Grammatical Functions in Tolaki
Owen Edwards

Thesis submitted for the degree of Bachelor of Arts with Honours in Linguistics in the School of Language Studies

The Australian National University

May 2012
Unless otherwise acknowledged in the text, this thesis represents the original research of the author.
Acknowledgements

I would like to take this opportunity to thank the many people who have made the writing of this thesis possible.

Firstly, I would like to thank those who made my fieldwork possible. Dr. Nurnia of Universitas Haluoleo sponsored my VISA application and Asrun Lio made arrangements for me when I first arrived in Kendari. Dr. Wayan Arka made his home in Bali available to me when I was travelling between Australia and Sulawesi.

I would also like to thank all the speakers of Tolaki who shared their language with me generously. Four people, however, deserve special mention. These were my four main informants in Sulawesi: Darmin, Untung, Sukur Tabara and Indrayana Arif. Each of these people freely gave of their limited time and was patient with me as I tried working out the intricacies of Tolaki. Without them this thesis would not exist.

I would also like to thank Omar Pidani who started my interest in Tolaki at the beginning of 2011. I learnt to speak Tolaki first from Omar and this gave me the confidence to travel to Sulawesi without knowing Indonesian. Omar was also available when I returned from Sulawesi to double check some of my data.

I would like to thank my supervisor Dr. Mark Donohue. Mark sowed the idea of fieldwork in my mind and, furthermore, made it possible. He also oversaw the writing of this thesis. He showed me the big picture when I was bogged down in detail and made me look at the detail when I wanted to focus on vagaries.

Finally, I would like to express my deepest thanks to Bapak Muhammad Ali and Ibu Sittihami of Hopa-hop, Wawotobi in Sulawesi. They opened their house up to me when I was a stranger and were my family in Sulawesi.

Naturally, any errors or deficiencies in this thesis are my sole responsibility, and cannot be blamed on any of the above people.
# 4 Morphology and Syntax

## 4.1 Outline

- English
  - 4.3.1 English Case Morphology
  - 4.3.2 Subjecthood Tests in English
    - 4.3.2.1 Control
    - 4.3.2.2 Conjunction Reduction
  - 4.3.3 Summary
- German
  - 4.4.1 Quirky Case in German
  - 4.4.2 Subjecthood in German
    - 4.4.2.1 Control
    - 4.4.2.2 Conjunction Reduction
    - 4.4.2.3 Arguments bearing Quirky Case as Objects?
  - 4.4.3 Summary
- Icelandic
  - 4.5.1 Quirky Case in Icelandic
  - 4.5.2 The Syntactic Status of Arguments with Quirky Case
    - 4.5.2.1 Control
    - 4.5.2.2 Conjunction Reduction
  - 4.5.3 Summary

## 4.2 Definition of Terms

## 4.3 English

- 4.3.1 English Case Morphology
- 4.3.2 Subjecthood Tests in English
  - 4.3.2.1 Control
  - 4.3.2.2 Conjunction Reduction
- 4.3.3 Summary

## 4.4 German

- 4.4.1 Quirky Case in German
- 4.4.2 Subjecthood in German
  - 4.4.2.1 Control
  - 4.4.2.2 Conjunction Reduction
  - 4.4.2.3 Arguments bearing Quirky Case as Objects?
- 4.4.3 Summary

## 4.5 Icelandic

- 4.5.1 Quirky Case in Icelandic
- 4.5.2 The Syntactic Status of Arguments with Quirky Case
  - 4.5.2.1 Control
  - 4.5.2.2 Conjunction Reduction
- 4.5.3 Summary

## 4.6 Summary

---

# 5 Tolaki Grammar Sketch

## 5.1 Introduction

## 5.2 The Noun Phrase

- 5.2.1 Nominal Morphology
  - 5.2.1.1 The Common Noun Prefix
  - 5.2.1.2 Adjunct Prefixes
- 5.2.2 Possessive Phrase
- 5.2.3 Relative Clauses

## 5.3 Prepositions

## 5.4 Verbs

- 5.4.1 Affixes for indexing verbal arguments
  - 5.4.1.1 Nominative Prefixes
  - 5.4.1.2 Absolutive Suffixes
  - 5.4.1.3 Genitive Suffixes
  - 5.4.1.4 Dative Suffixes
  - 5.4.1.5 Summary
- 5.4.2 The Non-Finite Verbal Form
  - 5.4.2.1 Phonological Form
# List of Tables

