaa
 each-eachone-N-Qu someone-A-Qu see-past-3sm
 ‘Each person saw someone.’
 For each x, there is a y, such that x saw y.

It is sufficient to reduplicate one quantifier, but it is also possible to reduplicate both quantifiers with the same distributive reading—

- (69) mum-muuNu peer yaar-yaar-ai-o paar-ttaa
 three-three people-N some-someone-A-Qu see-past-3sm
 ‘Three people saw someone.’
 For each of three x, there is some y, such that x saw y.

Extraction in these constructions also does not change the interpretation. The distributive reading survives after extraction. Interactions between quantifier scope and wh-scope are similarly determined. We get either a distributive reading (71) or a single x reading (70) and this is contingent on the reduplication of the wh- or quantifier phrase—

- (70) ellaa poliskaaran-um yaar-ai paar-tt-aa
 all policemen-N-Qu who-A see-past-3p
 ‘Who did all the policemen see?’
 What is the y, that for all x, x a policeman, x saw y

- (71) ellaa poliskaaran-um yaar-yaar-ai paar-tt-aa
 all policemen-N-Qu who-who-A see-past-3p
 ‘Who did all the policemen see?’
 For all x, x a policeman, what is the y such that x saw y

Extraction does not effect a change in the base interpretation in either case—

- (70a) **yaar-ai** [ellaar-um t_{wh} paar-tt-aa
 What is the y, that for all x, x saw y

- (71a) ellaar-um t_{wh} paar-tt-aa **yaar-yaar-ai**
 For all x, what is the y such that x saw y

Thus, none of the interpretive properties and violations that obtain in an SOV order are modified under movement. We now turn to the syntactic properties of long-distance movement.

2.4 CLAUSE EXTERNAL SCRAMBLING

Just as in Japanese and Hindi, we also find long distance extraction of NPs in Tamil. Examples are given from both Hindi (Mahajan 1991, p 38) and Tamil—

- (72) mohan-ko raam-ne soocaa [cpki siitaa-ne t dekhaa thaa]
 Mohan(EDO) Ram(SU) thought that Sita(ESUB) seen be-past
 ‘Mohan, Ram thought that Sita had seen.’

- (73) **draupadi-ai** vyaasar [CPdharmaa t toT-r-aan-nnu] ezhud-in-aar
 Vyāasa-N Dharma-N Draupadi-A lose-past-3sm-that write-past-3sh
 ‘Draupadi, Vyaasa wrote that Dharma lost.’

These movements also exhibit the same syntactic properties as short-extraction. Let us consider briefly the consequences to WCO, reflexive binding and Condition C effects of long distance word order permutations. Such permutations are not known to change interpretation, suppress WCO effects etc. in previously studied languages such as Hindi and Japanese.

It must be pointed out at the start that the preferred position of CP complements is either on the right or the left periphery as the following show. CPs are least likely to appear in their base-generated position, wedged between matrix subject and verb—

- (74) ganapati [shakuni dharmaa-kku daayatt-ai koDu-tt-aan-nnu] ezhud-in-aan
 Ganapati Shakuni-N Dharma-D dice-A give-past-3sm-that write-past-3sm
 ‘Ganapati wrote that Shakuni gave the dice toDharma.’
- (75) ganapati t_{CP} ezhud-in-aan [CPshakuni dharmaa-kku daayatt-ai koDu-tt-aan-nnu]
- (76) [CPshakuni dharmaa-kku daayatt-ai koDu-tt-aan-nnu] ganapati t_{CP} ezhud-in-aan

This is especially true of multiple embeddings where the stacked subjects make processing difficult and movement to the periphery (like Heavy NP-shift) is one way (*pro*-drop also serves a similar purpose) of easing the processing difficulty. In (78) the embedded CPs have been shifted to the left periphery of the matrix CP containing them and in (79) they have been shifted to the right periphery. It is of course possible to shift an embedded CP at one structural level to the left and another embedded CP, structurally further up, to the right—

- (77) ##[CPganapati [CPvyaasar [CPshakuni dharmaa-kku daayatt-ai
 Ganapati-N Vyaasa-N Shakuni-N Dharma-D dice-A
 koDu-tt-aan-nnu] son-n-aar-nu] ezhud-in-aan]
 give-past-3sm-that say-past-3sh⁴⁸-that write-past-3sm
 ‘Ganapati wrote that Vyaasa said that Shakuni gave the dice to Dharma.’
- (78) [CP³[CP²[CP¹shakuni dharmaa-kku daayatt-ai koDu-tt-aan-nnu] vyaasar
 t_{CP¹} son-n-aar-nu] ganapati t_{CP²} ezhud-in-aan]⁴⁹
- (79) [CP³ganapati t_{CP²} ezhud-in-aan] [[CP²vyaasar t_{CP¹} son-n-aar-nu]
 [CP¹shakuni dharmaa-kku daayatt-ai koDu-tt-aan-nnu]]

⁴⁸3sh is third person, singular, honorific.

⁴⁹Indices on the CP traces indicate the level of embedding where 1 indicates the most deeply embedded and 3, the matrix.

However, in discussing syntactic properties, we will retain the base-word order as far as possible in order to isolate the extraction we are interested in. In most cases we discuss one degree of embedding only.

2.4.1 Weak Crossover

With respect to the phenomenon of WCO we find that clause-external extraction, just as in clause-internal extraction, does not suppress the WCO effects. Examples include quantifiers and wh-phrases where the matrix subject contains the relevant pronoun and the matrix object the relevant quantifier or wh-phrase. The same results will obtain if the quantifier or wh-phrase were to be in the subject or any other position of the embedded clause and if the pronoun were to be contained in an object or other NP—

(80) *avan-uDaia_i manaivi [dharma yaar-ai_i toT-r-aan-nnu] ninai-tt-aaL
 he-G wife-N Dharma-N who-A lose-past-3sm-that think-past-3sf
 ‘Who_i does his_i wife think that Dharma lost?’

(80a) *yaar-ai_i avan-uDaia_i manaivi [dharma t_{wh} toT-r-aan-nnu] ninai-tt-aaL

(80b) *yaar-ai_i t_S [dharma t_{wh} toT-r-aan-nnu] ninai-tt-aaL avan-uDaia_i manaivi

(81) *avan-uDaia_i manaivi [dharma ellaar-ai-um_i toT-r-aan-nnu] ninai-tt-aaL
 he-G wife-N Dharma-N everyone-A-Qu lose-past-3sm-that think-past-3sf
 ‘His_i wife thinks that Dharma lost everyone_i?’

(81a) *ellaar-ai-um_i avan-uDaia_i manaivi [dharma t_{QP} toT-r-aan-nnu] ninai-tt-aaL

(81b) *avan-uDaia_i manaivi [dharma t_{QP} toT-r-aan-nnu] ninai-tt-aaL ellaar-ai-um_i

This is also true of Hindi where WCO effects cannot be suppressed when the matrix subject contains the pronoun—

(82) *sab-ko_i uskii_i bahiN-ne socaa (ki) raam t dekhaa
 everyone(EDO) his sister(SU) thought that Ram(ESU) saw
 ‘His_i sister thought that Ram saw everyone_i.’

If the pronoun is contained within the embedded subject, WCO effects do not obtain. This, Mahajan takes as evidence for clause internal movement at the first hop and a clause-external step at the next hop. The first hop is to an argument position from which the extracted object can bind a pronoun in the matrix subject, the next hop is to a non-argument position from which it cannot bind, thereby accounting for the possible WCO effects of long-distance extraction—

- (83) kis-ko_i/sab-ko_i raam-ne socaa ki uskii; bahiN-ne dekhaa thaa
 who/everyone(EDO) Ram(SU) thought that his_i sister(ESU) seen be-past
 ‘Who_i did Ram think that his_i sister had seen?’ /
 ‘Everyone_i Ram thought his_i sister had seen.’

Earlier, we discussed the WCO effects in clause-internal extraction with D-linked wh-phrases. We noticed that there were no WCO effects. In clause-external extraction however, we see WCO effects for D-linked quantifiers and wh-phrases when the pronoun is contained in the matrix subject or other matrix NP, but not when it is contained in the embedded subject—

D-linked wh-phrase:

- (84) *avan-uDaia_i manaivi [dharma enda_i sagodaran-ai toT-r-aan-nnu] ninai-tt-aaL
 he-G wife-N Dharma which brother-A lose-past-3sm think-past-3sf
 ‘Which_i brother did his_i wife think that he lost?’

- (84a) *enda_i sagodaran-ai avan-uDaia_i manaivi [t_{wh} [dharma t_{wh} toT-r-aan-nnu] ninai-tt-aaL

D-linked quantifier phrase:

- (85) *avan-uDaia_i manaivi [dharma ellaa sagodaran-ai-um_i toT-r-aan-nnu] ninai-tt-aaL
 he-G wife-N Dharma-N all brothers-A-Qu lose-past-3sm-that think-past-3sf
 ‘His_i wife thinks that Dharma lost all (his) brothers?’

- (85a) *ellaa sagodaran-ai-um_i avan-uDaia_i manaivi t_{QP} [dharma t_{QP} toT-r-aan-nnu] ninai-tt-aaL

If the phrase moves cyclically (as it indeed must, recall our discussion at the start on island violations), then at the level of the lowermost CP there is no relevant WCO configuration. At the next CP level there is a pronoun. This final hop is to a non-argument position strictly, whatever we might say about the local movement or non-movement of D-linked phrases.

2.4.2 Reflexive Binding

We now test whether long distance extraction creates possible new binders. The pronominal is contained within the matrix subject and the referential NP is within the embedded clause. We find that the moved NP is unable to bind the anaphoric pronoun in all cases and that the non-anaphoric pronominal is coreferential with the NP in all cases, with a preference for linear precedence as we shall see from the examples—

- (86) avan-uDaia_i/ / tann-uDaia_i/ manaivi [dharma; bhimaav-ai;
 he-Gen / self-G wife Dharma-N Bhima-A
 toT-r-aan-nnu] ninai-tt-aaL
 lose-past-3sm that think-past-3sf
 ‘His_i/Self_i wife thought that Dharma_i lost Bhima_i.’

When the object NP is extracted to a position above the matrix subject (86a), the pronoun is preferentially co-referential with the extracted object rather than with the embedded subject and conversely with an extracted subject (86b). The anaphoric pronominal can never be bound by the embedded subject or object—

- (86a) **bhimaav-ai_j** [avan-uDaia_{i??i_j} / tann-uDaia_{i?i_j} manaivi [dharma_i
t toT-r-aan-nnu] ninai-tt-aaL]
(86b) **dharma_i** avan-uDaia_{i??i_j} / tann-uDaia_{i?i_j} manaivi [t bhimaav-ai_j
toT-r-aan-nnu] ninai-tt-aaL

NPs, as a consequence of long-distance extraction, in Tamil as in Hindi, cannot bind pronouns from their new surface positions. If they could bind a pronoun from their pre-extraction, base position they continue to do so after extraction as well.

2.4.3 Reconstruction and Condition C Effects

Condition C effects in clause-external extraction, as with clause-internal extraction, are not modified as a result of NP extraction. The anaphoric pronoun can never be bound by the moved NP and the non-anaphoric pronoun can always be bound. There is, once again, a preference for the *linear precedence* of the antecedent and the arguments we offered earlier that this is not a structural or syntactic effect, still obtain—

- (87) [_{CP}avan-uDaia_i / tann-uDaia_i manaivi [_{CP}dharma shakuni-uDaia_i
he-G / self-G wife Dharma-N Shakuni-G
daayatt-ai poT-T-aan-nnu] ninai-tt-aaL]
dice-A put-past-3sm-that think-past-3sf
‘Draupadi thought that Dharma gave self’s_i dice to Shakuni_i.’
(87a) **shakuni-uDaia_i** **daayatt-ai** [_{CP}avan-uDaia_i / tann-uDaia_i manaivi
[_{CP}dharma **t** poT-T-aan-nnu] ninai-tt-aaL]
(87b) **dharma** [_{CP}avan-uDaia_i / tann-uDaia_i manaivi [_{CP} **t**
shakuni-uDaia_i daayatt-ai poT-T-aan-nnu] ninai-tt-aaL]

2.4.4 Quantifier Scope and Reconstruction

There appears to be no interaction between an embedded quantifier and a matrix quantifier; there are no possible ambiguities to consider—

- (88) muuNu peer [draupadi yaar-ai-o anupp-in-aa-nnu] ninai-tt-aa
 three people-N Draupadi-N someone-A-Qu send-past-3sf-that think-past-3p
 ‘Three people thought that Draupadi sent someone.’
 For three x, x thinks that there is some y and Draupadi sent y (??)

If we consider the same example as in the clause-internal situation with the embedded object quantifier phrase extracted long-distance over the matrix subject, we find that the interpretation does not change—

- (88a) yaar-ai-o [draupadi [muuNu peer t_{QP} paar-tt-aa-nnu] ninai-tt-aaL]
 him-A-Qu Draupadi-N three people-N see-past-3p think-past-3sf
 ‘Draupadi thought that three people saw someone.’
 There is some y such that (Draupadi thought that) for each of three x, x saw y.

Further, a reduplicated object quantifier phrase, also extracted long distance, retains its distributive reading—

- (89) yaar-yaar-ai-o [draupadi [muuNu peer t_{QP} paar-tt-aa-nnu] ninai-tt-aaL]
 some-someone-A-Qu Draupadi-N three people-N see-past-3p-that think-past-3sf
 ‘Draupadi thought that three people saw someone.’
 Draupadi thought that for each of three x, there is some y such that x saw y.

Interactions between quantifier scope and wh-scope are also similar to the examples of clause-internal extraction. We get either a distributive reading (91) or a single x reading (90) and this is dependent on the reduplication of the wh- or quantifier phrase. Here too, the wh- and the quantifier phrase are contained within the embedded clause—

- (90) yaar-ai [C_Pdraupadi, [C_Pellaar-um t_{wh} paar-tt-aa-nnu] ninai-tt-aaL]
 who-A Draupadi-N everyone-N-Qu see-past-3p-that think-past-3sf
 ‘Who did Draupadi think that everyone saw?’
 What is the y, that Draupadi thought that for all x, x saw y
- (91) yaar-yaar-ai [C_Pdraupadi [C_Pellaar-um t_{wh} paar-tt-aa-nnu] ninai-tt-aaL]
 who-who-A Draupadi-N everyone-N-Qu see-past-3p-that think-past-3sf
 ‘Who did Draupadi think that everyone saw?’
 For all x, what is the y such that Draupadi thought that x saw y

2.5 SUMMARY

From the above we see that the syntactic properties of both clause-internal and clause-external scrambling (or extraction) are identical. Unlike Hindi and Japanese, the properties

of binding, WCO, scope and Condition C effects are construed from the base position of the NP. Extraction does not modify these properties in any way. We can now identify the extraction in all cases as movement to a non-argument position (A-bar movement) from which the extracted NP must reconstruct to its base position. Unlike other languages in which scrambling has been discussed at length (Japanese, Hindi), Tamil appears to have no local A-position to which NPs can raise. Recall that at the start, we established that this movement was indeed ‘syntactic’ movement and not stylistic or PF movement. This raises an important question. What purpose does word order permutation serve, if most of its syntactic properties are fixed prior to permutation and why is it such a pervasive property of the language? We turn to this question in the next section. We would like to show that extraction of NP (or scrambling) subsumes several disparate processes including topicalization and clefts. Before we proceed to the interpretive factors in scrambling, we have one further note on asymmetries between left and rightward movements.

2.6 ASYMMETRIES BETWEEN R- AND L- ADJUNCTIONS

It has been recently suggested by Mahajan (1995) that NPs that have been moved to the right are not really extracted NPs. He argues that the NPs have been stranded as a result of raising of the rest of the TP material (following Kayne 1994, Haider 1993). He uses the same sorts as evidence as above (WCO effects, quantifier scope etc.) to point out to the asymmetries between the apparently right-moved elements and the left-moved elements. For example, a rightward appearing NP is unable to bind a pronoun, which we might expect if it is the same sort of clause-internal movement as L-extraction—

- (92) */???[mohan-ko_i ghar se nikaal diyaa apne_i baccoN-ne
Mohan(DO) house from throw give-perf self's children(SU)
‘Self’s_i children threw Mohan_i out of the house.’

The verb and its other arguments are raised to VP-external positions. It is not clear if the asymmetry implicates this raising of the TP material or if it suggests that R- and L-extractions are different kinds of operations. If the latter, then we do not expect them to have the same syntactic properties. In Tamil, our tacit approach has been to treat both extractions on a par. The syntactic properties remain the same, the interpretive properties change. If these arguments have been stranded it is not clear why. Or even why the interpretation of a (VP) stranded argument is different from when it raises to a higher Spec within the TP.

Dwivedi in her dissertation and elsewhere argues that CPs in Hindi-Urdu are moved to the right-periphery (what she calls ‘Paratactic Adjuncts’) but are opaque to extraction procedures. In fact they appear to be independent of the rest of the preceding CP, (examples from Dwivedi 1997)—

(93) mujhe lagtaa hai ki [vo laRkii baadme bhaasan degii]
 me-D seems is that DEM girl later speech give-FUT
 [jis-ne kuch kitaabeN paRhi hai]
 REL-Obl-E some book-pl read-Pf.f be-Pres.3s
 'It seeme to me that the girl who read some books will later give a speech.'

(93a) *kuch kitaabeN mujhe lagtaa hai ki [vo laRkii baadme
 bhaasan degii] [[jis-ne e paRhi hai]

This appears to be true of Tamil as well in that once a CP has been moved to the (left or right) periphery of a sentence, further extraction out of that CP is impossible. If the CP remains in its base-generated position, then further extractions out of that CP is possible. We illustrate the above in the following examples—

(94) shakuni [CPdharmaa daayatt-il raajyatt-ai izha-pp-aan enru] son-n-aan
 Shakuni-N Dharma-N dice-L kingdom-A lose-fut-3sm that say-past-3sm
 Shakuni said that Dharma will lose (his) kingdom in (the game of) dice.'