3.1 Semantic Roles .................................................. 17
4.1 English Pronouns ................................................. 25
4.2 German Pronouns ................................................ 27
4.3 Quirky Case in German ........................................... 29
4.4 German Grammatical Functions and Case ....................... 32
4.5 Quirky Case in Icelandic ......................................... 34
4.6 Morphology and Syntax in Icelandic and German ............... 37
5.1 Genitive Suffixes .................................................. 43
5.2 Features for Person and Number in Tolaki ...................... 47
5.3 Nominative Prefixes .............................................. 47
5.4 Absolutive Suffixes .............................................. 49
5.5 Genitive Suffixes .................................................. 51
5.6 Dative Suffixes .................................................... 53
5.7 PBT Dative Suffixes and their Reflexes in Tolaki ............... 54
5.8 Tolaki Verbal Argument Indexation Strategies .................. 56
5.9 Non-Finite Verb Forms .......................................... 57
5.10 Passive Forms .................................................... 63
5.11 Middle Derivations .............................................. 66
6.1 The Limits .......................................................... 74
6.2 Verbs Taking a dative P ........................................... 76
6.3 Origin of Tolaki Dative P Verbs with initial te- ................. 77
6.4 Coding of Tolaki Non-Subject Participants ...................... 81
6.5 Morpho-Syntactic Tests for Grammatical Functions .......... 87
6.6 English Syntactic Tests ........................................... 89
# List of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABS</td>
<td>absolutive</td>
</tr>
<tr>
<td>ACCID</td>
<td>accidental passive</td>
</tr>
<tr>
<td>ADJCT</td>
<td>adjunct</td>
</tr>
<tr>
<td>APPL</td>
<td>applicative</td>
</tr>
<tr>
<td>AV</td>
<td>active voice</td>
</tr>
<tr>
<td>CAUS</td>
<td>causative</td>
</tr>
<tr>
<td>CLF</td>
<td>classifier</td>
</tr>
<tr>
<td>CN</td>
<td>common noun</td>
</tr>
<tr>
<td>COMP</td>
<td>complementiser</td>
</tr>
<tr>
<td>COMPL</td>
<td>completative</td>
</tr>
<tr>
<td>CONF</td>
<td>confirmative</td>
</tr>
<tr>
<td>DAT</td>
<td>dative</td>
</tr>
<tr>
<td>DESID</td>
<td>desiderative</td>
</tr>
<tr>
<td>eSi</td>
<td>older sibling</td>
</tr>
<tr>
<td>EX</td>
<td>exclusive</td>
</tr>
<tr>
<td>GEN</td>
<td>genitive</td>
</tr>
<tr>
<td>GF</td>
<td>Grammatical Function</td>
</tr>
<tr>
<td>IN</td>
<td>inclusive</td>
</tr>
<tr>
<td>INDEF.P</td>
<td>indefinite P</td>
</tr>
<tr>
<td>INTR</td>
<td>intransitive</td>
</tr>
<tr>
<td>IV</td>
<td>instrumental voice</td>
</tr>
<tr>
<td>LFG</td>
<td>Lexical Functional Grammar</td>
</tr>
<tr>
<td>LNK</td>
<td>linker</td>
</tr>
<tr>
<td>LOC</td>
<td>locative</td>
</tr>
<tr>
<td>NEG</td>
<td>negative</td>
</tr>
<tr>
<td>NFIN</td>
<td>non-finite</td>
</tr>
<tr>
<td>NMLZ</td>
<td>nominaliser</td>
</tr>
<tr>
<td>NOM</td>
<td>nominative</td>
</tr>
<tr>
<td>NSG</td>
<td>non-singular</td>
</tr>
<tr>
<td>NSPEC.RC</td>
<td>non-specific relative clause</td>
</tr>
<tr>
<td>OV</td>
<td>objective voice</td>
</tr>
<tr>
<td>PASS</td>
<td>passive</td>
</tr>
<tr>
<td>PERF</td>
<td>perfect</td>
</tr>
<tr>
<td>PL</td>
<td>plural</td>
</tr>
<tr>
<td>PN</td>
<td>proper noun</td>
</tr>
<tr>
<td>POL</td>
<td>polite</td>
</tr>
<tr>
<td>PROG</td>
<td>progressive</td>
</tr>
<tr>
<td>QUOT</td>
<td>quotative</td>
</tr>
<tr>
<td>REDUP</td>
<td>reduplication</td>
</tr>
<tr>
<td>ySi</td>
<td>younger sibling</td>
</tr>
<tr>
<td>vi</td>
<td></td>
</tr>
</tbody>
</table>
Chapter 1

Introduction

Grammatical functions have been a topic of formal syntactic investigation within Austronesian languages now for some time.

In particular, debates have traditionally raged over the status of grammatical functions within Philippine-type languages. Regarding these languages, much of the discussion has focused on whether these languages do or do not have a syntactic subject, see for instance Kroeger (1993) and Schachter (1976).

However, within these debates the status of non-subject grammatical functions has often been marginalized or ignored. This thesis seeks to rectify this situation somewhat. It is a syntactic investigation into the properties and construal of grammatical functions in Tolaki, an Austronesian language of central Indonesia, with a particular, though not exclusive, interest in non-subject grammatical functions.

1.1 Outline

The bulk of my argumentation is found in chapter 6. In chapter 6, I develop an analysis of Grammatical Functions in Tolaki. I argue that current models of grammatical functions within Lexical Functional Grammar cannot straightforwardly account for the data we find. If we were to posit discrete categories for non-clausal grammatical functions on the basis of different behavior under different morphosyntactic tests, we would be forced to posit a minimum of nine categories in order to account for the results. I propose that a better way of modeling the data we find in Tolaki is to posit a continuum of grammatical functions between the most and least privileged grammatical functions subject and adjunct. Participants are located along this continuum and are either more subject-like or more adjunct-like.

In chapter 2, the notion of grammatical functions is discussed. I argue that grammatical functions such as subject and object (also known in some theories as grammatical relations) are a necessary component of the syntax of many languages and that syntac-
tic structures and behaviours cannot be derived from the semantics of a sentence alone. Readers who are already familiar with these notions need not read this chapter.

In chapter 3 I provide an overview of Lexical Functional Grammar, a lexically based theory of grammar under which I will model and analyse grammatical functions in Tolaki. Particularly relevant for this thesis is the discussion of Argument Structure in section 3.2.1. Readers already familiar with Lexical Functional Grammar need not read this chapter.

In chapter 4 I discuss the interaction between morphology and syntax. I present evidence from well-described languages such as English, German and Icelandic, which shows that the morphological encoding of an argument is not a guaranteed prediction of its syntactic status. Rather, the syntactic status of an argument must be determined on syntactic grounds. Readers who are already familiar with similar discussions of ‘quirky case’ need not read this chapter.

In chapter 5 I provide a sketch grammar of Tolaki, with a particular emphasis on verbal morphology, though the structure of the noun phrase is also discussed. This grammar sketch is intended to provide the reader with the necessary information to better understand the examples provided in the final chapter. Readers who feel such information is unnecessary or who are willing to trust my glosses need not read this chapter.

1.2 Language Background

Tolaki is an Austronesian language spoken in mainland South-East Sulawesi in Indonesia. Within Austronesian, Tolaki belongs to the Bungku-Tolaki language family. Figure 1.1 shows the location of the Bungku-Tolaki languages in South East Sulawesi. Along with Rahambuu, Kodeoha and Waru, Tolaki belongs to the Tolaki subfamily of Bungku-Tolaki (Mead 1999:63).

Mead (1999:71) estimates that Tolaki is spoken as a first language by 280,000 speakers. There are two main dialects of the language. Konawe is spoken in the east and is by far and away the largest of the two dialects with approximately 230,000 speakers. Mekongga is the second largest dialect and is spoken in the western part of the language area. The main difference between the two dialects is lexical, and nearly all speakers are aware of a handful of doublets that identify the two dialects. The most common doublets cited are (Mekongga/Konawe) owetelo’ika ‘fish’ and ohiol/peanihi ‘salt’.

Socially, Mekongga is the prestige dialect. It is identified by speakers as ‘soft language’ (Indonesian halus), while Konawe is referred to as ‘rough language’ (Indonesian kasar). Speakers typically identify any variety of Tolaki that is not familiar to them, including the ceremonial language (see below), as ‘Mekongga’.

Another division is between urban and rural varieties of Tolaki. The urban variety of Tolaki is that variety spoken by ethnic Tolaki who have mainly grown up in Kendari, the
Figure 1.1: Bungku-Tolaki Languages (Mead 1999:34)
capital city of South-Eastern Sulawesi. Typically such speakers use the language only at home when talking to the older generation of family members. The children of such speakers do not typically have an active command of Tolaki, though report that they can understand it.

Lexically, the urban variety of Tolaki is characterised by a greater proportion of loanwords from Indonesian. Phonologically, two loose correlates of the urban variety are a pronunciation of the voiced stops without implosion and a pronunciation of the bilabial fricative phoneme /β/ as a labio-velar approximant [w].

Within mainland South East Sulawesi, Tolaki is the most prestigious local language and speakers of other local languages often identify their language as Tolaki. Both Moronene and Kodeoha speakers have identified their speech variety to the author as ‘Tolaki’.

Tolaki has high community esteem. It is taught as an elective in local primary schools, there is a radio station that has some Tolaki language content and there is also a Facebook group, Saya Cinta Bahasa Tolaki (Indonesian: I love the Tolaki language), dedicated to the language.

Somewhat contradictorily though, despite this high esteem, Tolaki is not often the language of choice among Tolaki speakers, this is particularly true of urban speakers. Thus young ethnic Tolaki will often choose to speak Indonesian among themselves, even in the home, and at the 2011 meeting of the Lembaga Adat Tolaki Konawe Mekongga (Institute of the Culture of Tolaki Konawe-Mekongga) all business was conducted in Indonesian. Tolaki is most strongly maintained in rural areas, where many immigrants learn Tolaki as a second language.

Nearly all speakers of Tolaki are minimally bilingual in Tolaki and Indonesian. Monolingualism in Tolaki, though still occasionally reported, is rare.

The data presented in this thesis is of the Konawe dialect, in particular of the variety spoken in the regencies of Wawotobi and Unaaha, about 55km east of the capital Kendari.

1.3 Data Collection

The data for this thesis was collected in three main ways: linguistic elicitation, text collection and participant observation. Most of the data on which this thesis is based was collected during a four week field trip to Indonesia in January 2012, other data was collected during a Field Methods class at the beginning of 2011.

While Kodeoha speakers strongly feel that their distinct speech variety is Tolaki, though different both from Mekongga and Konawe, speakers of Mekongga find it unintelligible. When I presented some Kodeoha lexical items to my contacts in the Konawe dialect area, they initially identified it as ‘Mekongga’, then identified it as ‘Bugis’.
While in Sulawesi I recruited three informants with whom I conducted semi-regular linguistic elicitation. All of these informants were associated with Universitas Laki-dende in Unaaha, in South-Eastern Indonesia. Two were former students of the English department and one was a lecturer in English. All were male and between 20 and 35 years old. The languages of elicitation were English and Tolaki.

While in Sulawesi I also collected and transcribed several texts. These were supplemented by already published texts such as those included in [Untung](2009).

1.4 Glossing Conventions

Throughout this thesis many glossed examples are included. Usually there are three lines: the first line provides the foreign sentence or utterance, the second line provides a morpheme-by-morpheme gloss and the final line a free translation. Occasionally two lines of translation are provided, in which case the second, marked ‘lit.’ is a literal translation.

An asterisk (*) before a sentence indicates that the sentence is ungrammatical. A question mark (?) before a sentence indicates that the sentence is unnatural. This is either because it is pragmatically inappropriate or borderline grammatical. An asterisk mark outside brackets, *(X), indicates that the sentence is ungrammatical unless the material within the brackets is included, while an asterisk within brackets (*X) indicates that the sentence is ungrammatical if this material is included.

Two lines of Tolaki transcription are provided when the utterance involves morphophonemic processes. When there are two lines of Tolaki, the top line represents an orthographic transcription, while the second line a transcription with morpheme breaks indicated.

There are two morphophonemic process that operate in Tolaki. The first of these converts the voiceless stops: /p, t, k/, into voiced prenasalised stops /mb, nd, Ng/, after certain words or morphemes. Words or morphemes after which this morphophonemic process operates are transcribed with a final ‘N’. One common example is the indefinite P prefix poN-.

The second morphophonemic process inserts a glottal stop at a morpheme boundary between two vowels. When this morphophonemic process operates two lines of Tolaki transcription are given. The first line is orthographic with the phonetically predictable glottal stops transcribed, and the second is morpheme-by-morpheme with phonetically predictable glottal stops not transcribed.
Chapter 2
Syntax and the Study of Grammatical Functions

This chapter will provide an overview of the study of grammatical functions. I will argue that the identification of abstract grammatical functions such as *subject* and *object* is a necessary prerequisite for the study of syntax in language.

We will see that there are various syntactic phenomena, the behaviour of which is best described by reference to grammatical functions. We will look at five such tests: control, reflexive binding, quantifier float, relativisation and secondary predication.

We will see that the behaviour of each of these phenomena in various languages can be best explained by appealing to grammatical functions, and that semantics alone is not sufficient.

2.1 The Necessity of Grammatical Functions

2.1.1 Control

In English we find two types of superficially similar constructions, so-called ‘raising predicates’ as in (1), and so-called ‘equi predicates’ as in (2).

(1) The policeman seemed to catch the bank robber.
(2) The policeman tried to catch the bank robber.

As has been demonstrated by many authors working under many different theoretical frameworks, the similarities between the two are superficial[1]. I will not discuss the differences between these two constructions, but will focus on the second kind, as in sentence (2).

---

Sentence [2] contains two clauses, the main or matrix clause and the subordinate clause. In [3] the subordinate clause is indicated by square brackets.

(3) The policeman tried [to catch the bank robber.]

While the main clause contains a preverbal NP, the subordinate clause does not. This is represented by a gap, as in sentence [4].

We can say that the gap is controlled by an argument of the matrix verb. The matrix verb argument which determines the identity of the controlled participant is the controller.

(4) I tried [ _ to tickle Harold.]

Furthermore we find that the postverbal argument of this predicate cannot be controlled:

(5) * I tried [(*Harold) to tickle _]

One hypothesis could be that only the Agent of the subordinate clause is eligible to be controlled. However, when the subordinate clause is passive we find that the opposite is the case: only the Theme can be controlled, while the Agent cannot. This is shown in sentence [6] and [7]

(6) I tried [ _ to be tickled by Harold.]
(7) * I tried [(*Harold) to be tickled by _]

Instead, we must appeal to the abstract grammatical function subject. In English, only a subject is eligible to be controlled. The difference in the semantic role of the controllee in sentences such as [6] is explained by the fact that in active sentences the Agent is the subject, while in passive sentences the Theme is the subject.

There are more facts about control constructions in English that require us to appeal to grammatical functions. One such fact is that only objects or subjects can be controllers. Sentence [8] shows an object as the controller.