(94a) raajyatt-ai [CPshakuni [CPdharmaa t_L t_O izha-pp-aan daayatt-ila
 enru] son-n-aan]

(94b) ???[[CPdharmaa daayatt-il t_O izha-pp-aan enru] [CPshakuni t_{CP}
 son-n-aan]] raajyatt-ai

We can attribute this to violations of cyclicity. It must be pointed that that this movement of CP to the periphery occurs for two reasons. Earlier we described a process that was similar to Heavy-NP shift, where a phonologically heavy unit such as a CP is moved to the periphery, especially in multiple embedded situations. In addition a CP may be topicalized or focused (which will become clear after the discussion on the interpretive consequences of scrambling) and when it is either topicalized (95) or focused (96), it is moved to the periphery and it becomes impossible to extract out of it again—

(95) ???[[CPdharmaa daayatt-il t_O izha-pp-aan enru]-naa] [[TPshakuni
 Dharma-N dice-L lose-fut-3sm that TOP Shakuni-N
 t_{CP} son-n-aan] raajyatt-ai]
 say-past-3sm kingdom-A

(96) ???[CPraajyatt-ai shakuni t_{CP} son-n-adu] [CPdharmaa daayatt-il
 kingdom-A Shakuni-N say-past-nom Dharma-N dice-L
 t_O izha-pp-aan enru] (taan)
 lose-fut-3sm that (FOC)

2.7 INTERPRETATION AND SCRAMBLING

Our basic argument in this chapter, is that Tamil exhibits movement to the right and the left. When the movement is to the left the extracted NP moves to a topic position and when the extraction is to the right, the extracted NP moves to a focus position. This is startling first of all from the point of view of much work on focus (Hungarian focus, references) that has isolated focus positions to the left of the verb. It is equally startling from the standpoint of studies on extraposition that treat the postposed phrases as being ‘outside’ the clause (for example, afterthoughts Herring, etc.). We argue that *positional* focus in Tamil is located at the right edge (we will discuss the exact location of the site somewhat later) and that scrambling to the left and right mimic and closely interact with independent topic and cleft operations in the language. We begin by discussing cleft and topic constructions in turn and then compare these with extraction operations, outlining properties that are common to both kinds of constructions. We then look at the interactions between all these syntactic processes.

2.7.1 Cleft constructions

In Tamil, there are three ways of assigning focus to a constituent. First, a simple focus particle may be added to the phrase *in situ* and it receives contrastive focus. Consider the following. In (98) the focus particle **taan**⁵⁰ has been added to the object and the interpretation is altered, as the gloss shows—

- (97) dharma daayatt-il shakuni-kku draupadi-ai toT-r-aan
 Dharma-N dice-L Shakuni-D Draupadi-A lose-past-3sm
 Dharma lost Draupadi to Shakuni in (the game of) dice.

- (98) dharma daayatt-il shakuni-kku draupadi-ai-taan toT-r-aan
 Dharma-N dice-L Shakuni-D Draupadi-A-FOC lose-past-3sm
 ‘Dharma lost DRAUPADI to Shakuni in (the game of) dice.’

Second, the phrase that is to be focused may simply be contrastively stressed—

- (99) dharma daayatt-il shakuni-kku DRAUPADI-AI toT-r-aan
 Dharma-N dice-L Shakuni-D Draupadi-A-FOC lose-past-3sm
 ‘Dharma lost DRAUPADI to Shakuni in (the game of) dice.’

Third, the constituent that is to be focused may be clefted. Any constituent (NPs, including postpositional phrases, CPs, AdvPs) may be clefted across the verb⁵¹, with the optional addition

⁵⁰The focus particle is homophonous with the anaphoric pronoun.

⁵¹When the verb itself is clefted another verb (similar to English do-insertion rule) is inserted but we shall not discuss the structure of these here—

of a focus particle to the postposed element. The verb is nominalized (indicated as *nom* in the morpheme gloss) and carries tense information but not agreement⁵². The following examples show a clefted direct object and subject, respectively—

- (100) [dharma daayatt-il shakuni-kku t toT-r-adu] draupadi-ai(-taan)
 Dharma-N dice-L Shakuni-D lose-past-nom Draupadi-A(-FOC)
 ‘It was Draupadi that Dharma lost to Shakuni in (the game of) dice.’
- (101) [t daayatt-il shakuni-kku draupadi-ai toT-r-adu] dharma(-taan)
 dice-L Shakuni-D Draupadi-A lose-past-3sm Dharma-N(-FOC)
 ‘It was Dharma who lost Draupadi to Shakuni in (the game of) dice.’

The case of the clefted direct object may, optionally, be dropped. The case on the indirect object or other postpositional marking has to be obligatorily retained—

- (102) [dharma daayatt-il shakuni-kku t toT-r-adu] draupadi(-taan)
 Dharma-N dice-L Shakuni-D lose-past-nom Draupadi-N(-FOC)
 ‘It was Draupadi that Dharma lost to Shakuni in (the game of) dice.’
- (103) [dharma daayatt-il t draupadi-ai toT-r-adu] shakuni-kku(-taan)
 Dharma-N dice-L Draupadi-A lose-past-nom Shakuni-D(-FOC)
 ‘It was to Shakuni that Dharma lost Draupadi in (the game of) dice.’

As we said earlier, the nominalized verb form can carry tense information but no agreement. The various tensed forms of the verb ‘to lose’ are given in (104), the lack of agreement between the verb and the clefted subject is seen in (105) where a plural subject has been clefted—

- (104) toT-kir-adu ‘is losing’ (PRESENT)
 toTkka-pooV-adu ‘will lose’ (FUTURE)
 toT-r-adu ‘losing’ (PAST)
- (105) t draupadi-ai toT-r-adu paaNDavar-gaL(-taan)
 Draupadi-A lose-past-nominal Pandavas-pl(-FOC)
 ‘It was the Pandavas who lost Draupadi.’

(a) [dharma daayatt-il shakuni-kku draupadi-ai toTkka-taan] seid-aan
 Dharma-N dice-L Shakuni-D Draupadi-A lose-inf-FOC do-past-3sm
 ‘What Dharma did was lose Draupadi to Shakuni.’

⁵²In the sense that the verb is invariant whatever the clefted argument might be.

2.7.1.1 Clefting and Negation

Let us look at some further properties of cleft constructions. First we consider negation. In clefted sentences, negation has scope only over the clefted element unless it is directly affixed to the verb and the focus particle cannot be added—

- (106) [dharma daayatt-il t draupadi-ai toT-r-adu] **shakuni-kku** illai
 Dharma-N dice-L Draupadi-A lose-past-nom Shakuni-D(-FOC) neg
 ‘It was not to Shakuni that Dharma lost Draupadi in (the game of) dice.’

- (107) [dharma daayatt-il shakuni-kku t toT-r-adu] **draupadi-ai** illai
 Dharma-N dice-L Shakuni-D lose-past-nom Draupadi-A neg
 ‘It was not Draupadi that Dharma lost to Shakuni in (the game of) dice.’

When the verb is negated, the negative nominal form of the verb is used and the negative operator does not have scope over the clefted element—

- (108) [dharma daayatt-il shakuni-kku t toT-k-aad-adu] **draupadi-ai(-taan)**
 Dharma-N dice-L Shakuni-D lose-past-neg-nom Draupadi-A(-FOC)
 ‘It was Draupadi that Dharma did not lose to Shakuni in (the game of) dice.’

It is possible, of course, to negate both the verb and the clefted element independently—

- (109) [dharma daayatt-il shakuni-kku t toT-k-aad-adu] **draupadi-ai** illai
 Dharma-N dice-L Shakuni-D lose-past-neg-nom Draupadi-A neg
 ‘It was not Draupadi that Dharma did not lose to Shakuni in (the game of) dice.’

2.7.1.2 Clefting and Wh-questions

Wh-questions can be clefted, again, with no focus particle being appended to the clefted wh-phrase. Accusative case can be optionally dropped—

- (110) [dharma daayatt-il shakuni-kku t toT-r-adu] **yaar-ai / yaaru**
 Dharma-N dice-L Shakuni-D lose-past-nom who-A/who-N
 ‘Who did Dharma lose to Shakuni in (the game of) dice?’

It is possible to cleft more than one wh-phrase, but the reading that obtains is a paired-list reading. In unclefted sentences, the wh-phrase is preferably left *in situ*—

- (111) [dharma daayatt-il t_{wh} t_{wh} toT-r-adu] **yaar-ai** **yaar-ukku**
 Dharma-N dice-L lose-past-nom who-A who-D
 ‘Who and to whom did Dharma lose in (the game of) dice?’

In clefted sentences a *wh*-phrase, if present, must be obligatorily clefted. It is not possible to cleft a non-*wh*-phrase if a *wh*-phrase is present and neither is it possible to cleft one non-*wh* and one *wh*-phrase together in one sentence—

(112) *[dharma daayatt-il t yaar-ai t toT-r-adu] shakuni-kku
 Dharma-N dice-L who-A lose-past-nom Shakuni-D
 ‘It was to Shakuni that Dharma lost whom in (the game of) dice?’

(113) ??[dharma daayatt-il t toT-r-adu] **yaar-ai / yaaru** shakuni-kku⁵³
 Dharma-N dice-L lose-past-nom who-A/who-N Shakuni-D
 ‘Who and to Shakuni did Dharma lose in (the game of) dice?’

Negation of the extracted *wh*-phrase will have scope over the *wh*-phrase only as we might expect. Again, the verb can also be negated independently.

Thus far, we have discussed clefting of various phrasal constituents and we have discussed the properties of negation and question formation with clefts. It is also possible to cleft finite and infinitival CP complements of verbs and also possible to cleft a phrase long distance. We turn our attention to these issues.

2.7.1.3 Cleft and CP complements

Both finite and infinitival complement CPs can be clefted in their entirety with the optional use of the focus particle—⁵⁴

(114) shakuni t ninai-tt-adu [_{CP}dharmaa draupadi-ai toT-r-aan enru](-taan)
 Shakuni-N think-past-nom Dharma-N Draupadi-A lose-past-3sm that(-FOC)
 ‘It was that Dharma lost Draupadi that Shakuni thought.’

(115) dharmaa t virumb-in-adu [_{CP}PRO dayatt-ai viLayaaD-a](-taan_
 Dharma-N want-past-nom dice-A play-inf(-FOC)
 ‘It was to play dice that Dharmaa wanted.’

⁵³This sentence sounds better than the one where the non *wh*-phrase precedes the *wh*-phrase. That sentence would be completely ungrammatical. The acceptability of (113) is partly due to a possible reading where the postposed NP is construed as an afterthought.

⁵⁴Interestingly, when finite complements are clefted it is also possible to nominalize the complementizer, which of course suggests that the complementizer in Tamil is a verbal category. We just make a note of this fact here; compare (a) and (b)—

- (a) shakuni t ninai-tt-adu [_{CP}dharmaa draupadi-ai toT-r-aan enru](-taan)
 Shakuni-N think-past-nom Dharma-N Draupadi-A lose-past-3sm that(-FOC)
 ‘It was that Dharma lost Draupadi that Shakuni thought.’
- (b) shakuni t ninai-tt-adu [_{CP}dharmaa draupadi-ai toT-r-aan enb-adu](-taan)
 Shakuni-N think-past-nom Dharma-N Draupadi-A lose-past-3sm that-nom(-FOC)
 ‘It was that Dharma lost Draupadi that Shakuni thought.’

It is also permissible to cleft from within an embedded finite CP either locally to the edge of that CP or long distance to the edge of the matrix CP. All NP constituents of the lower finite CP can be clefted across the lower verb as in the case of the simple sentence and the matrix verb remains finite. It is not possible, however, to cleft out of an infinitival complement locally. Long-distance clefting is acceptable. The following examples illustrate these properties (we ignore the focus particle from here on)—

Clefting within an embedded, finite CP:

- (116) shakuni [CPdharmaa t toT-r-adu draupadi-ai enru] ninai-tt-aan
 Shakuni-N Dharma-N lose-past-nom Draupadi-A that think-past-3sm
 ‘Shakuni thought that it was Draupadi that Dharma lost.’

Clefting from an embedded, finite CP to the matrix:

- (117) shakuni [CPdharmaa t toT-r-aan enru] ninai-tt-adu draupadi-ai
 Shakuni-N Dharma-N lose-past-3sm that think-past-nom Draupadi-A
 ‘It was Draupadi that Shakuni thought that Dharma lost.’

Clefting within an embedded, infinitival CP:

- (118) *dharmaa [CPPRO t viLayaaD-a dayatt-ai] virumb-in-aan
 Dharma-N play-inf dice-A want-past-nom
 ‘It was dice to play that Dharma wanted.’ (Lit.)

Clefting from an embedded, infinitival CP to the matrix:

- (119) dharmaa [CPPRO t viLayaaD-a] virumb-in-adu dayatt-ai
 Dharma-N play-inf want-past-nom dice-A
 ‘It was dice that Dharma wanted to play.’

In clefting long-distance out of an embedded CP, it is possible to cleft only once (as above), either locally or long-distance. Clefting a single argument across two verbs sequentially, is disallowed—

- (120) *shakuni [[CPdharmaa t toT-r-adu t enru] ninai-tt-adu] draupadi-ai
 Shakuni-N Dharma-N lose-past-3sm that think-past-nom Draupadi-A
 ‘It was Draupadi that it was Shakuni that thought that Dharma lost.’ (Lit.)

It is however, permissible to cleft within an embedded finite CP and then to cleft the entire CP out to the matrix—

- (121) shakuni t_{CP} ninai-tt-adu [CPdharmaa t₀ toT-r-adu draupadi-ai enru]
 Shakuni-N think-past-nom Dharma-N lose-past-nom Draupadi-A that
 ‘That it was Draupadi who Dharma lost was what Shakuni thought.’

As with *wh*-phrases, more than one NP may be clefted with a pair-list reading under restricted conditions: both NPs must be arguments of the same verb and the underlying order should, be maintained (direct object preceding an indirect object etc.). Note that the underlying order to the right is a mirror image of the order to the left. It is not possible though, to cleft one embedded argument and one matrix argument. Compare the following—

- (122) [_{TP}shakuni [_{CP}dharma t_L t_O toT-r-aan enru]
 Shakuni-N [Dharma-N lose-past-3sm that]
 ninai-tt-adu] **bhimaav-ai daayatt-il**
 think-past-3sm Bhima-A dice-L
 ‘It was Bhima in (the game of) dice that Shakuni thought that Dharma lost.’

- (123) *[dushaasan t_{IO} [dharmaa t_O toT-r-aan enru]
 Dushasan-N Dharma-N lose-past-3sm that
 son-n-adu] **bhimaav-ai draupadi-kku**
 say-past-nom Bhima-A Draupadi-D
 ‘It was to Draupadi that it was Bhima that Shakuni said that Dharma lost.’

2.7.1.4 Other properties

There are a few other properties of clefts that must be mentioned. The clefted element attracts the nuclear stress or the intonational peak in the sentence, which usually fall on the first part of the verb. It is an integral part of the IP from which it is extracted. If it is an argument, it is assigned case by the verb. Most constituents of a CP can be clefted including NPs (postpositional or otherwise), adjuncts, adverbs, CPs (finite and infinitival), *wh*-phrases and certain quantifier phrases.⁵⁵ It cannot be replaced by a pronoun etc. Binding relations between the clefted element and its subject are also maintained under clefting—

- (124) dharma_i daayatt-il t toTr-adu tan_i manaivi-ai
 Dharma-N dice-A lose-past-nom self wife-A
 ‘It was his_i wife that Dharma_i lost.’

To summarize, these properties show that the clefted element properly belongs to the CP from which it has been extracted (except for adverbs), that it is thematically linked to the verb and, also, that none of the other syntactic properties of the CP are destroyed under clefting. We have seen that the process can apply once in each CP. A final property of clefts in Tamil that identifies them as regular syntactic extraction is that they observe islands.

⁵⁵It is more natural to find the universal quantifier ‘everyone’ and odd to cleft either ‘someone’ or ‘no one’. We will attribute this to the semantics of the quantifiers and the mismatch between the semantics of focus and the semantics of these quantifiers.

2.7.1.5 Island Violations

Island violations are taken to be diagnostics of movement in syntactic theory, that certain movements are illicit because they try to travel too far in a single hop or as causing illicit <antecedent, trace> chains. Movements are considered to be a local process. Apparent long distance movement is but a series of local moves. We saw the effects of islands on scrambling in Tamil. Likewise, clefting out of islands is disallowed (as in English)—

(125) John saw the artist who drew Mary.

(126) *It was Mary that John saw the artist who drew *t*.

In the following we show extraction out of two islands, the complex noun phrase and the sentential subject—

Complex Noun Phrase:

(127) draupadi [NP[TPshakuni-kku daaytt-il toT-r-a] dharmaav-ai] paar-tt-aaL
 Draupadi-N shakuni-D dice-A lose-past-ppDharma-N see-past-3sf
 ‘Draupadi saw Dharma who lost to Shakuni in (the game of) dice.’

(127a) *draupadi [NP[NP_{IO} daayatt-il toTr-a] dharmaav-ai]] paar-tt-adu shakuni-kku
 Draupadi-N dice-A lose-past-pp Dharma-N see-past-nom
 shakuni-D
 ‘It was to Shakuni that Draupadi saw Dharma who lost.’

Sentential Subject:

(128) [NP[TPdharma shakuni-kku draupadi-ai toT-r-adu]] avamaanam
 Dharma-N Shakuni-D Draupadi-A lose-past-nom shame
 ‘Dharma losing Draupadi to Shakuni is a shame.’