(8) I persuaded Alfred [ _ to tickle Harold.]

Sentence [9] shows that the oblique by-phrase of the main clause passive cannot be the controller.

(9) He was persuaded by me [ _ to tickle her.]

Thus we must appeal to the notion of grammatical functions to account for the following facts about English control constructions:
a. Only subjects are eligible to be controlled.

b. Only subjects or objects are eligible to be controllers.

However, not all languages have the restriction that the controller be a subject. One such language is Tagalog. In Tagalog the subject bears nominative case (marked by *ang*), and the voice marker on the verb corresponds to its semantic role. This is shown in sentence (10) below, in which the active voice on the verb corresponds to the agent semantic role of the argument bearing nominative case, *siya* 'he':

(10) ⟨**N**ag-bigay **siya** _ng=pera _sa=Nanay. ⟨PERF⟩AV-give 3SG.NOM GEN=money DAT=mother. He gave money to Mother.

Likewise, in sentence (11) the theme argument, *pera* ‘money’ is the subject, as indicated by its nominative case marking and the instrumental voice on the verb.

(11) I-b⟨in⟩igay **niya** _sa=Nanay _ang=pera. IV-⟨PERF⟩give 3SG.GEN DAT=mother NOM=money. He gave money to Mother.

The sentences in (10) and (11) differ in the interpretation of the affectedness and definiteness of the arguments (Kaufman 2009:3).

In Tagalog control constructions, the verb of the subordinate clause is untensed and a gap appears corresponding to one of its arguments. This is shown in (12) in which the gap corresponds to the agent. As the active voice of the verb indicates, this argument would be the subject and bear nominative case.

(12) B⟨in⟩alak **niya=ng** [ _mag-bigay _ng=pera _sa=Nanay]. ⟨PERF⟩plan.OV 3SG.GEN=COMP AV-give GEN=money DAT=mother He planned to give money to Mother. (Kroeger 1993:39)

In sentence (13), the subject of the subordinate clause is the theme *pera* ‘money’, as indicated by its nominative case and the instrumental voice of the verb. However, the subject is not controlled, instead the non-subject agent is controlled.

(13) B⟨in⟩alak **niya=ng** [ _i-bigay _sa=Nanay _ang=pera]. ⟨PERF⟩plan.OV 3SG.GEN=COMP IV-give DAT=mother NOM=money He planned to give money to Mother. (Kroeger 1993:39)

Thus, in Tagalog, unlike English, non-subjects are eligible controllers. Kroeger (1993:106) argues that the restriction of controller in Tagalog is to nouns which are
actors. He furthermore argues that in Tagalog non-subjects remain core arguments of
the verb, and are thus still eligible to be controlled.

In this section we have seen that control is a syntactic phenomenon which is best
explained by appealing to grammatical functions. Most languages impose a syntactic
restriction on the grammatical function borne by the controllee; in English only subjects
can be controlled. However, in Tagalog only actors can be controlled.

2.1.2 Reflexive Binding

Another syntactic phenomenon which requires us to appeal to grammatical functions in
many languages is reflexive binding. In English the antecedent (what the reflexive refers
to) of a reflexive pronoun must bear a grammatical function higher on the relational
hierarchy than the reflexive.

The relational hierarchy is a hierarchical ranking of grammatical functions first used
by Keenan and Comrie (1977) to constrain relative clause formation. A more recent
version of the relational hierarchy after Bresnan (2001:212) is given in (14) below.

The Relational Hierarchy:

(14) \[ \text{SUBJ} > \text{OBJ} > \text{OBJ}_\theta > \text{OBL}_\theta > \text{COMP} > \text{ADJ} \]

This means any argument bearing a grammatical function lower on the relational
hierarchy will not an eligible antecedent in English. In sentence (15) the reflexive pronoun
\textit{himself} is an object. Because of this, the oblique \textit{Bob} is not an eligible antecedent. This is represented in (16)

(15) Alfred described himself to Bob.

(16) SUBJ OBJ OBL
    Alfred V REFL PREP Bob

However, sentence (17) is ambiguous. The reflexive pronoun \textit{himself} is an oblique,
thus both the subject and object are eligible antecedents. This is represented in (18).

(17) Alfred described Bob to himself

(18) SUBJ OBJ OBL
    Alfred V Bob PREP to REFL

\footnote{That the binding restriction is not simply one of the surface order of the constituents can be shown
by (i) which remains unambiguous despite the oblique being topicalised.}

(i) To Bob, Alfred described himself.
Thus reflexive binding in English is sensitive to the position on the relational hierarchy of the grammatical function of both the antecedent and the pronoun.

In other languages a reflexive must have as its antecedent a restricted subset of grammatical functions. Malayalam is such a language. The antecedent of a reflexive pronoun in Malayalam must bear the grammatical function subject.

In example (19) the active subject ṛająw ‘king’ is an eligible antecedent for the reflexive swaṇtam. The same holds for the passive sentence (20) in which the antecedent subject bears the semantic role THEME. Sentence (21) on the other hand is ungrammatical as the antecedent ṛająwine ‘king’ bears the grammatical function object, rather than subject.

Malayalam Reflexive Binding:

(19) ṛająw swaṇtam bhaaṛya-ye ṇulli
   king.NOM self’s wife-ACC pinched
   The king pinched his own wife. (Mohanan [1982] 566)

(20) ṛajaxw swaṇtam bhaaṛya-yaal ṇullappettu
   king.NOM self’s wife-INSTR pinch.PASS.PAST
   The king was pinched by his own wife. (Mohanan [1982] 584)

(21) * ṛajaxwine swaṇtam bhaaṛya ṇulli
   king-ACC self’s wife.NOM pinched
   The king’s own wife pinched him (the king). (Mohanan [1982] 566)

Thus we have seen that reflexive binding is another phenomenon that requires us to appeal to grammatical functions. In English the antecedent must be an argument of the same predicate as the reflexive pronoun and must bear a grammatical function more highly ranked than the reflexive. In Malayalam the only available antecedent for a reflexive is the subject of the clause.

2.1.3 Quantifier Float

Another test which requires us to appeal to grammatical functions in some languages is quantifier float. In many languages a quantifier such as ‘all’ can appear within the noun phrase it modifies, or can ‘float’ to a position external to the noun phrase. When floated, the noun phrase which it modifies is often restricted by grammatical function. English is such a language, and the only noun phrase available to launch a floating quantifier is that bearing the grammatical function subject.