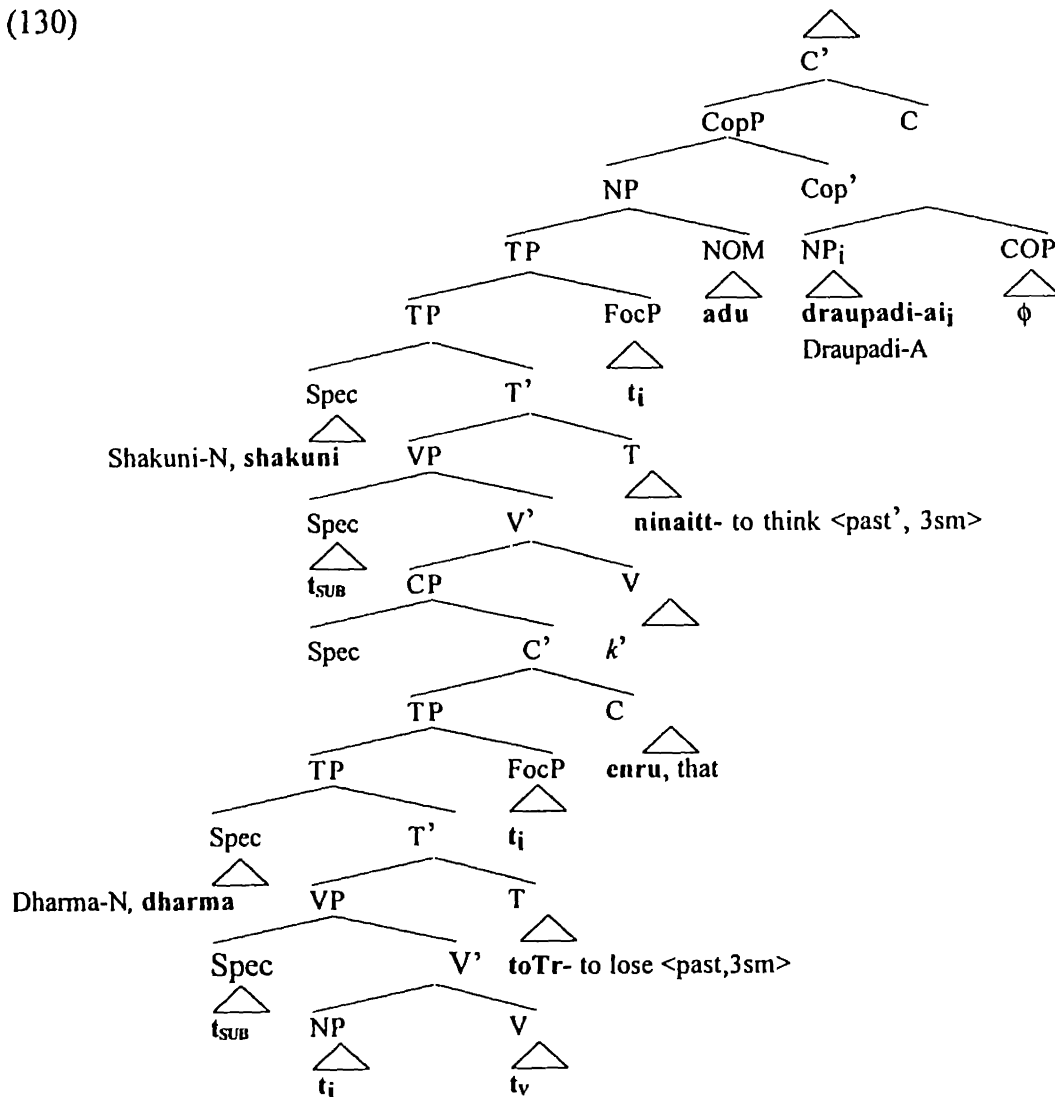
(128a) *[NP[TPdharma shakuni-kku t_O toT-r-adu]] avamaanam **draupadi-ai**
 Dharma-N Shakuni-D lose-past-nom shame Draupadi-A
 ‘It is Draupadi that Dharma losing to Shakuni is a shame.’

Clefting appears to be syntactic movement strictly speaking where (like scrambling) the binding, case, theta and other syntactic properties are determined at the base word order. Clefts have been analyzed in the literature as involving operator movement with the clefted argument being base-generated in the predicate position (Chomsky 1977). Heggie (1988) for example also assumes operator movement and in addition argues for a copular construction for clefts and pseudo-clefts. We have seen several properties of clefts which show us that clefting is movement of elements to a non-argument position, that this is not movement to a case-position. To recapitulate briefly, binding, case and theta properties are defined by the base position of the clefted element and not by its surface position. We also showed that the

movement is subject to island violations. Though there is no overt wh-operator in the cleft constructions, we assume that the movement of the NP is the relevant movement. We assume that the NP raises to a focus position, what we call FocP, generated to the *right* of TP. The operator raising is constrained by limitations on the distance it can travel in one hop as are all such syntactic movements including extraction. Like Heggie, we assume that the structure of these clefts is copular and we posit an empty copular head (Carnie 1995) that takes the nominalized clause and the clefted NP as its complements. Unlike Heggie's analysis we assume that the C selects the Copula Phrase as its complement. The structure of a clefted sentence as in (129) is given in (130). Note that the embedded object has been clefted across to the matrix—

- (129) [_{CP}shakuni [_{CP}dharmaa t toT-r-aan enru] ninai-tt-adu] draupadi-ai
 Shakuni-N Dharma-N lose-past-3sm that think-past-nom Draupadi-A
 'It was Draupadi that Shakuni thought that Dharma lost.'

(130)



In (130) we indicate the operator movements from FocP to FocP. Part of the process of clefting is nominalization of the TP and the creation of a nominative predicative construction. We assume that the TP is ‘nominalized’ by the addition of what we call a NOM head and that the clefted NP and this nominalized TP are held in a predicative relationship, which entails a copular structure. ν P has not been indicated in order to keep the tree smaller, but is still assumed to exist.

There are some strong reasons for assigning a cleft a copular structure, in Tamil. The copula is generally null in nominative predicative constructions in Tamil and it is so in clefts as well. It indicates that the predicated property is a permanent one and there is no tense information—

- (131) dharmaa suudaaTakkaaran
 Dharma-N gambler-N
 ‘Dharma (is) a gambler.’

However, the copula can be introduced into the construction by adding, what is often called in the literature an ‘adverbializing’ suffix, *-aaga*, ‘become’, to the entire construction. The predicated property is now a less permanent attribute—

- (132) dharmaa suudaaTakkaaran-aaga irukkaan
 Dharma-N gambler-N-adv be-pres-3sm
 ‘Dharma is as a gambler (now).’

The copula can, likewise, be introduced into cleft constructions, with the similar change in semantics—

- (133) dharmaa toT-r-adu draupadi-ai
 Dharma-N lose-past-nom Draupadi-A
 ‘It was Draupadi that Dharma lost.’

- (134) dharmaa toT-r-adu draupadi-aaga iruk-k-um
 Dharma-N lose-past-nom Draupadi-N-adv be-fut-3sn
 ‘It could be Draupadi that Dharma lost.’

Further, complementizers occur ‘higher’ than both clefts and nominative predicative constructions, i.e., C takes TPs and CopP (Copula Phrase) construction as complements. This is shown in the examples in (135) and (136). It is natural enough for Cs to take sentential complements but less so for the same C to take NP complements. Languages that permit complementizers with NPs and other nominals usually take a different lexical element as a nominal complementizer (Ken Hale’s observation)—

(135) draupadi [CP[_{Cop}dharmaa suudaaTakkaar-an] enru] ninai-tt-aaL
 Draupadi-N Dharma-N gambler that think-past-3sf
 ‘Draupadi thought that Dharma (is) a gambler.’

(136) bhishma [CP[_{Cop}dharmaa t toT-r-adu draupadi-ai] enru] ninai-tt-aaN
 Dharma-N lose-past-nom Draupadi-A
 ‘It was Draupadi that Dharma lost.’

Incidentally, the adverbialized copula construction is also a sentential complement in this sense, as might be apparent—

(137) bhishma [[dharmaa t toT-r-adu draupadi-]-aaga] iruk-k-um
 Bhishma-N Dharma-N lose-past-nom Draupadi-N-adv be-fut-3sn
 enru] ninai-tt-aaN
 that think-past-3sm
 ‘Bhishma thought that it could be Draupadi that Dharma lost.’

We must mention at this juncture that there is a construction in Tamil, which we shall call ‘equational’. These, like clefts appear to move an argument across the verb and have the same surface structure as clefts, but unlike clefts they have a pronominal head affixed to the verb and show some agreement with the ‘moved’ element. For example, in the nominative-accusative configuration, the agreement is with the subject only. If the object is to be moved then a passive configuration is preferred. In general, it appears to be difficult to move non-subjects. Thus (138) is fine but (139) is not—

(138) draupadi-ai shakuni-kku toTr-avar-gaL paaNDavar-gaL
 Draupadi-A Shakuni-D lost-nom-pl Pandava-pl
 ‘Those who lost Draupadi to Shakuni were the Pandavas.’

(139) *paaNDavar-gaL shakuni-kku toTravar-gaL draupadi-ai
 Pandava-pl Shakuni-D lost-nom-pl Draupadi-A
 ‘Who the Pandavas lost to Shakuni was Draupadi.’

In fact, with DS predicates, the verb does not agree with the dative subject but does agree with case-dropped accusative objects and with nominative objects of such predicates. In contrast, though the case on the direct object may be optionally dropped in clefts, no ‘agreement’ is ever possible there. In the following we include examples of equationals with DS predicates extracting either the nominative or the accusative objects. The unclefted sentences are also given—

DS predicate with accusative object:

- (140) paaNDavar-gaL-ukku droNaav-ai-um bhiishmaav-ai-um teriy-um
 Pandavas-D Drona-A-and Bhishma-A-and know-3sn
 ‘The Pandavas know Drona and Bishma.’

Moved object, case-dropped, with agreement:

- (140a) paaNDavar-gaL-ukku terind-avar-gaL droNaav-um bhiishmaav-um
 Pandavas-D know-past-nom-pl Drona-N-and Bhishma-N-and
 ‘Those who the Pandavas know are Drona and Bhishma.’

Moved subject, with agreement:

- (140b) *droNaav-ai-um bhiishmaav-ai-um terind-avar-gaL paaNDavar-gaL-ukku
 Drona-A-and Bhishma-A-and know-nom-pl Pandavas-D
 ‘The ones who know Drona and Bishma are the Pandavas.’

DS predicate with nominative object:

- (141) paaNDavar-gaL-ukku droNaav-um bhiishmaav-um tevaippaT-T-aargaL
 Pandavas-D Drona-N-and Bhishma-N-and need-past-3p
 ‘The Pandavas needed Drona and Bhishma.’

Moved object, with agreement:

- (141a) paaNDavar-gaL-ukku tevaippaT-T-avar-gaL droNaav-um bhiishmaav-um
 Pandavas-D need-past-nom-3p Drona-N-and Bhishma-N-and
 ‘Who the Pandavas needed were Drona and Bhishma.’

Moved subject, with agreement:

- (141b) *droNaav-um bhiishmaav-um tevaippaTT-avar-gaL paaNDavar-gaL-ukku
 Drona-N-and Bhishma-N-and need-past-3p Pandavas-D
 ‘Who needed Drona and Bhishma were the Pandavas.’

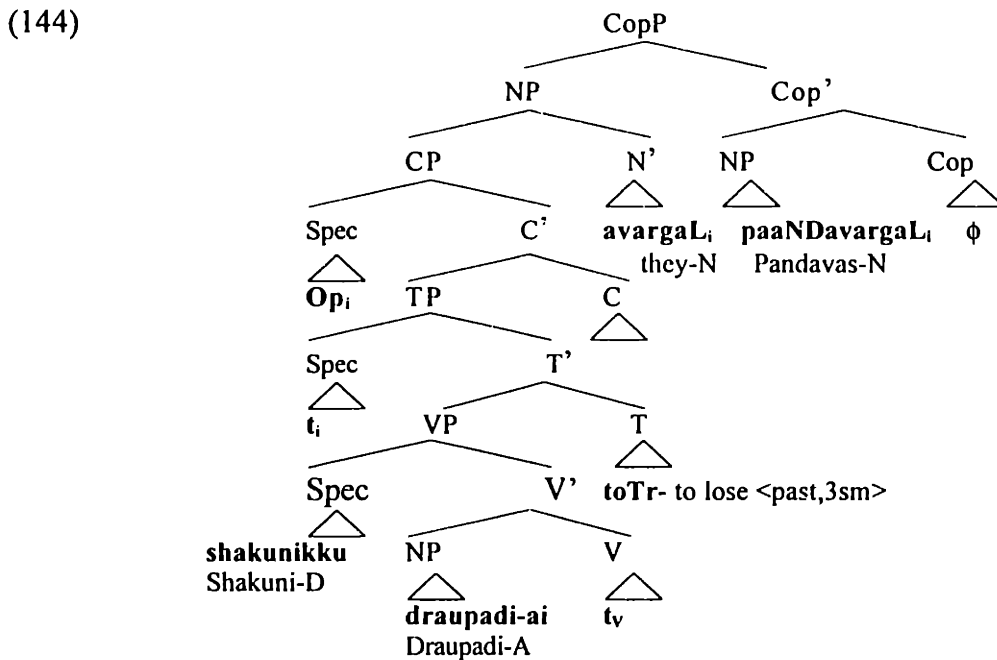
These are actually free relatives and not clefts (similar data for Malayalam is found in Mohanan 1982b). The differences between these and clefts are (a) the presence of the pronominal element (b) the lack of obligatory focus on the moved element and (c) the reading that there is a pronominal head that takes the TP as its complement. Surface appearances to the contrary, these are not clefts or pseudo-clefts but rather relative clauses with a pronominal head that are in a predicative relationship with the other (nominative) NP. In fact the restriction on ‘nominative’ arguments is expected. The head that is being modified by the relative clause must be nominative

to occur in a nominative-predicative construction. If the case is altered from dative to nominative, then the sentences above with a moved dative subject become much better⁵⁶—

- (142) ?droNaav-ai-um bhiishmaav-ai-um terind-avar-gaL paaNDavar-gaL
 Drona-A-and Bhisma-A-and know-nom-pl Pandavas-N
 ‘The ones who know Drona and Bishma are the Pandavas.’

We assign the following structure to this construction. There is a relative clause within one nominal of the nominative predicate that has a pronominal head, and the other NP is the predicate. The two parts are held within an empty copula structure as we saw in the clefts. However, the pronominal NP has not been adjoined to TP, it is base-generated within N. There is also a null (wh-) operator in these cases (similar to the English relative clause construction) that raises from the subject position to Spec, CP. Again, structural details that are not directly relevant have been omitted.

- (143) draupadi-ai shakuni-kku toTra-var-gaL paaNDavar-gaL
 Draupadi-A Shakuni-D lost-nom-pl Pandava-pl
 ‘Those who lost Draupadi to Shakuni were the Pandavas.’



In our discussion on clefts we also pointed out that it was possible to cleft two arguments out of one clause at one time with a pair list reading. In these cases we assume that both clefted NPs are adjoined to TP (and conjoined) with a single focus on them. We showed also

⁵⁶There is still some marginality. There appears to be some preference for matching case between the gap and the head of the relative clause. It is even more difficult with the DS predicate that takes a nominative object. In that case there are two nominative arguments – the base object and subject that is now the head of the relative clause.

that it was not possible to cleft one embedded argument and one matrix argument. This follows from the fact that arguments from different clauses cannot be individually conjoined, licitly—

- (145) *To whom and when did John give the book *t* and Mary go *t*?
 Meaning: To whom did John give the book and when did Mary go?

Recall that it was also not possible to cleft both the matrix and the embedded verbs. This is because cleft entails a copular construction with nominalization of the verb, i.e., the addition of a NOM head. In effect, the nominalized clause is a complex NP and consequently an island. Any attempts to extract out of it will result in island violations. In Tamil, participial relatives and other verbal nominal forms along with the nominal heads are also, as we might expect, barriers to extraction. In the following we give an example of each along with the NP-extracted counterpart—

- (146) *bhishma* [NP[CPshakuni dharmaa-kku koDu-tt-a] daayatt-ai] paar-tt-aan
 Bhishma-N Shakuni-D Dharma-N give-past-adj dice-A see-past-3sm
 ‘Bhishma saw the dice that Shakuni gave to Dharma.’
- (146a) **bhishma* [NP[CPshakuni *t*_{IO} koDu-tt-a]daayatt-ai] paar-tt-aan **dharmaa-kku**
- (147) *bhishma* [NP[CPdharmaa shakuni-kku toT-r]-ad-ai] gavani-tt-aan
 Bhishma-N Dharma-N Shakuni-D lose-past-nom-A note-past-3sm
 ‘Bhishma noted Dharma’s loss to Shakuni.’
- (147a) **bhishma* [NP[CPdharmaa *t*_{IO} toTr-ad-ai]] gavani-tt-aan **shakuni-kku**

The same logic applies to clefts. Consequently, it is neither possible to cleft across *both* the embedded and the matrix verbs with the extraction of a single argument, nor is it possible to extract two different arguments to different adjunction locations from a single CP. The only permissible option is to cleft within each CP once or to cleft, once and for all, either to the matrix clause or some other intermediate point.

We have shown that in clefts, there is adjunction of the clefted element to the TP at a locus we call FocP. We also showed in the context of discussing a cleft-lookalike construction that in relative clauses there is only null operator movement to Spec, CP. Though we did not discuss this, it can be shown that operator movement in relative clauses also observes island effects. Our preliminary goal, however, was to discuss scrambling. At this point we focus on just R-extracted or scrambled phrases.

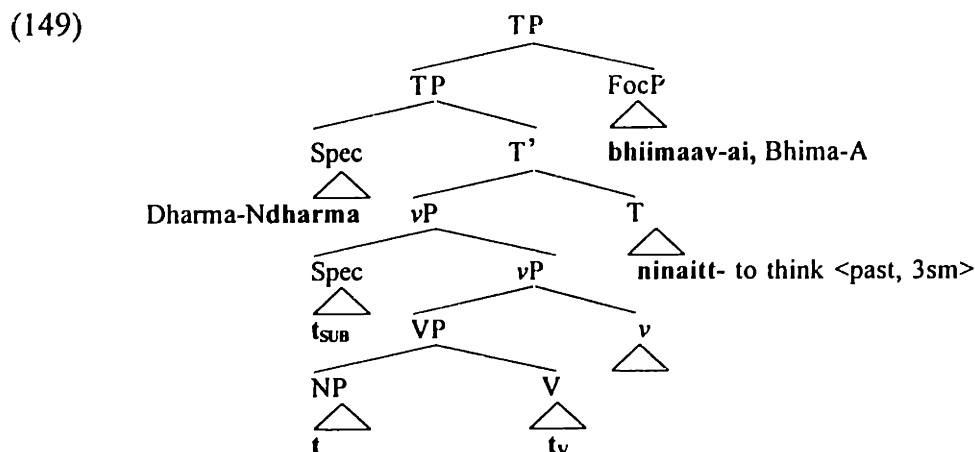
2.7.2 Clefting and R-extraction

In our earlier discussion on scrambling we discussed several properties of extraction of NPs and offered evidence from the non-suppression of WCO effects, binding Condition C and scope facts that these were instances of A-bar movement (or operator movements with a variable in the base-position). We also showed that these were well-defined syntactic processes (obeying island effects etc.). In the previous section we showed that clefting also involved the movement to a focus position and shared the same syntactic properties as other A-bar movements.

The entire discussion in the preceding section is relevant in order to establish parallels between R-extraction and clefting. We discuss them in this section. Interpretively, the right-moved NP is considered to have focus and just as with the clefted phrase, the postposed NP attracts the nuclear stress or the intonational peak (which is no more over the verb). Thus—

- (148) dharmaa t toT-r-aan **bhiimaav-ai**
 Dharma-N lose-past-3sm Bhima-A
 ‘Dharma lost BHIMA.’

We would like to suggest that just as in clefts, in R-extraction, there is movement and adjunction of the extracted phrase to the FocP locus, adjoined to TP. As with clefting, the adjoined phrase is below COMP. What sets a clefted construction apart from the R-extracted construction then, are the lack of nominalization and the absence of nominative-predicative relation between the CP and the clefted element. The interpretive similarities are the result of movement to this locus. A phrase-marker for the sentence in (148) is given in (149)⁵⁷—



One of the interesting consequences of this analysis of R-extraction and clefts is the prediction of interference either between the two processes or between two applications of the same process.

⁵⁷ More exactly, the object NP must raise from Spec, vP to FocP.

We have already seen that two cleft operations interfere with each other. In the following we show that multiple R-extractions are impossible exactly as with two clefts and, further, that a mix of clefting and R-extraction is also impossible. Consider the following sentence where two NPs appear to be R-extracted—

- (150) **dharma** **t** **t** **toT-r-aan** **shakuni-kku bhiimaav-ai**
 Dharma-N lose-past-3sm S hakuni-D Bhima-A
 ‘Dharma lost Bhima to Shakuni.’

Two interpretations are possible. One interpretation is that ‘Dharma lost BHIMA TO SHAKUNI’, with a conjoined focus reading (as with conjoined clefted NPs). This means that Dharma lost Bhima to Shakuni and not any one else; and if he has lost others then it is not to Shakuni that he lost them. The other interpretation is that ‘Dharma lost TO SHAKUNI’, and ‘Bhima’ is an afterthought, a clarification of what was lost. In the first case, both NPs have adjoined to the same locus on TP and in the latter case only the dative argument is adjoined to TP, the other NP is not, strictly speaking, a constituent of the TP. In R-extraction it is only the first NP (in non-conjoint situations) that is in focus. Once R-extraction has applied once it is not possible to R-extract again within the same CP.

Now consider the interaction between R-extraction and clefting. In the following, the base sentence is given in (151)—

- (151) **dharma** [**draupadi** **bhishmaav-ai** **tiTT-in-aa-nnu**] **namb-in-aan**
 Dharma-N Draupadi-N Bhishma-A scold-past-3sf-that believe-past-3sm
 ‘Dharma believed that Draupadi scolded Bhishma.’

In (152) both processes are applied independently to two arguments of the embedded verb across the matrix verb and the result is ungrammatical—

- (152) ***[_{NP}[_{CP}dharma [_{CP}t_S to tiTT-in-aa-nnu] namb-in-]adu] draupadi bhishmaav-ai**
 Dharma-N scold-past-3sf-that believe-past-3sm Draupadi-N Bhishma-A
 ‘It was Draupadi that scolded Bhishma that Dharma believed.’

Similarly, in (153), one argument of the embedded verb has been R-extracted across the embedded verb and another argument of the embedded verb has been clefted across the matrix. This is also ungrammatical—

- (153) ***[_{NP}[_{CP}dharma [_{CP}t_S to tiTT-in-aa-nnu **bhishmaav-ai**]namb-in-]adu] draupadi**
 Dharma-N scold-past-3sf-that Bhishma-A believe-past-nom Draupadi-N
 ‘It was Draupadi that Dharma believed scolded BHISHMA.’

If one operation targets a landing site then another similar operation, targeting the same landing site cannot be performed. Thus, if R-extraction adjoins an NP to the TP, clefting cannot apply to an argument in the same domain because there is no available target landing site. These ungrammaticalities offer very strong support for the analysis provided here. As might be expected, the following is grammatical and it is easy to see why. Within the embedded clause the direct object has been R-extracted and within the matrix, the matrix subject has been clefted. Each of these operations is carried out in a *different* domain and the one does not interfere with the other. Within the embedded clause the direct object **bhishma** has been adjoined to the embedded TP at FocP_{EMB} . The clefted NP is the matrix subject **dharma**. It is adjoined to the matrix TP at FocP_{MAT} before the copular structure is formed—

- (154) $[_{\text{NP}}[_{\text{CP}}\text{t}_{\text{SUB}} [_{\text{CP}}\text{draupadi } \text{t}_O \text{ tiTT-in-aa } \text{bhishmaav-ai-nau}] \text{ namb-in}]\text{-adu}] \text{ dharma}$
 Draupadi-N scold-past-3sf Bhishma A-that believe-past-nom Dharma-N
 ‘It was Dharma who believed that Draupadi scolded BHISHMA.’

At the start of our discussion on clefts we mentioned that there were three focusing strategies in Tamil. In fact, given this analysis, there are four (including R-extraction).

There are a few differences between clefting and R-extraction apart from nominalization and predication in the former. Wh-phrases cannot be R-extracted to post-verbal positions (even though the right-adjoined position is a position of focus) but they can be clefted—

- (155) $*[_{\text{TP}}\text{draupadi } \text{t}_{\text{wh}} \text{ tiTT-in-aa}] \text{ yaar-ai}$
 Draupadi-N scold-past-3sf who-A
 ‘Whom did Draupadi scold?’

- (156) $[_{\text{COP}}[_{\text{NP}}[_{\text{CP}}\text{draupadi } \text{t}_{\text{wh}} \text{ tiTT-in}]\text{-adu}] [_{\text{NP}}\text{yaar-ai}]$
 Draupadi-N scold-past-nom who-A
 ‘Who was it that Draupadi scolded?’

Wh-phrases in Tamil prefer to remain *in situ* generally (unless they are wh-moved, see section*). Their ultimate position as predicative NPs in clefts saves the derivation but in R-extraction they are in a *derived* position which they do not tolerate even though it is a focus position.⁵⁸

In R-extracted CPs the scope of negation is over the entire sentence and not just the extracted phrase. This is explained by the positioning of negation. In the simple CP, the NegP (which we assume is located below T) has scope over the object in its base-position. Since the extracted NP has to obligatorily reconstruct it never escapes the scope of negation. On the other hand, the copular structure must have separate NegP nodes. In the simple nominative predicates, for example, it is possible to negate either component—

⁵⁸See discussion on wh-movement.

(157) dharma nallavan illai
 Dharma-N nice-one-N Neg
 ‘Dharma is not nice.’

(158) dharma illai nallavan
 Dharma-N Neg nice-one-N
 ‘It is not Dharma who is nice.’

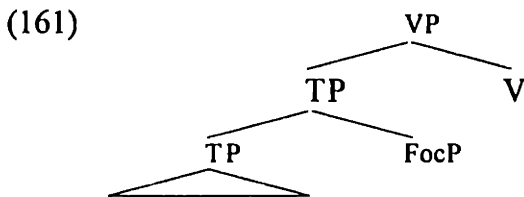
The same is true of clefts and so we assume that there are separate NegPs in each copular constituent. These differences do not run counter to our analysis that right-adjunction of phrases is operator movement, just as in clefts.

One further remark needs to be made regarding infinitivals. We noted that it was not possible to cleft locally within an embedded infinitival clause but that it was permissible to cleft long-distance out of the same (see section 2.7.1.3). This is true of R-extraction as well—

(159) *dushaasana [CP^{INF} PRO t_o paar-kka **draupadi-ai**] po-n-aan
 Dushaasana-N see-inf Draupadi-A go-past-3sm
 ‘Dushaasana went to see Draupadi.’

(160) *dushaasana [CP^{INF} PRO t_o paar-kka] po-n-aan **draupadi-ai**
 Dushaasana-N see-inf go-past-3sm Draupadi-A
 ‘Dushaasana went to see DRAUPADI.’

There appears to be something different about infinitival complements. We have to attribute this difference to either a lack of adjunction position or to the lack of operator movement. Infinitivals are TPs as we saw in Chapter 1. They are transparent to case assignment by a matrix verb and they never co-occur in Tamil with a complementizer. The NP should be able to adjoin to TP in principle, but we find that the structure in (161) is not permitted—



The transparency of TP to V and matrix T may be a why this structure is not licit. But at this juncture we leave it an open question why this must be so. TPs are not barriers to movement because of this transparency and consequently, NPs that have been extracted from the embedded clause can adjoin to the matrix TP directly. This feature incidentally, also offers additional evidence that R-extraction and clefting follow the same paths.

2.7.3 Topicalization

In the above we argued that R-extraction was in effect focus movement and that it closely mimics clefting. In fact, we believe that focus is one of the reasons for word order permutation in Tamil. We also showed that multiple right extractions are not all movements to focus positions but indicate ‘afterthoughts’ etc. But rightward movement only covers a subset of the word orders that are possible in Tamil. We now turn our attention to leftward (or L-) extractions. We have already discussed the syntactic properties of such L-extractions. They were shown to be instances of A-bar movement as well. Interpretively, however, we argue that these are topic movements that mimic the topicalization operation and target the same landing sites. We begin by describing topicalization in Tamil and then compare it with L-extraction. As with clefts and rightward-extraction, we discuss the interaction between these two operations as well.

In Tamil, the topic position is left-peripheral to the sentence and is marked by a topic-marker **enraal** ‘if you say’, usually shortened to **-naa**. Thus—

- (162) draupadi-kku krishnav-ai romba piDikk-um
 Draupadi-D Krishna-A very like-3sn
 ‘Draupadi likes Krishna very much.’
- (163) [_{CP}draupadi-kku-naa [_{TP} t_{TOP} krishnav-ai romba piDikk-um]]
 Draupadi-D-TOP Krishna-A very like-3sn
 ‘As for/If you say Draupadi, (she) likes Krishna very much.’
- (164) [_{CP}krishnav-ai-naa [_{TP}draupadi-kku t_O romba piDikk-um]]
 Krishna-A-TOP Draupadi-D very like-3sn
 ‘(If you say)Krishna, Draupadi likes (him) very much.’

Any NP can be topicalized. However, this operation is subject to the same sort of constraints as clefting and other syntactic operations. It is not possible, for example, to topicalize out of islands. In the following, we show extraction out of both a relative clause construction (CNPC) and a sentential subject—

Complex Noun Phrase Constraint:

- (165) draupadi [_{NP}[_{CP} e_{SUB} dharmaa-vai dayatt-il ven-Dr-a] shakuni-ai] veru-tt-aaL
 Draupadi-N Dharma-A dice-L win-past-adj Shakuni-A hate-past-3sf
 Draupadi hated Shakuni who beat Dharma in (the game of) dice.’
- (165a) *dharmaa-vai-na draupadi [_{NP}[_{CP}e_{SUB} t_{TOP} dayatt-il ven-Dr-a] shakuni-ai] veru-tt-aaL

Sentential Subject Constraint:

- (166) [NP_{CP}shakuni dharmaa-vai dayatt-il ven-Dr-]-adu avamaanam
 Shakuni-N Dharma-A dice-L win-past-nom shame
 'That Shakuni beat Dharma in dice is a shame.'

- (166a) *dharmaa-vai_[NP_{CP}shakuni t_{TOP} dayatt-il ven-Dr-]-adu] avamaanam

It is possible to topicalize long-distance, however. In the following we give one such example—

- (167) draupadi [dharmaa raajyatt-ai jei-pp-aan] enru namb-in-aaL
 Draupadi-N Dharma-N kingdom-A win-fut-3sm that believe-past-3sf
 'Draupadi believed that Dharma will win the kingdom.'

- (167a) raajyatt-ai-naa draupadi [CPdharmaa t_{TOP} jei-pp-aan] enru namb-in-aaL

As with clefting, it is neither possible to topicalize NPs from different CPs to the same landing site nor is it possible to topicalize NPs from a single CP to different locations—

- (168) draupadi bhimaa-kku [CPdharmaa raajyatt-ai jei-pp-aan enru] son-n-aaL
 Draupadi-N Bhima-D Dharma-N kingdom-A win-fut-3sm that say-past-3sf
 'Draupadi said to Bhima that Dharma will win the kingdom.'

- (168a) *[CP**bhimaa-kku-naa raajyatt-ai-naa** draupadi t_{TOP} [CPdharmaa t_{TOP} jei-pp-aan enru] son-n-aaL]

- (168b) *[CP**raajyatt-ai-naa** draupadi bhimaa-kku [CP**dharmaa-naa** t_{TOP} t_{TOP} jei-pp-aan enru] son-n-aaL]

From the above we see that topicalization behaves like clefting in being an operation that applies cyclically and once a targeted site has been occupied no further movement to that position is possible. Occasionally, the topicalized phrase seems to occur in-situ. For example,

- (169) [dharmaa-kku daayam-naa romba piDikk-um]
 Dharma-D dice-TOP very like-3sn
 '(The game of) dice, Dharma likes very much.'

But it becomes increasingly harder with non-argument NPs, to leave the topicalized phrase *in situ*—

- (170) ???[dharmaa-kku draupadi viiTT-ila-naa tevaippaDuv-aaL]
 Dharma-D Draupadi-N house-L-TOP need-fut-3sf
 'At home, Dharma will need Draupadi.'

(171) **viiTT-ila-naa** [dharmaa-kku draupadi **t_{TOP}** tevaippaDuv-aaL]

We suggest that in (169), either both the subject and the object are conjointly topicalized or the object is ‘outside’ the TP, a case of left-dislocation perhaps..

Like clefting, topicalization can apply to entire CPs as well as already topicalized CPs. In the latter case, the sentence is a bit hard to process with topic switches coming one on the heels of the other—

(172) [dharmaa [CP[shakuni daayatt-il jei-tt-aan] enru] son-n-aan]
 Dharma-N Shakuni-N dice-L win-past-3sm that say-past-3sm
 ‘Dharma said that Shakuni won in (the game of) dice.’

(173) [_{TOP}P[CP[shakuni daayatt-il jei-tt-aan] enru]-naa dharma **t_{TOP}** son-n-aan]
 Shakuni-D dice-L win-past-3sm that TOP Dharma-N say-past-3sm
 ‘That Shakuni won (in the game of) dice, Dharma said.’

(174) #[CP[CPdaayatt-ila-naa [shakuni **t_{TOP}** jei-tt-aan] enru]-naa dharma **t_{TOP}**
 dice-L-TOP Shakuni-N win-past-3sm that-TOP Dharma-N
 son-n-aan]
 say-past-3sm
 ‘That in (the game of) dice Shakuni won, Dharma said.’

2.7.4 Topicalization and L-extraction

In this section we compare both topicalization and L-extraction. NPs that have been L-extracted have the same interpretation as topicalized NPs. Thus, the sentence in (175) is interpretively equivalent to the one in (176)—

(175) **daayam-naa** dharmaa-kku **t_{TOP}** romba ishTam
 dice-N-TOP Dharma-D very like
 ‘Dice, Dharma likes very much.’

(176) **daayam** dharmaa-kku **t** romba ishTam
 dice-N Dharma-D very like
 ‘Dice, Dharma likes very much.’

We can see the interaction between left extraction and topicalization in the following. Each of these operations can be applied independently to a domain but not both at the same time (we also showed that topicalization cannot apply twice and likewise, multiple L-extractions are also

ungrammatical⁵⁹). Example (177a) shows the application of both these operations to NPs from the same CP and example (177b) shows application of these operations to different NPs in different CPs. As we mentioned in the last section, this second sentence becomes quite difficult to process, while the first is ungrammatical. (177) shows the base sentence prior to the application of movement operations—

- (177) [vyaasa gaNapati-kku [draupadi krishnaa-kku saadatt-ai poT-T-aaL
 Vyaasa-N Ganapati-D Draupadi-N Krishna-D rice-A put-past-3sf
 enru] son-n-aar]
 that say-past-3sh
 ‘Vyaasa told Ganapati that Draupadi served rice to Krishna.’

- (177a) *[_{CP}saadatt-ai-naa vyaasa gaNapati-kku [_{CP}krishnaa-kku draupadi
 rice-TOP Vyaasa-N Ganapati-D Krishna-D Draupadi-N
 t_{TOP} t_{IO} poT-T-aaL enru] son-n-aar]
 put-past-3sf that say-past-3sh
 (Lit.) ‘As for rice, Vyaasa told Ganapati, to Krishna, Draupadi served.’

- (177b) #[gaNapati-kku-naa vyaasa [krishnaa-kku draupadi t_{IO}
 Ganapati-D-TOP Vyaasa-N Krishna-D Draupadi-N
 saadatt-ai poT-T-aaL enru] son-n-aar]
 rice-A put-past-3sf that say-past-3sh
 ‘As to Ganapati, Vyaasa said, to Krishna, Draupadi served rice.’

We have shown that multiple topicalization or leftward-extraction operations within a single CP are not permitted and neither is a mix of such operations. However, we do see the following word orders in Tamil, where multiple NPs *appear* to have been L-extracted—

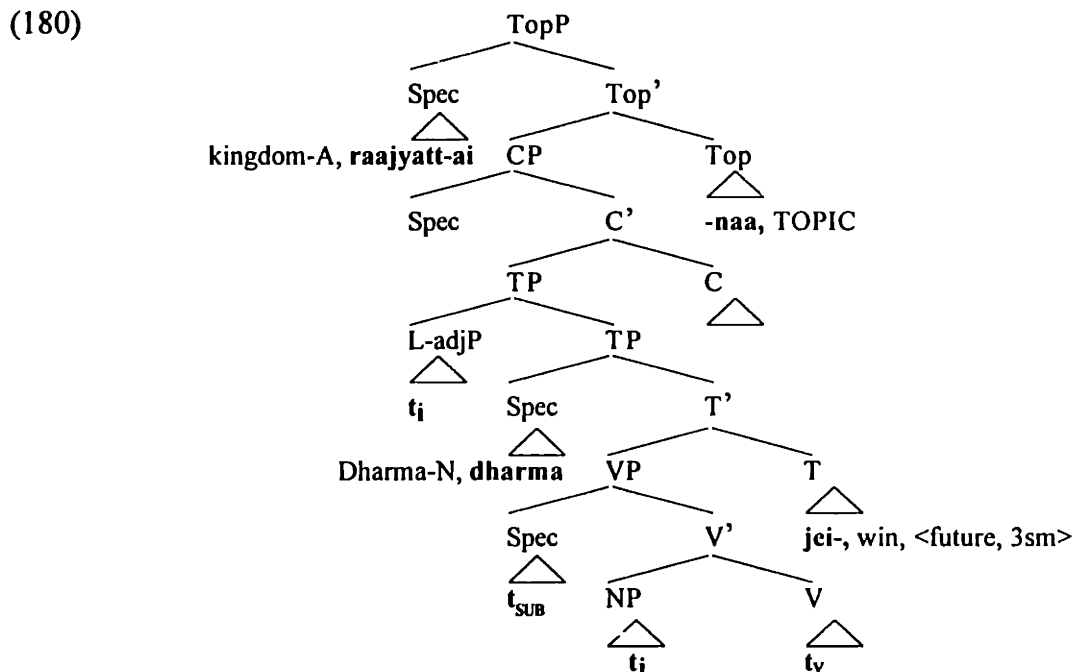
- (178) **krishnaa-kku saadatt-ai [draupadi t_{IO} t_O poT-T-aaL]**
 Krishna-D rice-A Draupadi-N
 ‘To Krishna, the rice, Draupadi gave.’