This is demonstrated in sentence (22) below where both noun phrases are plural, and thus semantically eligible to launch the quantifier. However, in fact, only the subject, the cockatoos, can do so. The passive sentence in (23) in which the THEME launches...
the quantifier shows that the restriction is to grammatical functions, not semantic roles. Finally, sentence (24) is ungrammatical as the only noun phrase available to launch the quantifier is singular.

(22) The cockatoos have all eaten the crackers.
(23) The crackers have all been eaten by the the cockatoos.
(24) * The cockatoo has all eaten the crackers.

Another language in which the scope of a floating quantifier is limited to the subject is Tagalog (Kroeger 1993:22).

In sentence (25) there are two plural arguments: mga guro ‘teachers’ and mga bata ‘children’. Thus, semantically, the floated quantifier could refer to either of these arguments. However, only the subject guro ‘teachers’ can launch it.

(25) ⟨N⟩ag-bigay ⟨PERF⟩AV-give all NOM=PL=teacher GEN=money DAT=PL=child.
All the teachers gave money to the children. (Kroeger 1993:23)

Likewise, in sentence (26) there are also two plural arguments. However, the dative voice and nominative case marking show that the RECIPIENT ang mga bata ‘the children’ is the subject, and we find that this is the only argument eligible to launch the floating quantifier.

(26) B(in)igay-an ⟨PERF⟩-give-DV all GEN=PL=teacher GEN=money NOM=PL=child.
The teachers gave money to all the children. (Kroeger 1993:23)

Thus, floating quantifiers are another syntactic phenomenon that requires us to appeal to grammatical functions in many languages. In both English and Tagalog, two typologically and genetically diverse languages, the only NP eligible to launch a floating quantifier is the subject.

2.1.4 Relativisation

Another syntactic test which requires us to appeal to grammatical functions in many languages is relativisation. In many languages the gap in a relative clause can correspond only to arguments of a restricted grammatical function. English is not such a language; any constituent including adjuncts can fill the gap in a relative clause, as illustrated in sentence (27).

(27) This is [the car] I ate my lunch in ___
However, many languages do restrict which argument can fill the gap. Kroeger (1993) shows that in Tagalog only subjects can be relativised. This is illustrated below in sentences (28) and (29). In (28) the voice marker on the verb shows that the head of the relative clause *isda* ‘fish’ is the subject. However, (29) is ungrammatical as the voice marker on the verb corresponds to the agent *bata* ‘child’, which also bears nominative case. This means that this argument must be the subject and that the argument which is relativised, *isda* ng ‘fish’ is a non-subject.

Tagalog Relativisation:

(28) *isda=ng  i-b(in)igy  ng=lalake sa=bata*
fish=LNK IV-(PERF)give GEN=man DAT=child
the fish which was given to the child by the man.  

(29) *isda=ng  ⟨n⟩ag-bigy  ang=lalake sa=bata*
fish=LNK ⟨PERF⟩AV-give NOM=man DAT=child
the fish which was given to the child by the man.  

Luganda (a Bantu language) is an example of a language in which only subjects or objects can be relativised (Kroeger 2004:182).

Thus we have seen that relativisation is another syntactic phenomenon that requires us to appeal to grammatical functions in many languages. Although this is not the case in English, many other languages only allow a restricted set of grammatical functions to be relativised. Tagalog is an example of a language which only allows subjects to be relativised.

2.1.5 Secondary Predication

Secondary predication is another syntactic test which is most easily described by appealing to the notion of grammatical functions. In English a secondary predicate can be included clause finally. A simple example is given in (30), with the depictive secondary predicate *drunk*.

(30) He came home at 12:00 drunk.

In (30) we see that the subject of the main clause is also the subject of the secondary predicate. Objects can also launch a secondary predicate. This is shown in (31) with a depictive secondary predicate and in sentence (32) with a resultative secondary predicate.

(31) I have my coffee black.

(32) They shot my brother dead.
In sentences in which there is both a subject and object and both are plausible subjects of the secondary predicate, the sentence is ambiguous. This is shown in sentence (33). The passive sentence in (34) shows that the oblique by phrase can also launch the secondary predicate.

(33) I confronted him drunk.
(34) I was (suddenly) confronted by him drunk.

However, adjuncts such as the beneficiary for him in (35) are not eligible to launch the secondary predicate, no matter whether this would be semantically appropriate.

(35) I bought another beer for him drunk.

Thus we can see in English that the identification of the participant which launches the secondary predicate is best determined on the basis of grammatical function rather than semantics. Adjuncts are not eligible to launch a secondary predicate.

2.2 Summary

In this chapter we have seen that in a variety of languages various syntactic phenomena require us to appeal to grammatical functions.

We have seen that five such phenomena are control, reflexive binding, quantifier float, relativisation and secondary predication. While these phenomena are neither a complete inventory of those that distinguish between grammatical functions, nor cross-linguistically universal, they are indicative of the kinds of phenomena that regularly distinguish between grammatical functions.
Chapter 3

Lexical Functional Grammar
Overview

In this chapter I will provide an overview of the main features of Lexical Functional Grammar (LFG), the theory under which I will carry out my analysis in this thesis.

We will begin in section 3.1 with an overview of the status of grammatical functions within LFG. We will then discuss each of the three distinct, but interconnected, levels of representation within LFG: lexical structure, constituent structure and functional structure. In section 3.2 we will discuss lexical structure, the level at which the lexical information of an entry is found. For argument taking predicates it is also the level at which the argument structure is found. In section 3.3 we will discuss constituent structure. This is the level at which the linear order and hierarchical groupings are encoded. Finally in section 3.4 we will discuss functional structure, the level at which information from the lexical and constituent structures is combined.

3.1 Grammatical Functions within LFG

In LFG grammatical functions are theoretical primitives and are not defined in universal phrase structure or semantic terms (Dalrymple 2001:11).

Grammatical functions are identified on the basis of grammatical phenomena such as those presented in chapter 2 on a language-by-language basis. A grammatical phenomenon which is used to identify grammatical functions is called a ‘test’. Phrase structure position is simply one of many syntactic tests that can be used to identify grammatical functions.\(^1\)

\(^1\)Within a Chomskyan Principles and Parameter approach grammatical functions are defined by their phrase structure position. Thus subject can be defined roughly as the NP daughter of S and object can be defined as NP daughter of VP (Carnie 2002:79). When a grammatical function does not appear in its ‘expected position’ transformations are posited which move it to another part of the clause.
LFG posits a universally available inventory of GFs. There are a total of eight grammatical functions in this inventory:

\[(1)\quad \text{SUBJ, OBJ, OBJ}_\theta, \text{COMP, XCOMP, OBL}_\theta, \text{ADJ, XADJ}\quad \text{(Dalrymple 2001:9)}\]

A superscript \(\theta\) indicates that this grammatical function is associated with a particular semantic role.