In the R-extraction cases we saw that the first NP in a sequence of postposed NPs is focused (unless there is conjoint focus) but the others have an afterthought/clarification role. In the multiple L-extracted orders (such as IO-O-S-V), either both NPs conjointly bear the interpretive role of topic or only the one immediately left-peripheral to the sentence does (the direct object in the example above). The indirect object appears extraneous to the sentence. This extraneousness is indicated in the phonology by a pause after the indirect object. There is no such break in the intonation contour between the topic and the rest of the sentence.

⁵⁹Under the interpretation that both extracted NPs have been topicalized.

We may conclude that L-extraction has a ‘topicalization’ role just as R-extraction has a ‘focusing’ role. The interference that we showed above in great detail must be the failure of multiple application of the same or similar operation. The difference between topicalization and L-extraction is less dramatic than the difference between clefting and rightward-extraction. The topic marker is attached only to topicalized constituents and not L-extracted ones. If the targeted landing site is a TP-adjoined site in both cases it is unclear why one is topic-marked and the other is not. We assume that there is operator movement to Spec, TopP (drawing from Rizzi 1995) in the case of topicalized constructions which is absent in the L-extracted sentences. In both there is leftward adjunction of the operator to TP. The Spec, TopP position is indicated by the topic marker. We assign topicalized and L-extracted phrase markers the following structure (180)—

- (179) **raajyatt-ai-naa** dharma t_{TOP} jei-pp-aan
kingdom-A-TOP Dharma-N win-fut-3sm
‘As for the kingdom, Dharma will win.’



2.7.5 Topic and Focus in Parallel

In the preceding sections one goal was to establish that clefting and R-extraction on the one hand and topicalization and L-extraction on the other could be grouped together as being similar kinds of operations. Let us call them TOP and FOC, respectively. This similarity was attributed to the following properties. (a) Both operations target the same TP adjunction site (issue of interference). (b) Both imply the same sort of operator movement. (c) Both are interpretively equivalent. It would be interesting to determine the nature of the interaction between these two pairs of operations. Given what we have already said we should not expect

any interaction between the two sets of operations. Consider the following example with an embedded CP—

- (181) [_{CP}shakuni kauravar-ukku [_{CP}[dharma daayatt-il raajyatt-ai to-pp-aan]
 Shakuni-N Kauravas-D Dharma-N dice-L kingdom-A lose-fut-3sm
 enru] son-n-an]
 that say-past-3sm
 ‘Shakuni told the Kauravas that Dharma will lose his kingdom in (the game of) dice.’

We know that it is possible to perform either one of the same pair of operations in a single domain; i.e, it is not permissible to both cleft and R-extract within the lower CP or to both topicalize and L-extract. In the following we have mixed examples where the FOC operations are mixed with the TOP operations within the same CP. It should be obvious that these operations can be performed independently in different CPs without any interference. We only show interactions when both operations are applied in the same domain—

Clefting and Topicalization within the embedded CP:

- (182) [_{CP}shakuni kauravar-ukku [_{TopP}daayatt-ila-naa [_{CP}[dharma t_{TOP} t_{FOC}
 Shakuni-N Kauravas-D dice-L-TOP Dharma-N
 tok-kap poo-v-adu] raajyatt-ai enru] son-n-aan]
 lose-inf go-fut-nom kingdom-A that say-past-3sm
 ‘Shakuni told the Kauravas that in dice, it will be the kingdom that Dharma will lose.’

Leftward and R-extraction within the embedded CP:

- (183) [_{CP}shakuni kauravar-ukku [_{TP}daayatt-ila [_{TP}dharma t_L t_O
 Shakuni-N Kauravas-D dice-L Dharma-N
 top-p-aan] raajyatt-ai enru] son-n-aan]
 lose-fut-3sm kingdom-A that say-past-3sm
 ‘Shakuni told the Kauravas that in dice, it will be the kingdom that Dharma will lose.’

Topicalization and R-extraction within the embedded CP:

- (184) [_{CP}shakuni kauravar-ukku [_{TopP}daayatt-ila-naa [_{TP}[dharma t_L t_O
 Shakuni-N Kauravas-D dice-L-TOP Dharma-N
 top-p-aan] raajyatt-ai] enru] son-n-aan]
 lose-fut-3sm kingdom-A that say-past-3sm
 ‘Shakuni told the Kauravas that in dice, it will be the kingdom that Dharma will lose.’

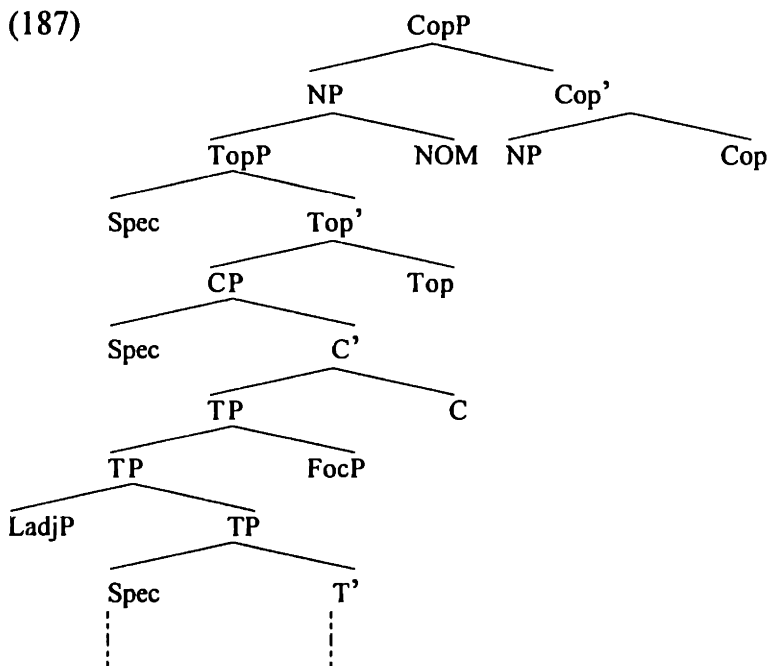
Clefting and L-extraction within the embedded CP:

- (185) [_{CP}shakuni kauravar-ukku [_{TP}daayatt-ila [_{TP}dharma t_L t_O
 Shakuni-N Kauravas-D dice-L-TOP Dharma-N
 tok-kap poo-v-adu] raajyatt-ai enru] son-n-aan]
 lose-inf go-fut-nom kingdom-A that say-past-3sm
 ‘Shakuni told the Kauravas that in dice, it will be the kingdom that Dharma will lose.’

Topicalization and Clefting long-distance out of the embedded CP:

- (186) [_{TOPP}daayatt-ila-naa [shakuni [[_{CP}[dharma t_{TOP} to to-pp-aan] enru]
 dice-L-TOP Shakuni-N Dharma-N lose-will-3sm that
 namb-in-adu]] [raajyatt-ai]
 believe-past-nom kingdom
 ‘In dice, it is the kingdom that Shakuni told the Kauravas that Dharma will lose.’

FOC and TOP do not interfere with each other as these examples show. Though we do not give the examples here, it is easy to see that within the matrix CP also, a mix of these operations can be performed. Our prediction is right. Our proposal that there are separate TOP and FOC operators (just as there may be a separate wh-operator, see below) holds true. We now need to fix the relative positioning between topic and focus. We have seen that extraction out of moved constituents is illicit. If FOC is located below TOP and is performed first then the TP that contains the FOC material will be nominalized. Subsequent extraction out of this nominalized clause (island) will not be permitted. However, if TOP is performed first then FOC can still apply. We suggest the following structure for multiple extracted structures—



The assumption is that the topic phrase does not form a barrier to movement. A further prediction is that wh-movement, if it is shown to be independent of scrambling, must be unaffected by TOP and FOC operations, because Spec, CP is still available for wh-movement, if such an operation exists in Tamil. We look at this next.

2.7.6 Wh-Movement in Brief

We restrict ourselves here to showing that there is optional wh-movement in Tamil and that it is to be considered one of the operations that are subsumes under the label ‘scrambling’. In discussions on WCO, we already implicated wh-phrases in movement operations and showed that they cause WCO effects and further that extraction of the wh-phrase does not override them. We also noted that wh-phrases in cleft constructions are obligatorily clefted. In the following we give a very brief account of wh-question in Tamil and suggest that a third process that constitutes scrambling, is optional wh-movement.

In Tamil, wh-phrases are preferably left *in situ*. They may also be optionally moved but only to the left (recall that wh-phrases do not appear to the right of the verb, even though this is a focus position)—

(188) dharmaa shakuni-kku jaar-ai toT-r-aan
 Dharma-N Shakuni-D who-A lose-past-3sm
 ‘Who did Dharma lose to Shakuni?’

(189) jaar-ai dharmaa shakuni-kku t_{wh} toT-r-aan
 who-A Dharma-N Shakuni-D lose-past-3sm
 ‘Who did Dharma lose to Shakuni?’

It is possible to either L- or R-extract, even if the wh-phrase has moved. In the following we give an example of each. The relative ordering between the wh-phrase and the L-extracted phrase is TopP and then, wh-phrase (191). If the indirect object occurs between the wh-phrase and the subject, it is interpreted as a parenthetical (192)—

(190) shakuni-kku jaar-ai dharmaa t_{wh} t_{IO} toT-r-aan
 Shakuni-D who-A Dharma-N lose-past-3sm
 ‘To Shakuni, who did Dharma lose?’

(191) jaar-ai shakuni-kku dharmaa t_{wh} t_{IO} toT-r-aan
 who-A Shakuni-D Dharma-N lose-past-3sm
 ‘Who, to Shakuni that is, did Dharma lose?’

While the L-extracted phrase retains a topic reading, the R-extracted phrase does not carry focus anymore. It is interpreted as being an afterthought (193). This is similar to the cleft situation discussed earlier, which is ungrammatical with a focus interpretation on the clefted non-wh phrase, except when the wh- is considered an echo question (194)—

(192) jaar-ai dharmaa t_{wh} t_{IO} toT-r-aan shakuni-kku
 who-A Dharma-N lose-past-3sm Shakuni-D
 ‘Who did Dharma lose, to Shakuni that is?’

- (193) ***yaar-ai** dharma t_{wh} t_{IO} toT-r-adu **shakuni-kku**
 who-A Dharma-N lose-past-nom Shakuni-D
 ‘It was to Shakuni that Dhama lost who?’

Wh-phrases cannot be extracted out of islands (196), but *in situ* wh-questions within islands are acceptable (195). In addition, as with all extraction operations, the scopal and WCO properties are determined from the base-position of the wh-phrase. We have seen evidence for both in our earlier discussions and we will not recapitulate them here—

- (194) draupadi [[dharma yaaru-kku toT-r-a] sedi-ai] keT-T-aaL
 Draupadi Dharma-N who-D lose-past-adj news-A hear-past-3sf
 ‘Draupadi heard the news that Dharma lost to whom.’

- (195) ***yaaru-kku** draupadi [[dharma t_{wh} toT-r-a] sedi-ai] keT-T-aaL
 who-D Draupadi Dharma-N lose-past-adj news-A hear-past-3sf
 ‘Draupadi heard the news that Dharma lost to whom.’

Wh-extraction also, unsurprisingly, shows the properties of A-bar movement. In addition, it appears that extraction of wh-phrases does not interfere with TOP operations. In fact, the order of elements is in accord with the phrase structure we assigned to multiple extraction structures at the end of the last section. However, wh-movement interferes with FOC. We would like to suggest that word order permutation also involves overt, *optional* wh-movement in Tamil to Spec, CP. The wh-operator is raised to Spec-CP. However, the conflict between FOC and wh-extraction can be attributed to focus clashes. A wh-phrase must receive focus. To focus another NP in the same domain sets up a clash. One way to over-ride this clash is to construe the R-extracted phrase an afterthought. We still need to explain why clefting of wh-phrases is acceptable while R-extraction is not. Earlier we said that perhaps wh-phrases prefer to remain *in situ*. If that were completely true then it doesn’t explain why they raise to the left without any much difficulty. We modify the earlier statement to say that a wh-phrase can either undergo wh-movement to Spec, CP or they must be left *in situ*. Note that in clefts the clefted position is an eventual *in situ* position. The adjunction positions are excluded. In the simplest case the wh-phrase raises optionally to Spec, CP. The wh-operator and wh-focus is attributed to this position. This much is straightforward. We also have to say that a sentence may have either wh-focus or (what we will call) NP-focus but not both. It appears that wh-phrases, if present, *must* be focused. Thus, performing an NP-focus operation when there is a wh-phrase, violates this condition. It is outside the scope of this chapter to consider the semantics of wh- and NP focus. It has been suggested recently that they must be treated differently and perhaps that they target different sites. If that is so, then Tamil does offer some direct evidence on positional variations of focus.

Finally, we indicated that in conjoint focus and topicalization the base order of the arguments must be reflected in their adjoined site. Thus, for example, in conjoint topicalization the order must be [IO-DO] and in conjoint focus, [DO-IO]. Such a requirement has been

attributed to the MLC (or Relativized Minimality restated). Richards 1995 argues that the secondarily moved element ‘tucks’ under a previously-moved element. We also indicated this in our discussion on case checking. However, such a requirement does not hold for either L- or R-extraction or wh-movement. Therefore, either one of [DO-IO] or [IO-DO] is permissible. It follows that both topicalization and focus must involve ‘features’ and attraction by features of a particular substantive category, but not so with wh-movement, L- and R-extraction procedures. This constitutes another difference between the topicalization and L-scrambling on the one hand and clefting and R-scrambling on the other. We will leave this subject open at this juncture.

2.8 CONCLUSIONS

In this chapter we have tried to argue that free or flexible word ordering in Tamil is a well-defined syntactic process with robust semantic/interpretive consequences. We identified two extraction procedures, leftward and rightward, based on direction of adjunction. As a syntactic process, these L- and R-extraction procedures were shown to have the properties of movements to non-argument or non-lexical positions, i.e. the antecedent and the trace are in an operator-variable relation. We discussed certain parallel constructions, topicalization, clefting and wh-movement in Tamil and tried to show that ‘scrambling’ or ‘extraction’ mimics these operations. We also discussed the interaction between all these procedures in parallel and demonstrated that the focusing strategies were *independent* of the topicalization strategies but that wh-movement interfered with focusing strategies. We assigned a composite structure to these multiple-extracted sentences. However, one perhaps difficult question remains. Why should a language have multiple operations with similar interpretive consequences? It is not clear what the answer should be but, at the very least, such multiplicities are not uncommon. Languages are known to have multiple focus strategies (contrastive stress, morphological focus, clefts and pseudo-clefts), multiple relative clause constructions (participial relatives and correlatives, for example) and multiple verb-nominalizing strategies. So perhaps it is not surprising that Tamil uses word order permutations to signal interpretive differences. A related issue of interest is what children do with such free word order. We turn to that next.

CHAPTER 3: ACQUISITION IN TAMIL

3.0 INTRODUCTION

In Chapter 1, we discussed the agreement and case properties in Tamil. We showed the complex network of feature checking as developed within the Minimalist Program that accounts for the various case and agreement details in a wide variety of constructions, including finite and non-finite sentences, with canonical and non-canonical case-marking on subjects and objects. We discussed the internal structure of serial verbs in Tamil and we also analyzed the implications of feature checking for binding. In Chapter 2 we discussed phrase order restructuring. We concluded that the apparent free word order in Tamil is motivated by certain very specific goals, namely, movement to Topic, Focus and Wh- positions. Some of the most persuasive evidence for the above comes from language acquisition data. In this chapter, we would like to show that children acquire these facts very early and in a manner consistent with the theory and facts of adult grammar presented in the previous chapters. We discuss the developmental facts and the light they can shed on the grammatical processes.

We consider here, two sets of data. Some of the data is drawn from the speech recordings (longitudinal) of a single Tamil speaking child, Vanitha (V), recorded over a period of two years (CHILDES database MacWhinney and Snow (1985), Narasimhan (1981)). The recordings begin with the child at 9 months of age and end with the child at 33 months. In all there are twenty five sessions, each about an hour long. The recordings are of natural speech and the child interacts primarily with her parents. The data has also been previously analyzed in Sarma (forthcoming), Sarma (1995) and Thomas and Vainikka (1994). The second set includes data collected by the author from 10 children of different ages, over a period of one year.⁶⁰ The spread in the ages is from 17 (one year and five months) to 42 (three years and eight) months. The ages at the time of recording are given. The data for each child is drawn from four recording sessions, each about an hour long. The sessions were spread over a two month period, with at least a week between sessions and at most three weeks. The children were selected from the local, middle and upper middle-class Tamil speaking community in Ooty, India, and represent a spread of dialects. They were selected to represent an appropriate segment in the time frame that was of interest. The ages do not reflect the actual recording sequence of the children. The recordings again, are of natural speech. With younger children, the parent (or other caretakers) interacted with the child at home while the observer remained silent. With the older children (pre-school, ages 2;2 and above), the interaction was between the observer and the child directly, at school. No caretaker was present. The (nick)names and ages of the children at the time of the recording sessions are given in (1)—

⁶⁰ This fieldwork was made possible in part by a pre-doctoral fellowship grant (1996) from the Wenner-Gren Foundation for Anthropological Research, Inc.

(1)	<u>Name</u>	<u>Sex</u>	<u>Ages of recording</u>
	Niveda	F	1;5;12, 1;5;28, 1;6;7 and 1;6;22
	Kannan	M	1;7;17, 1;7;29; 1;8;3 and 1;8;12
	Priya	F	1;9;2, 1;9;16, 1;10;4 and 1;10;23
	Satish	M	2;0;9, 2;0;21 and 2;1;11 and 2;1;19
	Srija	F	2;3;3, 2;3;15 and 2;4;5 and 2;4;29
	Veena	F	2;6;10, 2;6;20, 2;7;6 and 2;7;17
	Vidya	F	2;8;23, 2;9;13, 2;9;27 and 2;10;15
	Karthik	M	2;11;3, 2;11;24, 3;0;16 and 3;1;2
	Lavanya	F	3;2;21, 3;3;11, and 3;4;1
	Pradeep	M	3;6;6, 3;6;22, 3;7;14 and 3;8;2

In the following, we would like to show that the child's competence cannot be accounted for by theories of 'partial' competence, i.e., where the child graduates from knowing limited parts of the phrase structure tree to knowing the whole. From the range and degree of accuracy of use of case and verbal inflection, as well as the presence of other properties of adult Tamil grammar in developmental syntax, we will show that the phrase marker must be fully determined very early in the acquisition process. More specifically we argue within the recent hypotheses by Wexler (1996, 1998) that there is both 'Very Early Parameter-Setting' (VEPS) and 'Very Early Knowledge of Inflection' (VEKI) and that children learn inflections extremely early and thoroughly. VEPS states that the "basic parameters are set correctly at the earliest observable stages, that is, at least from the time that the child enters the two-word stage around 18 months of age". VEKI states that "at the earliest observable stage the child knows the grammatical and phonological properties of many important inflectional elements in their language". To this end, we discuss both what the grammar tells us about the production data and what the production data tell us about the grammar. We begin by discussing subject-verb agreement broadly-speaking. We consider simple finite sentences both transitive and intransitive, and inherent case sentences with default agreement on the verb, as well non-finite constructions, i.e., those with no overt agreement, including infinitivals, ECM predicates and verbal participles (auxiliaries etc.). We also discuss the associated developmental phenomena of null subjects and bare verbs. We then turn our attention to the special circumstances of binding and feature checking in Tamil (see section 1.7). Finally, we discuss word order permutations, its contingency on case and the semantic distinctions between various scrambled word orders.

3.1 AGREEMENT AND CASE ASSIGNMENT

3.1.1 Background

Recent discussions of a child's linguistic competence have centered on the status of the syntactic tree, i.e., whether or not the entire class of functional categories (FCs) manifest in the adult language is present in child language. On the one hand, adopting the 'partial-competence hypothesis', some researchers argue that the tree is not fully specified (Radford (1988, 1990),

Platzack (1990), Guilfoyle and Noonan (1988)) making the FCs unavailable to the child, while others argue that there is a functional node available to the child which bears 'resemblance' to adult FCs but is not the same (Clahsen (1990), Meisel and Müller (1992)). On the other hand Babyonyshev (1993), Poeppel and Wexler (1993), Wexler (1998, 1996) and others argue for a 'full-competence' approach, with auxiliary analyses of the stated differences between adult and child language, for example, the optional infinitives stage. They show the drawbacks in accounting for the data such as V2 positioning in German and case checking in Russian, if full-competence is not assumed. This Chapter in the spirit of the previous chapters, is concerned with the status of FCs in child grammars of Tamil..

3.1.2 Previous Analysis

In an earlier analysis of the Vanitha corpus (Narasimhan 1981, MacWhinney and Snow 1985), Thomas and Vainikka (1994) argue that V's speech shows maturation from a simple 'only VP' stage (0;9 to 1;7) through a 'low IP' or TP stage (1;8-1;9) and 'full IP' stage (2;1) to a CP stage (2;2-2;9). The syntactic properties of child language at each stage of acquisition is correlated with the point on the tree that the child can and does access. The evidence for isolating each of these stages derives from the presence or absence of IP characteristics such as the use of modal, tense and aspect auxiliaries and the use of case and agreement as well as from the presence or absence of CP-related processes such as question formation and the use of complementizers. Thomas and Vainikka also consider it symptomatic of V's competence that at earlier stages there are few examples of agreement, questions and embedding.

Their argument runs as follows. Between the ages of 14 and 19 months, there are no instances of modals, nominative subject pronouns or inflectional affixes on the verb and the verb appears in the stem form, affixless. The lack of such IP-related elements leads them to conclude that the child's syntactic tree consists of a bare VP. Between 20 and 21 months, there are still no nominative subject pronouns and no modals, although there are many instances of the third person singular and past tense markers. This, following Clahsen, they take to be an underspecified IP stage where the full agreement paradigm has not yet been acquired; what they call the FP-stage. At 25 months, there are increased uses of third and first person agreement markers as well as present and past tense suffixes, and the use of modals. The child is now assumed to be at the IP-stage. The story is similar for CPs. There are no complementizers or embedded clauses in any one of the three stages isolated so far, and thus the CP is unavailable till the child is 26 months old. At this point the child has some embedded clauses but without the overt complementizer. As of thirty-three months V still does not have overt complementizers and Thomas and Vainikka conclude that the CP is not-fully specified. The final piece of evidence derives from question formation. They argue that there are few yes-no questions early on and these are produced in increasing frequency and complexity between 21 and 25 months. Early wh-questions in the data are similar to English wh-questions and are possibly formulaic. These tend to be 'what' and 'where' questions and possibly involve adjunction to lower nodes and not movement to CP. Between 21 and 25 months, there are other wh-questions, and they conclude

that the CP is beginning to emerge. Vainikka and Thomas do not discuss the possible triggers which enable the child to ‘mature’ from one stage to the other, other than to suggest a possible interaction between X'-theory and the input.

3.1.3 Early Transcripts (Vanitha, Niveda, Renu and Priya)

Let us consider the early transcripts, i.e. those from 9 until 22 months, individually. Generalizations follow the discussion. A summary of the number of utterances produced by each child is given in (2)

(2)	<u>Name</u>	<u>Age (in months)</u>	<u>Number of total utterances</u>
	Vanitha	9-22	145
	Niveda	17-18	65
	Kannan	19-20	98
	Priya	21-22	137

The utterances are primarily one word utterances and mostly just bare nouns. Typical examples include the three below—

(3)	paapaa	‘baby’	(V:1;1;28)
(4)	pandu	‘ball’	(K: 1;7;17)
(5)	aaccu	‘over!’	(P: 1;9;16)

There are also a number of imperatives (what Vainikka and Thomas take to be the *bare stem* form of the verb) and a few adjectives. Interesting examples of imperatives include—

(6)	kaakaa crow	poo! go (away)!	(V:1;2;25)
(7)	pandu ball	taa give!	(K: 1;2;25)
(8)	ammaa mother	vaa! come!	(P:1;2;25)

The total count of these imperative forms are given in (9)—

(9)	<u>Name</u>	<u>Number of Imperatives</u>
	Vanitha	55
	Niveda	23
	Kannan	37
	Priya	47

There are few nominative predicative constructions in the data—

(10)	<u>Name</u>	<u>Number of Nominative-Predicatives</u>
	Vanitha	15
	Niveda	4
	Kannan	7
	Priya	11

The nominal counterparts of the Copula (see discussion clefts) appear in the nominative (unmarked) case—

(11) amma Tiicar (K: 1;8;3)
 mother-N teacher-N
 'Mother is (a) teacher.'

(12) ambi muTTaay (N: 1;6;22)
 Ambi-N stupid-masc-N
 'Ambi is stupid.'

However, since the copula is a null element it is not strictly possible to claim that these have a copula. These have been correctly used and we assume the null hypothesis that the child is aware of the underlying structure.

There are also a few wh- questions, both yes-no and wh- questions, with the appropriate agreement marking and question marking —

(13) (pro) va-r-iy-aa? (V:1;3;22)
 come-pres-2s-Q
 'Are you coming?'

(14) pandu i-kk-aa? (K: 1;7;17)
 ball-N be-pres-3sn-Q
 'Is the ball there?'

(15) aar (pro) et-t-aa im? (V:1;6;1)
 who-N take-past-3h (huh)
 'Who took (it) huh?'

(16) pro paysa veNm-aa? (N:1;5;28)
 money want-3sn-Q
 'Do you want (the) money?'

- (17) paaTTi tuung-TT-aaL-aa? (P:1;7;29)
 grandmother-N sleep-leave-past-3sf-Q
 ‘Has Grandmother gone to sleep?’

The total count is given below—

(18)	<u>Name</u>	<u>Number of questions</u>
	Vanitha	3
	Niveda	2
	Kannan	5
	Priya	6

Finally there are also several instances of overt agreement between subject and verb. Interesting examples include—

- (19) pro paper mela kaal vay-kka-kuuD-aa-du. enna aak-um? (V:1;9;16)
 paper top leg(-A) put-inf-must-neg-3sn what happen-fut-3sn
 ‘(One) must not place (one's) foot on the paper. What will happen (if one did)?’

- (20) arti tuul pe-y-ru-kk-aa. (V:1;9;16)
 Aarti-N school(-dat) go-vbp-be-pres-3sf
 ‘Aarti has gone to school.’

- (21) paaTTi uuT-Ti-viT-T-aa (P:1;7;29)
 grandmother-N feed-vbp-leave-past-3sf
 ‘Grandmother fed me.’

- (22) naa (pro) paTT-nu tuuk-kip-poT-T-een (K:1;7;29)
 I-N (sound)-that carry-vbp-put-past-1s
 ‘I threw it (sound).’

There are two instances, unprompted, in the V corpus where the sentence gloss does not match what the utterance seems to be saying—

- (23) (?pro) paaTTi TaaTaa poo-r-een (V:1;3;22)
 grandmother bye-bye go-pres-1s
 ‘Grandmother is going bye-bye.’

- (24) (?pro) paaTTi periimaa TaaTaa poo-r-oom.
 grandmother aunt bye-bye go-pres-1pl
 ‘Grandmother and aunt are going bye-bye.’

If third person is intended as the translation suggests it is, then this constitutes wrong use of the agreement markers. It is likely that the gloss is incorrect and there is indeed a subject *pro* in each sentence.

The total number of instances of overt agreement (including the *wh*-/yes-no question examples) are given below are given below—

(25)	<u>Name</u>	<u>Number of Finites</u>
	Vanitha	20
	Niveda	9
	Kannan	12
	Priya	19

In the data considered so far with the children under 22 months of age and barely within the two-word stage, we find imperatives, overt agreement, nominative predicatives and *wh*-questions. Of the 20 instances of finite sentences in the V corpus, 18 are correct and 2 controversial, i.e., there is a mismatch between the agreement markers on the verb and the sentence gloss. There are no such controversial instances in the data of the other two children. However, even in those two instances the verb is (non-imperative) finite, i.e. V does not use a non-finite stem, or an imperative form. We summarize the total data (for all four children) presented so far, in the following table to show the split between finites and the imperative stems (which we showed in section 1.4 to be morphologically distinct from the finites, but a finite form, nonetheless, see also the following section). There are no imperative utterances with other finite, non-2nd person inflection and there are no non-2nd-person finites with an imperative use—

Table 1: Summary of forms with overt agreement. (Total number of utterances: 445)

(26)	Imperative	Finites (<i>wh</i> - and others)
Finite, +Tense	0	58+(?2)
Finite+Tense, 2 nd person	162	0

In addition, V consistently uses *pro*-drop. This is expected and correlated with an early appearance of agreement inflection. (see also section on *pro*???)

3.1.4 Imperatives in acquisition

One of the striking features of any corpus is the use of the so-called ‘bare’ verb or the verb stem – a verb without any overt inflectional morphology. This has led to hypotheses about the acquisition of agreement and the ‘lack’ of it at early stages of development. This is particularly hard to prove or disprove in languages without rich agreement. The data under consideration does have some instances of ‘bare’ stems. The affirmative, singular, imperative

form is the only 'bare' form in the adult grammar and we argue that the child grammar is no different. We shall offer evidence that the 'bare' forms in the data are not really 'bare'. The discourse-context offers one kind of evidence. In the corpus, the imperative utterance is uttered in the discourse-context of an order or request and only those verbs that can be so-employed are utilized; for example 'give', 'beat', 'go away', 'put down', 'come' etc. The children use the imperative forms frequently with an accompanying gesture; for example, an outstretched hand when asking for something or upraised arms when asking to be carried, or a waving motion to signal the action of 'beating' and so on. In other instances the meaning is quite clear given the contextual information. In the following example from the V corpus the imperative forms are underlined—

- (27) (Situation: Father pinches Vanitha in jest) (V:2;4;5)
 VANITHA: eey! kiLLaada! (Translation: Hey! Don't pinch!)
 (Situation: Father pinches her again)
 VANITHA: eey! (pro) aDippeen (Translation: Hey! (I) will spank you)
 FATHER: een, enna paNNineen? (Translation: Why, what did I do?)
- (28) (Situation: Father tugs Vanitha's hair)
 VANITHA: eey eey. (Translation: Hey! Hey!)
 FATHER: ennaaccu? (Translation: What happened?)
 VANITHA: eey! en mayira puDikkaada! (Translation: Hey! Don't pull my hair!)

In Chapter i, section 1.4 we discussed the syntactic properties of imperatives, including the subcategorization (NP and IP complements) properties of the verb and case and agreement information to show that the imperative maybe analyzed in terms of the feature-checking mechanisms we outlined. We showed that the imperatives in Tamil have unique affirmative and negative morphological forms. We suggested that the construction was finite, with obligatory 2nd person features on T/IMP and we also suggested that the subject case in an imperative construction (what we called IMP case) was obligatorily checked (similar to infinitivals checking null case on PRO). This we assumed was the reason why we do not get DS predicates in the imperative. That is, the IMP case cannot be additionally checked on a subject that has already been inherently case-marked and consequently the derivation crashes. We showed that an overt NP in initial position was a vocative and not an overt subject of the predicate and that the subject was phonologically null. We discuss select instances of imperatives from the corpus in light of this syntactic analysis and argue that these reveal V's understanding of these mechanisms. The adult (standard dialect) equivalent of the utterances is also given in parentheses.⁶¹

⁶¹ The adult version given here is a fully-articulated version which is not entirely colloquial. In speech greater phonological reduction is permitted; in fact casual speech forms may be closer to the child's utterance as cited than the so-called adult version!

The morphological forms are used correctly even in the earliest transcripts, as we saw. More examples of the negative imperative are given below. The negative especially brings home the fact that the children know the imperative contexts—

(29) kaakaa aik-aad-a (N:1;5;12)
 (kaakaav-ai aDikk-aad-ee) (adult)
 crow-A beat-neg-euph
 ‘Don’t beat the crow.’

(30) eDukk-aad-a (K:1;8;3)
 (eDukk-aad-ee) (adult)
 take-neg-euph
 ‘Don’t take!’

The ‘subject’ or the person being ordered/requested is never expressed. They may be accompanied by an NP in the *vocative* case (which in most cases is identical to the bare noun) with the accompanying intonational peak, usually to capture the attention of the person (addressee) or for emphasis. This NP is seldom the second person pronoun, but the title or the name of the person who is being ordered.—

(31) ammaa! azh-aad-a (N:1;6;22)
 (ammaa azh-aad-ee) (adult)
 Mama-V cry-neg-euph-imp.sg.
 ‘Papa! Don’t cry!’

We see evidence for the full range of verbal complements with imperatives, including embedded, sentential complements. In (32), the object bears accusative case as does the object in (33). The complex verb in (33) contains an aspectual auxiliary—

(32) anda pand-a taa (K:1;8;12)
 (anda pand-ai taa) (adult)
 that ball-A give-imp.sg.
 ‘Give that ball!’

(33) paaTTi anda naay-a acc-uDu (P:1;10;23)
 (paaTTi anda naay-ai aDic-cu-viDu) (adult)
 grandmother-V that dog-A beat-vbp-leave-imp.sg.
 ‘Grandmother! Beat (off) that dog!’

In (34) the embedded CP requires no further explanation; it occurs as a complement of the main verb which has a 2nd person subject that is phonologically null, with the phi-features [2nd person, singular]. The internal structure is also indicated. (35) is more interesting because each of the embedded non-finite verbs (verbal participles) appear with PRO in the subject position.

These PRO subjects inherit their reference from the main verb's subject. All the embedded verbs are interpreted vis-à-vis the matrix and are construed as imperatives—

(34) naa enna iidi iru-kk-een paaru (V:2;6;7)
 (naan enna ezhud-i iru-kk-een-(nu) paaru) (adult)
 I-N what-A write-vbp be-pres-1s-that see-imp.sg.
 'See what I have written.'

(34a) [PRO [_{CP} naan enna ezhudi irukk-een-(nu)] paaru]

(35) nii endu pooy eDuttiNDu vaa (2;6;7)
 (nii ezhun-*au* poy-i eDut-tu-ko-ND-u vaa) (adult)
 You-V rise-vbp go-vbp bring-vbp-have-vbp come-imp.sg.
 'You get up and go bring it and come.'

(35a) [nii [PRO [[PRO ezhundu] [[PRO poyi] [[PRO eDuttu-koNDu] vaa]]]]]

One also finds the use of *pro* in object position in imperatives (see section 3.2)—

(36) (pro) taa! (V:1;1;28)
 Give-imp.sg
 Give (it) (to me)!

Consider the table below—

Table 2: Use of DS predicates and Nom-Acc verbs in imperative and non-imperative contexts

(37)	Imperatives	Non-imperatives
Nom.-Acc. Predicates	162	46+(?2)
DS predicates	0	12

Table 2 summarizes the data in the early transcripts for the use of DS predicates, imperatives and finites. There are, *no* instances of imperatives with DS predicates in the corpus. If our account about IMP-case-checking is correct and if feature checking is part of the genetic blue-print then this situation is what we should expect. There are however uses of the DS predicate even in the earliest transcripts in *non-imperative* contexts. So it cannot be argued that the child does not 'know' DS predicates.⁶² Examples include—

⁶² In fact, one of the earliest predicates learned is a DS predicate *veNDa-* 'want', quite freely and frequently used in the negative!

(38) ee-kku (pro) naan-aam (N:1;6;7)
 (ena-kku veND-aam) (adult)
 me-D want-neg
 'I don't want (it/that).'

(39) ee-kku adu pikk-um (P:1;10;4)
 (ena-kku adu piDikk-um) (adult)
 I-D it like-3sn
 'I like it.'

The imperative singular is also the only verb form that is an uninflected stem in Tamil. As we argued above, the children's use of the bare stem is appropriate for the contexts in which they have been used. There is no unexpected overlap or incorrect use of verb forms. In the table in the previous section, we saw that there is a definite divide between the finite uses of the verb and the apparently 'bare' uses of the verb. This division, the lack of DS predicate imperatives and the appropriate uses of the verb are unexplained in the bare-verb approach. The corpus indicates that V is cognizant of the difference between an imperative and a non-imperative construction⁶³. We now turn to look at the various finite configurations including DS constructions.

3.1.5 Feature Checking and Acquisition: The Later Transcripts

3.1.5.1 *Finites*

Agreement is most prolific in the later transcripts. We consider the data from the later transcripts of the Vanitha corpus as well as the other older children.⁶⁴ A summary of the inflectional forms used by the children over time follows. The data includes, as we might expect, nominative-accusative and DS case configurations. All instances of use of agreement are correct. There is no misanalysis of the case configuration of a verb. In the following we give examples of each of these case configurations from the corpus—

Nominative-Accusative:

(40) naa (pro) unifarm-a eDuttuTTeen (R:2;11;3)
 (naan unifarm-ai eDut-tu-viT-T-teen) (adult)
 I-N uniform-A take-vbp-leave-1s
 'I took off my uniform.'