Among these grammatical functions COMP, XCOMP and XADJ are all clausal functions allowing another subject. The subject is internal in the case of COMP and is specified externally in the case of XCOMP and XADJ.

### 3.1.1 Arguments/Adjuncts

Some of these grammatical functions can be grouped with others on the basis of various cross classifications. One important division among grammatical functions is that between adjuncts and arguments, as shown in (2). Other terms for these groups include ‘modifiers’ (adjuncts) and ‘governable grammatical functions’ (Dalrymple 2001:11).

\[(2)\quad \text{SUBJ OBJ OBJ}_\theta \text{ OBL}_\theta \text{ XCOMP COMP ADJ XADJ}\]

Two tests which can be used to test whether a constituent is an argument or an adjunct are multiple occurrence and order dependence.

#### 3.1.1.1 Multiple Occurrence

One test for adjuncts is multiple occurrence. Adjuncts can be multiply specified while arguments cannot (Dalrymple 2001:12). Thus sentence (3) with two locative adjuncts is grammatical, while the failure of the goal in (4) to be multiply defined, despite having an identical phrase structure to the locatives in (3), shows that the locative in put is an oblique.

\[(3)\quad \text{I ate my lunch [}_p\text{p in Sydney] [}_p\text{p in my car.]}\quad \text{ADJ ADJ}\]

\[(4)\quad * \text{I put my lunch [}_p\text{p in the fridge] [}_p\text{p in my lunch-box.]}\quad \text{OBL}_{-\text{LOC}} \quad \text{OBL}_{-\text{LOC}}\]

The only interpretation of (4) is one in which the second prepositional phrase is an adjunct modifying the previous noun phrase ‘the fridge’, as in the semantically odd (5) in which the fridge is interpreted as being inside the lunch box.

\[(5)\quad ? \text{I put my lunch [}_p\text{p in [}_p\text{p the fridge [}_p\text{p in my lunch-box.]} ] ]}\quad \text{OBL}_{-\text{LOC}} \quad \text{ADJ}\]
Such an interpretation is very unlikely for (3) in which the first noun phrase is a proper noun with a fixed and known location. That arguments cannot be multiply specified arises because a predicate subcategorises for only a set number of arguments, while adjuncts are not subcategorised for.

3.1.1.2 Order Dependence

Another test for adjuncts is order dependence. The truth condition of a sentence can change when adjuncts are reordered, while only the rhetorical structure of a sentence is changed if arguments are reordered (Dalrymple 2001:13).

Thus sentence (6a) can be true if the dog barked for hours and hours on consecutive nights, while sentence (6b) in which the order of the adjuncts is reversed, is true if the dog barked for many consecutive nights. However, the sentences in (7) in which the order of the arguments varies, have the same truth conditions but different pragmatics.

(6) a. The neighbour’s dog barked for a long time every night.
    b. The neighbour’s dog barked every night for a long time.

(7) a. I ate the roast beef.
    b. The roast beef, I ate. (The chicken, I didn’t.)

3.2 Lexical Structure

Lexical Functional Grammar is a theory that posits an enriched lexical component. As put by one syntactician: “The lexicon is where a lot of the work in LFG is done” (Carnie 2002:340). One example is the passive-active alternation, which is treated as a lexical process rather than as a syntactic process. Lexical entries are found at the level of lexical structure and include information such as meaning, word class, argument structure and language specific categories and features. Possible lexical entries for three English words of different word classes can be seen in (8) below.

(8) Lexical Entries:

man (N)  walks (V)  the (DET)

(↑PRED) = ‘man’  (↑PRED) = ‘walk⟨SUBJ⟩’  (↑DEF) = {+}
(↑PERS) = {3}  (↑TENSE) = {PRES}
(↑NUMB) = {SG}  (↑SUBJ NUMB) = {SG}
(↑GEND) = {MASC}  (↑SUBJ PERS) = {3}

The up arrow ‘↑’ in these entries refers to the lexical item in question. It indicates that this is the (relevant) information that this lexical item provides to the meaning of a sentence. Note that the entry for the verb ‘walks’ is slightly more complex than that of the other word classes, as it contains the extra information ‘⟨SUBJ⟩’. This is the
argument structure of this predicate and it shows what arguments this predicate licenses. In this case it tells us that ‘walks’ licenses one argument and that this argument is a subject. The remainder of this section comprises a more detailed discussion of argument structure and argument taking predicates, in particular verbs.  

3.2.1 Argument Structure

In this section I will discuss the argument structure of argument taking predicates. We will see that there are two levels of linguistic interpretation for verbal participants, semantic and syntactic.

In section 3.2.1.1 we will see that, semantically, at the lexico-conceptual level of representation, the verb subcategorises for and assigns semantic roles to its participants, semantic roles which are hierarchically ordered.

In section 3.2.1.2 we will see that, syntactically, the verb contains an argument structure which does not necessarily license the same number of arguments as exist at the lexico-conceptual level. The relative order of these arguments, as determined by hierarchical ordering of semantic roles at the lexico-conceptual structure, is then mapped onto grammatical functions such as ‘subject’ and ‘object’.

<table>
<thead>
<tr>
<th>Semantic Role</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGENT</td>
<td>causer or initiator of an event</td>
</tr>
<tr>
<td>EXPERIENCER</td>
<td>entity which perceives a stimulus</td>
</tr>
<tr>
<td>RECIPIENT</td>
<td>entity which acquires something</td>
</tr>
<tr>
<td>BENEFICIARY</td>
<td>entity for whose benefit an action is performed</td>
</tr>
<tr>
<td>INSTRUMENT</td>
<td>thing which is used to perform an action</td>
</tr>
<tr>
<td>THEME</td>
<td>entity which changes location or possession</td>
</tr>
<tr>
<td>PATIENT</td>
<td>entity which undergoes a change in state</td>
</tr>
<tr>
<td>STIMULUS</td>
<td>object of perception, cognition or emotion</td>
</tr>
<tr>
<td>LOCATION</td>
<td>place where an event takes place</td>
</tr>
<tr>
<td>SOURCE</td>
<td>subtype of LOCATION; origin of motion</td>
</tr>
<tr>
<td>ACCOMPANIMENT</td>
<td>entity which is associated with an action</td>
</tr>
</tbody>
</table>

Table 3.1: Semantic Roles

3.2.1.1 Lexico-Conceptual Structure

At the semantic level, every verb is assumed to subcategorise for a certain number of participants, as well as specifying the semantic role of those participants. The semantic

---

2Though other word classes can license arguments, I use verbs as my example as they are the most familiar of predicative word classes.
The semantics of a verb like *die* dictate that it has one participant and that this participant is a *Patient*. The semantics of the verb *kill* dictate that it has two participants; an *Agent* and a *Patient*. We can represent the lexico-conceptual structure of each of these verbs in (9) and (10) respectively. Capitals are used to indicate a semantic concept.