⁶³ It is nonetheless a puzzle (as was also pointed out by Anne Vainikka) why there are more imperative forms in the early transcripts and fewer such uses as V grows older.

⁶⁴ Since their initials are not always unique, we assign some of them a letter from the alphabet for convenience: Satish (S), Srijia (J), Veena (N), Vidya (D), Karthik (R), Lavanya (L) and Pradeep (T).

Intransitive, unergative:

- (41) naa poy-Du-een (D:2;8;23)
(naan poy-i-viDu-v-een) (adult)
I-N go-vbp-leave-fut-1s
'I will go off (for real).'

Dative-Nominative object:

- (42) ee-kku rattam va-r-du (V:2;1;15)
(ena-kku rattam va-ra-du) (adult)
I-D blood-N come-pres-3sn
'I am bleeding.'

Dative-Accusative:

- (43) ena-kku ammaav-a pikk-um (J:2;3;15)
(ena-kku ammaav-ai piDikk-um) (adult)
I-D mother-A like-3sn
'I like amma.'

As with the adult speech, there are certain instances where the DA configuration appears to alternate with a DN configuration for a single verb (or for that matter where a NA configuration alternates with a nominative-nominative configuration). Consider (42) and (43). The adult version conforms to the child's—

- (44) ena-kku ellaam-ø teriy-um (V:2;9;4)
(ena-kku ellaam teriy-um) (adult)
I-D everything-N know-3sn
I know everything

- (45) eekku adu valik-r-adu (V:2;1;18)
(ena-kku adu valikka-ra-du) (adult)
I-D that-N/that-A hurt-pres-3sn
I am hurting there

These are instances of a process of optional case-marker drop. This occurs when the object-NP has either been incorporated into the verb to form a complex verb form or is interpreted as non-specific. The interesting issue is that a case-dropped NP cannot be scrambled. We return to this in the discussion on scrambling. These are not instances of case-misanalysis since the children use accusative case on the displaced objects but not on the objects *in situ* for the same verb. We will return to this later.

Table 3: PNG affixes across three tenses in S, V, J, N, D and R

(46) Tense	Age	Total	1s	2s	3sm	3sf	3sn- NA	3sn- DS	1p	2p	3p
Past	S:2;0	48	13	2	11	2	18	1			1
Pres		51	15	3	5	1	14	11		1	1
Fut		24	9		3	1	11				
Past	S:2;1	57	16	2	9	1	23	3	1	1	1
Pres		49	11	3	2	3	12	14		3	1
Fut		27	3		4	1	19				
Past	V:2;1	56	14	1	10	3	26	2			
Pres		50	24	4	3	1	7	11			
Fut		24	7		2	1	13	1			
Past	V:2;2	47	15	2	4	5	19				2
Pres		19	7	4	3	2	2	1			
Fut		15	2			2	11				
Past	J:2;3	63	19	3	4	2	30	1	2		2
Pres		52	5		11	1	12	9	1	12	1
Fut		24	1	1			22				
Past	J2;4	41	11	4	2	1	23				
Pres		70	6		9	4	21	15	3	10	2
Fut		14	2	1	6		3		2		
Past	V:2;4	58	26	2	5	3	20	2			
Pres		29	5	4	1	2	9	8			
Fut		33	5		1	3	24				
Past	V:2;6	49	11	4	4	3	24	3			
Pres		44	10	1	5	10	6	8			4
Fut		16	2		1	4	9				
Past	N:2;6	50	18	6		2	23			1	
Pres		60	13	9	3	3	14	6	1	8	3
Fut		14		1		1	11		1		
Past	N:2;7	49	12	5	4	4	19	2	1		2
Pres		79	21	7	7	5	17	9		13	
Fut		12	2	3			7				
Past	D:2;8	47	14	1	1	5	21			5	
Pres		69	17	3	11	1	16	11	1	6	3
Fut		28	3		1	3	19			2	
Past	D:2;9	48	3		2	3	30		2	7	1
Pres		62	16	2	13	2	12	9		8	
Fut		23		3			17			3	

Past	V:2;9	31	7		7	3	11	1			2
Pres		39	2	2	5	3	12	10	2		3
Fut		25	4	1	1	0	19				
Past	D:2;10	32	21	1	1	2	4			1	2
Pres		63	2	6	14	4	13	12		9	3
Fut		24	7		2		8			6	1
Past	R:2;11	45	19		3	1	13			7	2
Pres		68	19	2	5	1	21	7		12	1
Fut		27	1		1		22			4	1
Past	R:3;0	74	31	3	2	2	25			11	
Pres		77	11		7	2	24	12	3	17	
Fut		35	8	1			22			4	
Past	R:3;1	51	20	3	6	1	18			3	
Pres		79	16		11	5	10	19	3	15	
Fut		25		1			17			7	

In Table 3 we indicate the number of instances in the transcripts of each inflectional form. Since there are three tense forms and nine person-number-gender affixes (we separate the default verb-agreement and the overt agreement instances though they are morphologically identical) we have collapsed the data in the following ways: (a) Data from the same 'month' (by age) for each child is given as a single number, i.e., if there are two transcripts for a child from the same month (by age), (for example, 1;5;12 and 1;5;28) only one total number is given. (b) we have not included the data from the two older children. The data bears out our conclusions very effectively without these children. (c) we have excluded examples with negative auxiliaries from the count. Some negative auxiliaries do not show overt regular agreement markings. We believe that this is because the negative auxiliary is morphologically deficient. Historically the auxiliary did have independent agreeing forms like other verbs. In Modern Tamil there is only one frozen form of the auxiliary (*illai*) with a neuter, plural agreement marking in the past and present tenses. In the future tense a completely different auxiliary is used (*maaTTu* 'hang') which does show agreement. The forms with *illai* have been excluded.

The spread of the inflectional forms across ages and children argues quite strongly in favour of our thesis that the children know subject-verb agreement, that 'Very Early Knowledge of Inflection' is a property of Tamil acquisition. It must be stated that all instances of inflectional use are 'correct'. That is, the adult grammar would also attest the same forms. However, in the V and the R corpus there are a couple of non-adult utterances—

- (47) *sinimaa tuungi-TT-aaL-aa?* (V:2;6;7)
 Cinema (*f) sleep-past-3sf-Q
 'Has the cinema slept (closed for the night)?'

- (48) raatri neruppu vara-maaTT-aaL-aa (V:2;6;7)
 night fire(*f) come-neg-3sf-Q
 ‘Won't the fire come at night?’
- (49) boodam van-d-aan diDiir-nu (R:2;11;3)
 ghost-N come-past-3sm suddenly-like
 ‘The ghost came suddenly.’
- (50) avan ellaar-ai-um saap-T-aan-aam (R:2;11;3)
 he-N everyone-A-Qu eat-past-3sm-so
 ‘Seems like, he (the ghost) ate everyone.’

The NPs **sinimaa**, **neruppu** and **boodam** are ‘neuter gender’ in the adult lexicon. These children have misanalyzed the gender of these nouns. However, the verb agreement is appropriate for the gender assigned. These sentences show that the inflectional elements have not been *memorized* but rather that the child is assigning inflection appropriate to the NP selected as subject.

In our discussion on case and agreement we showed that in constructions with a dative subject and an accusative object, the verb agreed with neither argument but appeared with ‘default’ phi-agreement. In Table 3 we show the separation between such default agreement and overt agreement. We find that there is a total of 827 instances of overt agreement for the inflectional form [3sn] and 188 default agreement forms. Whether the child’s grammar is cognizant of this difference can be established only through a discussion of case-marking on the subject. Since we find default agreement only with dative-accusative predicates we should expect to find dative subjects and accusative objects. In the following we offer the tabulation of *overt* nominative subjects with (referential expressions and pronouns) and *overt* dative subjects (referential expressions and pronouns) in the corpus as they occur with nominative-accusative and dative-accusative predicates. We should not find any crossover between the two predicates and the external arguments. DS predicates should check dative case on the internal argument and T, nominative case. We do not expect to find errors in this case selection if V’s grammar includes the case checking mechanisms. We find that DS predicates select only DS subjects and nominative-accusative predicates, nominative subjects—

Table 4: Case-selection on Subjects with respect to DS and non-DS Predicates

(51)	Nominative case	Dative case
DS Predicates	0	92
Non-DS predicates	396	0

Before we conclude our discussion on agreement and case we must discuss instances of ECM etc. We discussed these additional case properties in Chapter 1. The case-feature on the nominative object we said, was checked by the lower T and the accusative object by the verb itself in *vP*. We also showed in Chapter 1 that nominative and accusative case on

overt subjects of embedded infinitivals can be checked by either the matrix T (nominative case) or the matrix predicate (accusative case) in certain circumstances (ECM etc.). In the acquisition data too, in the older children where we get more embedded sentences, we find examples of such case checking—

- (52) naa [paapaav-ai kuLi-kka] veik-r-een (L:2;11;3)
 (naan paapaav-ai kuLi-kka vei-kir-een) (adult)
 I-11 doll-A bathe-inf make-pres-1s
 'I am making the doll bathe.'
- (53) ena-kku [amma mam-mam uuT-i-viD-a]-N-um (D:2;9;13)
 (enakku amma mam-mam uuT-i-viD-a-veND-um) (adult)
 I-D amma-A food-N eat-vbp-leave-vbp-want-3sn
 'I want amma to feed me.'
- (54) appaa [enna peesa] sonnaar (R:2;11;3)
 (appaaa enn-ai pees-a son-n-aar) (adult)
 father-N I-A speak-inf say-past-3sh
 'Father asked me to speak.'

In (52) the causative, as expected, checks the accusative case on the subject of the embedded verb, in (53) the matrix T checks the nominative case on the embedded subject and in (54) the matrix verb again checks the accusative case on the embedded subject. There are only a few such examples (6 causatives and 4 DS-infinitival embeddings in the entire corpus) in the corpus but the cases have been appropriately checked in all. More than the simple finites which offer statistical evidence that V's grammar is similar to the adult grammar, these constructions offer direct and strong evidence that the feature checking mechanisms are in place. There is no 'partial' tree hypothesis that can account for these case relations. Unfortunately, there are no examples of dative case infinitivals embedded beneath other DS matrix predicates so it is not possible to check what happens in those configurations. It is in general difficult to get such embeddings, so it is not surprising that we do not find it. However, given our analysis, we would not expect these to be ungrammatical, but we have no direct evidence.

It is clear that the children are cognizant of the difference between finite and non-finite forms as early as 15 months and are also adept at using various agreement markers — including cases of default agreement. We showed with data from imperatives and 'non-local' case relations that this is indeed the case. We now to instances of no overt agreement, i.e., non-finite forms.

3.1.5.2 Non-finites

To complete the discussion on case and agreement, we need to look at the children's use of auxiliaries, and non-finite constructions. This feature configuration characterizes

non-finite TPs which in Tamil include infinitivals and verbal participles (VbP) as we saw in Chapter 1.

One of the most common uses of the VbP is in the context of use of auxiliary verbs as we saw. The auxiliary verb bears the agreement inflection. The main verb appears in the VbP form. We find various examples of these in the corpus—

(55) (pro) pand-a veLii-la tuuk-ki poTTuTTeen (R:3;1;2)
 (pand-ai veLiy-ila tuuki poT-Tu-viT-T-een) (adult)
 (I-N) ball-A out-L carry-vbp put-vbp-leave-past-3sm
 'I threw out the ball.'

(56) (pro) maavu paNNirukk-een (V:2;4;5)
 (maavu paNNi-irukk-een) (adult)
 (I-N) flour-∅ make-am-1s
 'I have made flour.'

(57) nii tuungapecTiy-aa? (D:2;8;23)
 (nii tuung-a-poy-i-viT-T-i-aa) (adult)
 you-N sleep-inf-go-vbp-leave-past-2s-Q
 'Have you gone to sleep?'

Recall that we said that the auxiliaries + main verb complex behaves as one phonological unit and cannot be separated by insertion of any material between them. We suggested that this was because of head movement of the V to each higher v in turn. We also said that the auxiliaries were of the category v which are able to select an external subject. There is some direct evidence in the corpus that these properties are also part of V's grammar. When elements are scrambled they have to move across the entire verb complex to be adjoined to T—

(58) naan poTTuNDuTTeen unifarm-a (N:2;7;6)
 (naan poT-Tu-koN-Du-viT-T-een unifarm-ai) (adult)
 I-N put-vbp-have-vbp-leave-past-1s
 'I have put my uniform on.'

The features of head movement and vP/VP selection must also then, be a part of the developing grammar. In the entire corpus there are 102 such instances of complex verb formations with one main verb and either one or two additional auxiliaries.

The somewhat more interesting cases involve the use of verbal participles in subordination and co-ordination and the use of infinitival complements. We saw one instance of the former while discussing imperatives, repeated here as (57)—

- (59) nii eendu pooy eDuttiNDu vaa (V:2;6;7)
 (nii ezhundu poyi eDut-tu-koN-Du vaa) (adult)
 You-V rising going bring-vbp-have-vbp come-imp.sg.
 ‘You get up and go and bring it and come’

Interpretively, all the subjects refer to the same ‘subject’, the one to whom the order is given and all the embedded verbs are interpreted as imperatives. All the T nodes are interpreted vis-à-vis the matrix T.

Infinitivals occur most frequently in the corpus, as complements to modal verbs. Unlike aspectual auxiliaries, in these cases it is the modal verb which is the main verb. Subject case (generally dative) is determined by the modal. In the following, we offer some examples from the corpus—

- (60) ammaa-kku tuNi to-kka-num (J:2;4;29)
 (ammaa-kku tuNi toy-kka-veND-um) (adult)
 mother-D clothes wash-inf-want-3sn
 ‘Mother wants to wash clothes.’

- (61) kaDay-kku pooy ena-kku jem vaangi-NDu varaN-um (V:2;1;18)
 (kaDay-kku poo-y ena-kku jem vaan-gik-koN-Du vara-veND-um) (adult)
 store-D go-vbp I-D gem-∅ buy-vbp-have-vbp come-must-3sn
 ‘Going to the store I want to buy gems (M&Ms) and come.’

We find then, that the performance data encompasses the simple finite (DS and non-DS) sentences and non-finites including verbal participles and infinitivals. We showed that in all cases the usage was grammatical and conformed to our expectations. We also showed that the usage of case and agreement marking was appropriate and correct even in the earliest transcripts. While this degree of adult-child correlation goes a long way to ratify our assumptions about acquisition there are also other features of acquisition that need to be discussed, such as *pro*-drop and binding. We will discuss these in the following sections.

3.2 *pro*-DROP

In the previous section we discussed the data that bear out V’s competence with feature-checking mechanisms. We also said in passing that the null argument phenomenon was a property of languages with a strong AGR (T in our analysis). In Rizzi’s theory (Rizzi 1986) *pro* is licensed in a Spec-Head relation to ‘strong’ AGR (T) or when governed by certain verbs. In Tamil, *pro* is licensed in all (structurally or inherently) case-marked NP positions. Our attention will be focused mainly on subjects and objects which we have shown above to be in a checking relation with the verb. That is, a ‘strong’ T and a case-assigning V permit the licensing of *pro*—

- (61) naa (pro) poTTeen (J:2;3;3)
 (naan (pro) poT-T-een) (adult)
 I-N put-past-1s
 ‘I put (that).’
- (62) (pro) idula oo-kku (pro) tareen⁶⁵ (V:2;2;28)
 ((pro) idula una-kku (pro) ta-r-een) (adult)
 (I-N) this-L you-D give-pres-1s
 ‘(I) will give you (that) in this.’
- (63) (pro) veN-um mam-mam (J:2;3;15)
 ((pro) veND-um mam-mam) (adult)
 want-3sn food-N
 ‘(I) want food.’
- (64) (pro) (pro) naan-aam (S:2;0;9)
 ((pro) (pro) veeND-aam) (adult)
 want-neg-3sn
 ‘(I) don’t want (that) (Lit: (X) doesn’t want (Y)).’

In (61) the object NP has been ‘dropped’, in (62) both the (nominative) subject and the (accusativə) object have been dropped, in (63) the dative subject has been dropped and in (64) both the dative subject and the nominative object have been dropped. The identification of the subject is signaled by the phi-agreement on the verb where appropriate. In the dative subject cases the verb bears the default agreement features.

This empty category is characterized in the same manner as other NPs and carries case, agreement and categorial features. It however lacks the associated phonological matrix. *pro* acts like an ordinary pronoun in having its reference fixed by context or by some antecedent in an appropriate position. It is characterized therefore as a [+pronominal, –anaphor] element, i.e. the structural relations of (antecedent, *pro*) pairs are generally like those of (antecedent, pronoun) and unlike those of control (antecedent, PRO). Agreement marking on the verb also serves to recover the reference of the *pro* licensed in Spec, TP.

We have identified two features of *pro* – (i) that it is a pronominal and (ii) that it is licensed only by a strong T. Direct evidence for (i) derives from anaphoric binding. Recall that the local binding cases in Tamil involve the auxiliary *koL*. In these A-binding cases the object/anaphor NP cannot be deleted unless the anaphor is contained within a possessive-NP or a non-anaphoric object is used (for example, the benefactive construction). We find examples of these as well in the corpus—

⁶⁵ Here we have indicated the *pro* in the canonical object position – before the verb. We are going to ignore the position of adjuncts and other postpositional phrases.

- (65) (pro) (pro) kay ambi-kka-Num (V:2;4;22)
 ((pro) (pro) kay alamb-i-koLL-a-veND-um) (adult)
 (I-D) (I-G) hand-∅ wash-vbp-have-inf-want-3sn
 ‘(I) want to wash (my) hands.’
- (66) naa (pro) vaccu-k-r-een (V:2;9;4)
 (naan (pro) vait-tu-koL-kir-reen) (adult)
 I-N put-vbp-have-pres-1s
 ‘I will keep (that).’

However, (67) is ungrammatical. Instances of the grammatical constructions are found in the corpus but correctly, not an equivalent of the ungrammatical one—

- (67) *raaman pro aDiccuk-koN-D-aan
 Rama-N beat-refl-past-3sn
 ‘Rama beat (him).’