(9)  *die*: ‘DIE(PAT)’
(10) *murder*: ‘CAUSE(AGT ‘DIE(PAT)’)

Although (10) may be the most accurate and detailed representation of the lexico-conceptual structure of *murder*, I will use the simpler structure shown in (11) as the precise lexico-conceptual structure of a verb does not bear upon its syntactic realisation.

(11) *murder*: ‘KILL(AGT, PAT)’

Some verbs, such as weather verbs, do not subcategorise for participants at the semantic level. The lexico-conceptual structure of one such verb *rain* is given in (12).

(12) *rain*: ‘RAIN( )’

Additionally, the semantic roles for which a verb subcategorises for are ranked in the Thematic Hierarchy as shown in (13) taken from Bresnan and Kanerva (1989:23).

Thematic Hierarchy:

(13)  AGENT > BENEFICIARY > RECIPIENT > EXPERIENCER > INSTRUMENT > THEME > PATIENT > LOCATIVE

The semantic role furthest to the left on this hierarchy is the most highly ranked, and that furthest to the right the most lowly ranked.

The binary features [±HR] (Highest Role) and [±LR] (Lowest Role) in combination with this hierarchy allow us to further classify the participants. These are the grammatical relations A, S, P, and D, as shown in (14) adapted from Kiparsky (2001) who uses these features for defining structural case.

Grammatical Relations:

(14)  A [+HR, -LR]
     S [+HR, +LR]
     P [-HR, +LR]
     D [-HR, -LR]

Andrews (1985:68) defines these grammatical relations syntactically with reference to primary transitive verbs (PTVs): verbs which clearly take both an agent and patient such as *murder*. Thus, A is any argument of a bivalent verb receiving the same treatment as the Agent of a PTV and P likewise any argument receiving the same treatment as the Patient. S is the sole argument of a monovalent verb.
3.2.1.2 Valency

No matter the nature of its lexico-conceptual structure, every verb is assumed to have as part of its lexical entry the number of syntactic arguments it licenses. An intransitive verb licenses one argument, a transitive verb two arguments and a ditransitive verb three arguments.

In most cases, the number of arguments a verb licenses syntactically is the same as the number of participants it subcategorises for semantically. Thus the ungrammaticality of sentence (15) below is explained because the verb died only licenses a single argument, as in example (16). However, example (17), also with two arguments, is grammatical as the verb killed licenses two arguments.

(15) * The crocodile died the duck.
(16) The crocodile died.
(17) The crocodile killed the duck.

The linking between the lexico-conceptual structures of each of these verbs and their argument structure is shown in (18) for die and (19) for kill. The order of the participants on the bottom tier is determined by the Thematic Hierarchy in (13).

(18) die:  
‘DIE⟨PAT⟩’
‘die⟨⟩’

(19) kill:  
‘KILL ⟨AGT, PAT⟩’
‘kill⟨⟩’

However, this is not always the case. We saw in (12) that the lexico-conceptual structure of the verb rain contains no participants. Nonetheless, we find that in English the verb rain requires a subject. This is shown by the ungrammatical subjectless sentence (21) in contrast with the grammatical sentence (20) with the subject it.

(20) It rained yesterday.
(21) * rained yesterday

We can represent the linking between the lexico-conceptual and argument structures of rain as in (22).

(22) rain:  
‘RAIN⟨⟩’
‘rain⟨⟩’

Another English example is the verb to cark it which is used colloquially to mean ‘to die’. As shown in (24) and (23), this verb requires an object.
The old man carked it.

* the old man carked

The linking between the lexico-conceptual and argument structures of cark it is shown in (25).

(25) cark it:

`'DIE ⟨PAT ⟩'

| 'cark⟨ , ⟩'`

Such a phenomenon is not limited to English. In the Mayan language Tzotzil (as described in Aissen (1987)) there are no ditransitive verbs. Thus while the verb ?ak’ ‘give’ subcategorises for three participants at the lexico-conceptual structure, an AGENT, RECIPIENT and THEME, it is ungrammatical to include all three, as shown in sentence (27). Sentence (26) shows that it is grammatical to include only two: the AGENT, fun ‘Xun (a name)’, and the THEME, tfitom ‘pig’.

(26) ?a li fun-e, ba y-ak’ tfitom.
   TOPIC DEF PN-CL, go A3-give pig
   Xun went to give the pig [away].

(27) * ?a li fun-e, ba y-ak’ tfitom li ?ants-e.
   TOPIC DEF PN-CL, go A3-give pig DEF woman-CL
   Xun went to give the pig to the woman.

In order to include the RECIPIENT that exists at the lexico-conceptual level, the verb must be applicativised with the suffix -be. This is shown in sentence (28)

(28) ?a li fun-e, ba y-ak’-be tfitom li ?ants-e.
   TOPIC DEF PN-CL, go A3-give-APPL pig DEF woman-CL
   Xun went to give the pig to the woman.

We can represent the argument structure of the Tzotzil verb ?ak’ ‘give’ in sentence (26) in (29) below, and that of the applicativised ?ak’be in (30).

(29) ‘?ak’⟨ , ⟩’

(30) ‘APPL⟨ , ⟩‘?ak’⟨ , ⟩’

The Tzotzil applicative can also be used to introduce arguments with a variety of other semantic roles including but not limited to BENEFICIARY and PATIENT (Aissen 1987:106).
Thus, in Tzotzil there are no ditransitive verbs. In order to allow the inclusion of the recipient which is included in the lexico-conceptual structure of the verb ?ak’ ‘give’, the verb must be applicativised.

3.3 Constituent Structure

Constituent structure (c-structure) is the level which encodes the linear order of elements. It is also the input to the phonological component of the grammar. This last point is worth noting; LFG does not posit operations such as transformations that move constituents around. If the position of a constituent is correlated with a particular grammatical function this is annotated in the c-structure rules.

C-structure is represented in LFG through the familiar conventions of phrase structure rules and tree diagrams. A possible set of phrase structure rules for English are given in (31) below.