The previous section showed us the extent of V’s knowledge with respect to agreement and case assignment. Table 5 summarizes the use of the overt NPs and *pro* in the V corpus—

Table 5: *pro-drop and its distribution across subjects and objects:*

(68)	Overt	pro	Overt	pro	Overt	pro
Age/Child	Nominative	Nominative	Dative	Dative	Accusative	Accusative
S:2;0	35	45	9	34	33	47
S:2;1	46	53	15	19	21	34
V:2;1	57	31	19	23	55	45
V:2;2	39	44	3	5	32	38
J:2;3	50	61	11	17	19	32
J2;4	43	59	7	16	35	27
V:2;4	38	61	4	15	39	68
V:2;6	68	35	2	4	36	24
N:2;6	31	54	16	23	11	19
N:2;7	30	66	11	31	25	27
D:2;8	49	56	16	21	5	29
D:2;9	40	62	9	12	17	33
V:2;9	36	36	3 +(*2)	11	24	14
D:2;10	43	57	15	14	12	9
R:2;11	50	53	12	25	41	37
R:3;0	81	86	7	12	22	23
R:3;1	45	78	14	18	27	40

The table shows the use of overt subjects and objects (referential NPs and pronouns) and *pro* in dative and nominative subject and accusative object positions. As soon as the agreement features begin to surface, so does *pro*-drop. We can see that the use of *pro*-drop is extensive. In fact, the use of subject *pro* generally exceeds the use of lexical or overt pronominal subjects. Both features presuppose a very accurate knowledge of verb subcategorization as well as the underlying processes of assigning subject-verb vs. default agreement

The table above offers convincing evidence that the *pro*-drop parameter is set very early. We see it work in the very early transcripts and in the later ones. Thus, Tamil grammar offers evidence for ‘Very Early Parameter Setting.’ In the following sections we discuss two very different systems of Tamil grammar that is tied to the earlier discussion - binding and scrambling.

3.3 BINDING, AUXILIARIES AND THE CORPUS

When we analyzed the binding facts in Chapter 1, section 1.7, we showed that the domain of application of Principle A was the same as the case and agreement checking domain. We also showed that the auxiliary surfaces in benefactive and other subject-affecting constructions and that there were also several aspectual uses of the auxiliary. The children already show great facility with non-finites and therefore, unsurprisingly, also use participial forms of **koL** to signal aspectual meanings We find several examples of the aspectual use of the auxiliary in the corpus. The following data are all from the V corpus in order to show that a single child has grasped the entire range of variations—

- (69) (pro) kirana puDiciNDu peeDivaan (2;6;7)
 (kiran-ai piDi-cik-koN-Du po-y-viDu-v-aan) (adult)
 (he-N) Kiran-A catch-vbp-have-vbp go-vbp-leave-fut-3sm
 ‘He will catch Kiran and go away.’
- (70) (pro) nuula puDiciNDee pooraan (2;9;4)
 (nuul-ai piDi-cik-ko-ND-ee poo-r-aan) (adult)
 (he-N) thread-A catch-vbp-have-vbp-cl go-pres-3sm
 ‘He is going while holding the thread.’
- (71) kaDay-kku pooy ena-kku jem vaangiNDu vara-N-um (2;1;18)
 (kaDay-kku poo-y ena-kku jem vaan-gik-koN-Du var-a-veND-um) (adult)
 store-D go-vbp I-D gem- buy-vbp-have-vbp come-inf-must-3sn
 ‘Going to the store I want to buy gems (M&Ms) and come.’
- (72) avan puttagatt-ai paDit-tuk-koN-Du-iru-nd-aan
 he-N book-A read-vbp-have-vbp-be-past-3sm
 ‘He was reading a book.’

V is still not at the point where it is relevant to discuss binding facts and principles directly. V's corpus does not have the examples that are directly relevant to local binding. However, the older children in the corpus (Lavanya and Pradeep) do show instances of such binding, albeit only a few—

- (73) rajni tann-a summaa aDiccuNDaan (T:3;7;14)
 (rajni tann-ai summaa adic-cuk-koN-D-aan) (adult)
 Rajni-N self-A simply beat-vbp-have-past-3sm
 'Rajni (pretended to) beat himself.'

The few instances of binding that do occur in the V corpus are given below. It is obvious that she is at least aware of the existence of the anaphor and its meaning—⁶⁶

- (74) VANITHA: endu onjupooccu (2;4;5)
 Translation: Mine broke
 FATHER: naa oDacuTTeenaa nii oDaccuTTiyaa?
 Translation: Did I break (it) or did you break (it)?
 VANITHA: taanee
 Translation: By itself
- (75) VANITHA: idu onjuttee (2;4;22)
 Translation: This broke!
 FATHER: een oDacca?
 Translation: Why did you break (it) ?
 FATHER: een oDacca ada?
 Translation: Why did you break that
 VANITHA: taanaa onjuttu
 Translation: Broke by itself

We established with ample evidence in the preceding sections that V along with the other children has acquired all the facts of agreement and case assignment. Given the link between binding and agreement in Tamil, what might we expect her to know? It is quite clear that V ought to 'know' the auxiliary and utilize it in non-reflexive contexts. This we saw above. In addition, we argued that phi-feature sharing between the subject, the anaphoric object and

⁶⁶The anaphor taan is homophonous with an emphatic clitic. There are several uses of the emphatic in the corpus—

- (a) naataan (pro) uriccu-p-een (2;4;22)
 I-N-emph peel-fut-1s
 I will peel (it)
- (b) niitaan (pro) pooT-T-a
 you-N-emph put-past-2s
 You put (it)
- (c) (pro) idutaan paT-Tu-du
 (I-D) this-ø-emph hurt-past-3sn
 This only hurt (me)

subject, along with case-checking by T on the subject NP result in a binding relation between all elements in T. In the absence of an overt anaphor, we should find (a) the ‘subject-oriented’, benefactive and other uses of the auxiliary assuming that **koL** does raise to T and V’s grammar performs this operation. (b) We should also find some minimal pairs of predicates that vary only in the use/lack of use of **koL** and (c) we should find both intransitive and transitive verbs in use in such contexts. Our expectations are borne out. V uses **koL** in benefactive contexts, and with intransitive verbs with a subject-oriented reading—

[Benefactive]

- (76) (pro) anda kaDela jem vaangiNDeen (2;4;5)
 (anda kaDay-ila jem vaangik-koN-D-een) (adult)
 (I-N) that store-L gem- \emptyset buy-have-past-1s
 ‘I bought gems at the store (for myself).’

[Intransitives]

- (77) amma ceDiila okkaandiNDaa (2;6;7)
 (amma ceDiy-ila okkaan-du-koN-D-aa) (adult)
 mother-N plant-L sit-vbp-have-past-3sf
 ‘Mother sat herself down on the plant.’

V also uses the auxiliary with predicates to create lexical pairs with shift in meaning. We give three such pairs here. Compare each pair—

[Lexical pairs]

- (78) (pro) onnu kiiya poTTuTTaan (2;2;28)
 (onnu kiizhe poT-Tu-viT-T-aan) (adult)
 (he-N) one down put-vbp-leave-past-3sm
 ‘He has dropped one.’
- (78a) kiran paysaav-a uLLa poTTiNDaa (2;6;7)
 (kiran paysaav-ai uLLa poT-Tik-koN-D-aa) (adult)
 Kiran-N paisa-A in put-vbp-have-past-3sf
 ‘Kiran put the money inside.’
- (79) naa (pro) vaariy-aaccu onakku (2;4;22)
 (naan vaariy-aaccu ona-kku) (adult)
 I-N comb-finish you-D
 ‘I have combed (hair) for you.’
- (79a) naa (pro) vaarikkavaa? (2;4;22)
 (naan vaar-ik-koLLav-aa) (adult)
 I-N (my hair) comb-vbp-have-Q
 ‘Shall I comb (my hair).’

- (80) (pro) ad-a eDukkreen (2;4;5)
 (ad-ai eDukka-r -een) (adult)
 (I-N) that-A take-pres-1s
 ‘I am taking that.’
- (80a) sinnadu eDuttukkoo (2;9;4)
 (sinnadu-ø eDut-tuk-koL) (adult)
 small one take-vbp-have-imp.sg.
 ‘Pick up the small one/Take the small one for yourself.’

In the context of non-finite forms we also said that embedded subject PROs get their referential features from the matrix subject. We also said that if an anaphoric object of the infinitival is bound locally we also see **koL**. We have already established V’s competence with infinitivals with respect to case-checking and agreement. We should expect therefore to see infinitival **koL** with a benefactive etc. reading. Consider (81) and (82)—

- (81) ee-kku pinnu pooTTukkaNum (2;1;18)
 (ena-kku pinnu poT-Tuk-koLL-a-veND-um) (adult)
 I-D pin-ø put-vbp-to have-want-3sn
 ‘I want to wear a pin.’
- (81') [AGR_{SP} ena-kku_n [VP[AGR_{SP} PRO_n pinnu poTTuk-koLLa_n] veND-um]]
- (82) (pro) kay ambikkaNum (2;4;22)
 (kay alamb-ik-koLL-a-veND-um) (adult)
 I-D hand wash-to have-want-3sn
 ‘I want to wash my hands.’
- (82') [AGR_{SP} pro_n [VP[AGR_{SP} PRO_n kay alambik-koLLa_n] veND-um]]

As the above show, V does show the use of **koL** in infinitivals.

In this section we made certain predictions about the child corpus given certain facts of the adult Tamil grammar. That is, since binding and agreement were shown to be closely tied in Tamil, a child that is well aware of agreement cannot escape knowledge of the binding domain. Though we could not test this directly with local binding sentences we do find the subject-oriented readings that were a part of our binding analysis, along with prolific use of the auxiliary **koL**. This is a specific property of the syntax of Tamil. It is in direct contrast to much work on binding and acquisition which do not discuss binding conditions in children as young as these. (Chien and Wexler 1991, Grodzinsky and Reinhart 1993). We showed that both the agreement and case systems are in place and so are the binding properties. This constitutes further evidence that the grammar unfolds in its entirety in the developmental syntax of Tamil.

In the next section, we discuss properties of scrambling in child grammar and whether the children are aware of the properties of free word order in Tamil that we discussed in detail in Chapter 2.

3.4 SCRAMBLING

In giving the sketch of Tamil case and agreement properties in Chapter 1, we indicated that there is a phenomenon of accusative case-drop in certain dialects that is permitted under two conditions: (i) the object noun must be non-rational (-rat) and (ii) the NP must remain adjacent to the verb, i.e. scrambling is not an option. The two conditions interact to give us four logical possibilities of case-to-position relations. The numbers of case-marked and case-dropped forms occurring pre-verbally and post-verbally in the corpus are given in Table 6. Numbers preceded by an asterisk indicate instances of violations. The table includes data for all finite forms (imperatives and otherwise). There are no instances of long-distance extraction. All examples here involve movement to the right or the left of a local TP. We expect that if the children know the case contingency on scrambling, the last column must be empty—

Table 6: Accusative case drop and scrambling:

(83) Age/Child	+Acc Verb	-Acc Verb	Verb +Acc	Verb -Acc
S:2;0	11	15	7	0
S:2;1	5	12	4	0
V:2;1	5 + *1	42 + *1	5	*1
V:2;2	4	26 + *2	1	*1
J:2;3	5	9	4	*1
J2;4	7	19	9	0
V:2;4	15	20 + *2	0	*2
V:2;6	8	23 + *1	3	*1
N:2;6	2	7	2	0
N:2;7	7	12	5	*1
D:2;8	0	5	0	0
D:2;9	4	11	3	0
V:2;9	4	20	0	*1
D:2;10	4	6	2	0
R:2;11	30	0	11	*2
R:3;0	17	0	5	0
R:3;1	20	0	7	0
L:3;2	27	0	9	*1
L:3;3	31	0	11	0
L:3;4	29	0	6	*1

The last column is *not* a sequence of zeros. First let us discuss the ungrammatical constructions. In the second column the mistakes all include dropping case on nouns that are [+rational] by V. As with gender, one noun may have been designated as [-rat] by the child. The noun is **boochaanDi** ‘bogeyman’. There are two instances of this noun. The remaining 4 constitute incorrect use of case-drop. In the first column the only mistake consists in assigning accusative case to an NP that should have taken the dative. The fourth column is more interesting. V for example, appears to scramble case-dropped NPs though there are only 5 instances of such errors in the V corpus. The others also commit the same error but retain the case for the most part on the scrambled phrase. Of greater interest are R and L who speak a dialect which does not permit case-drop. They retain the case both pre-verbally and post-verbally. The four errors in their data appear to be instances of case-drop on the accusative NP but the phonological cues indicate that they are not. The postposed material in all four cases was an afterthought or a clarification, pronounced after a significant pause. The child is occupied with something else before the afterthought is uttered. For example—

- (84) naan (pro) paar-t-een # puunai
 I-N see-past-1s cat
 ‘I saw (it). The cat.’

We therefore think that these are not true case-drop errors.

Collapsing the data in Table 6, we get the summary in Table 7 for the children whose dialect does have case-drop. We exclude R and L.

Table 7: Case-drop and position of NP pre and post verbally

(85) Case	Pre-Verbal	Post-verbal
-ACC	233	12
+ACC	182	45

Preverbally, case-drop occurs 56% of the time, and the case-marker is retained 44% of the time. Case is dropped optionally it appears on accusative NPs. In postposed orders, the case is retained about 79% and dropped about 21% of the time. The tendency to retain case-marking on the displaced NP has increased, up from 44%. Nonetheless the correlation is as yet imperfect. R and L however have no problem with retaining case on the displaced NP. Since they never drop case pre-verbally, they retain it post-verbally too.⁶⁷ Some relevant examples of the displaced accusative NPs with and without case are given below—

⁶⁷Although there is no relevant data in these transcripts, it would be interesting to verify if children acquiring Tamil perceive the difference between nominative objects and case-dropped objects. They should be able to freely scramble the former but not the latter. This would further test their knowledge on the conditions of case-drop, as well as the features of scrambling.

(86) pro kaD-kka poo-r-een jemm-a. (V:2;1;18)
 bite-inf go-pres-1s M&M-A
 ‘(I) am going to bite the M&M.’

(87) (pro) kiizhe adu poT-T-een (J:2;4;29)
 down it-ø put-past-1s
 ‘(I) threw it down.’

(88) *naa vaang-in-een bomma (2;1;18)
 I-nom buy-past-1s doll-ø
 ‘I bought the doll.’

Thus far we considered accusative-marked objects. The case condition on scrambling must hold for other NPs as well and it does. We must point out that case is never dropped on non-accusative NPs. The children scramble a wide variety of such NPs— locative, dative, nominative etc. Examples follow—

(89) amma dressu poT-Tu-viT-T-aa paapaa-kku (N:2;7;17)
 mother-N dress- ø put-vbp-leave-past-3sf baby-D
 ‘Mother put the dress on the baby.’ (Or ‘Mother dressed the child.’)

(90) amma marundu pooDu-v-aa kannu-la taan (V:2;2;8)
 mom medicine-ø put-fut-3sf eye-loc only
 ‘Mother will put medicine in the eye only.’

In all, there are 146 such instances of scrambling of single and multiple NPs. The scrambled NP surfaces to the right or the left of the verb. Such moved NPs we showed occupy A-bar positions in the adult language. The question is whether they observe the same principles in the child language. All such scrambled NPs are case-marked. It is not possible to offer binding and weak crossover data at this juncture, however, the interpretation of the scrambled phrases suggests that word order permutations are motivated by topic and focus interpretations. Consider the following examples of right and leftward movement from the V corpus—

(91) nagpur-la pandu pandu butterfai pee-D-t-Tu. (V:2;6;7)
 Nagpur-loc fly- fly- butterfly-N go-vbp-leave-past-3sn
 ‘In Nagpur the butterfly flew away.’
 (lit: In Nagpur flying, flying, the butterfly went away)

(92) naa pro vaar-i-aac-c-u ona-kku. (V:2;4;22)
 I-nom comb-vbp-finish-past-3sn you-D
 ‘It is for you that I have combed (your) hair.’

In the above, an NP has been moved to the left periphery in (91) and to the right periphery in (92). The interpretation is that of a topic in (91). Looking at the context we find that ‘Nagpur’ (a city in India) has been the topic of conversation and the child asks various questions about the city and also recounts other properties of the city (including (91)). In (92) there is a clear focus interpretation. In fact the child has just been discussing combing her doll’s hair. When her father requests that she comb his hair, she tells him that she is done combing *his* hair but not the doll’s. It is a clear instance of contrastive focus. Additionally in the example in (90) a focus particle has been appended to the right-moved phrase. The data suggests that the child is aware of the semantic differences that underlie such displacements.

3.5 CONCLUSIONS

Our intention at the start of this chapter was to discuss aspects of developmental syntax with a primary focus on case and agreement and word order restructuring which we discussed in the preceding chapters. The tacit assumption has been that the syntactic mechanisms that are assumed to be a part of the adult grammar are also a part of the child’s developing grammar. Further, these mechanisms or some manifestation of them ought to be discernible in the performance data. This is a simpler hypothesis as has been argued for in acquisition literature. We don’t have to account for why a child turns from analyzing sentences one way to analyzing them in another way. In particular we showed that the data argues strongly for the recent hypotheses by Wexler (1998) that parameters are set early (for example, the *pro*-drop parameter) and that the inflectional elements are acquired very early as well. We should also point out that the Head-parameter is also set very early. The phrase structure is strictly head-final at all levels save the phrasal level, when phrases can be order permuted. We also demonstrated the children’s competence in a wide variety of constructions. In parallel, we raised issues that have been particularly salient in the study of the acquisition of syntax – null subjects and the so-called ‘bare’ verbs which we argued were imperative forms of the verb. We also discussed auxiliary use and binding in Tamil, two issues that are intricately tied to the case and agreement systems. Interestingly, we found that given our analysis of binding and agreement we could predict that we should find a certain range of constructions in the production data. This constituted one way of back-tracking on our efforts to ‘check’ our analysis and we obtained the right results. Finally we considered features of word order changes in acquisition and showed that children appear to be aware of the interpretive consequences of word order permutation but that the scrambling-case contingency was as yet imperfectly learned by some children. In considering the corpus, what we wanted to establish was (i) if there was enough evidence to support the assumption that the developing grammar closely parallels adult grammars and (ii) if such evidence could be suitably explained by the mechanisms that were outlined in the previous Chapters. The questions are concerned primarily with the degree of deviance of the child’s performance from the adult’s performance. We found that the degree of deviance, syntactically, is practically zero. That is the child (for all the phonological deviations, i.e., baby-talk) is approximating the adult’s speech very successfully. Statistically the children’s performance was also consistent with an analysis whereby, the grammatical know-how is in place at even the very early stages.

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