(31) a. \( S \rightarrow NP \quad VP \)  
\( (↑^\text{SUBJ}=↓) \quad (↑=↓) \)

b. \( VP \rightarrow V \quad NP \)  
\( (↑=↓) \quad (↑=↓) \)

c. \( NP \rightarrow DET \ N \)  
\( (↑=↓) \quad (↑\text{OBJ}=↓) \)

Here the variable ‘↑’ is instantiated by the node immediately dominating the constituent in question and the variable ‘↓’ is instantiated by the node itself. Thus, for example, \( (↑^\text{SUBJ}=↓) \) can be read as ‘this node is the SUBJ of what is above this node’. The equation ‘\( (↑=↓) \)’ indicates that the features of this node are shared with the immediately dominating node. Thus for example the definite article ‘the’ provides the information \( (↑\text{DEF}=↑+) \) (this node is definite) and the noun ‘man’ provides among other things the information \( (↑\text{PRED} = \text{man}) \). Because both these nodes have the equation \( (↑=↓) \), this allows both sets of information to ‘filter up the tree’ and be present in the NP node; the SUBJ of the sentence.

Using the phrase structure rules in (31) and the lexical entries provided above in (8), the tree diagram in (32) can be generated for the simple English sentence The man walks.
3.4 Functional Structure

At the level of functional structure (f-structure), the lexical information from the lexical entries and the structural information from the c-structure are combined. Lexical information includes the feature values of categories such as the TENSE of the sentence or the NUMB of the participants. Structural information includes the relationships between the elements of the sentence, abstract grammatical functions such as SUBJ, OBJ and COMP. F-structure is represented formally in hierarchically organized attribute-value matrices.

The functional structure of the sentence in (32) is provided in (33) below.

(33) \[
\begin{bmatrix}
\text{PRED} & \text{walk}^{\langle\text{SUBJ}\rangle} \\
\text{TENSE} & \text{PRES} \\
\text{SUBJ} & \\
& \begin{bmatrix}
\text{PRED} & \text{'man'} \\
\text{NUMB} & \text{SG} \\
\text{PERS} & \text{3} \\
\text{GEND} & \text{MASC} \\
\text{DEF} & +
\end{bmatrix}
\end{bmatrix}
\]

There are three well-formedness conditions that apply to the f-structure. Descriptions of these conditions are taken from Dalrymple (2001:35ff).

The first condition is coherence. Coherence disallows f-structures which contain grammatical functions which are not found in the argument structure of their predicate. This explains why sentence (15) *The crocodile died the duck*, is ungrammatical. The
second argument the duck has not been assigned a grammatical function by the predicate died.

The second well-formedness condition is completeness. It requires that all the grammatical functions subcategorised for by the predicate have values realising them. This explains why a sentence such as *Yells at me is ungrammatical. The verb ‘yell’ subcategorises for a SUBJ, but there is no NP realising this grammatical function.

The third well-formedness condition is consistency. This requires that each attribute in the feature matrix have a unique value. This well-formedness condition explains the unacceptability of a sentence such as *the children plays the piano, as the subject noun ‘children’ provides the information (NUMB) = {PL} while the verb plays provides the information (SUBJ NUMB) = {SG}. Thus the category NUMB does not have a unique value and the sentence is ungrammatical.

3.5 Summary

This concludes the brief summary of Lexical Functional Grammar. We have seen that LFG has three levels of representation. At the lexical level is included all the information provided by individual lexical items. In the case of predicates which license one or more arguments this lexical entry includes an argument structure which details the number of arguments licensed as well as their hierarchical ordering. It is from this ordering that grammatical functions such as SUBJ and OBJ are ultimately assigned. At the lexical level there also exist argument structure operations which can be applied to a predicate in order to alter its argument structure in various ways.

The second level is that of constituent structure, the level which encodes the linear order and hierarchical structure of constituents. Constituent structure is also the level at which the grammatical functions encoded in the argument structure of a predicate are mapped onto constituents of a clause.

The third level of representation is that of functional structure. At the level of functional structure the information provided by the lexical entries and the information provided by the constituent structure is unified. Three well-formedness conditions, coherence, completeness and consistency, apply in order to prevent ungrammatical sentences from being generated.
Chapter 4

Morphology and Syntax

4.1 Outline

This chapter will demonstrate the extent to which the morphology of a language reflects its syntax. To this end I will investigate three closely related languages which differ in this respect.

In section 4.2 I will define what is meant by the terms ‘case’ and ‘grammatical function’.

In section 4.3 we will see that in English it is difficult to prise apart the notions of case and grammatical function and that the former reflects the latter to a large extent.

In section 4.4 we will see that in German the subject grammatical function can be quite accurately predicted from the nominative case, despite the existence some constructions that could present exceptions.

Finally, in section 4.5 we will see that in Icelandic, there is a very low degree of correspondence between the case and grammatical function that a noun bears. We will see that neither can be predicted on the basis of the other.

In the following sections I will focus on, though not limit, my discussion to the grammatical function subject as it is the grammatical function most instructive in these languages.

4.2 Definition of Terms

In this chapter I will investigate the relationship between morphology and syntax. I will be concerned primarily with the relationship that holds between grammatical functions on the one hand and morphological case on the other.

In this thesis I assume case is a feature of noun phrases (Andrews 1982:501). One of the functions of this feature can be to mark the role a noun phrase plays in a sentence. While other categories, such as number, may mark features about individual
participants, case marks relations *between* different participants.

Taking a stereotypical use of the locative case, we can say that a noun $x$ bears the locative case when there is another participant $y$ which is perceived to exist or occur in the spatial domain of $x$. The locative case thus marks the spatial relationship between $x$ and $y$.

I furthermore assume that case is morphologically, not syntactically, manifested (Barðdal 2001:17). It makes no sense to posit the existence of a certain case in a language unless this case is morphologically manifested for at least some of the nouns in this language.

Grammatical functions on the other hand, it has been argued, must be defined on the basis of syntactic criteria (see Chapter 2).

Grammatical functions can be viewed as a syntactic solution to the problem of keeping track of the relations a participant bears to other elements of a clause, while case can be viewed as a nominal morphological solution to the same problem. Thus in languages which make use of both grammatical functions and the morphological category case, we expect that there will be a certain amount of overlap between the two systems. In a language in which the morphology was a perfect reflection of its syntax, each unique grammatical function would be associated with a unique case.

### 4.3 English

#### 4.3.1 English Case Morphology

In English only five of the personal pronouns inflect for one of two cases, either the nominative or accusative case. The different forms of each of these pronouns are given in Table 4.1.

<table>
<thead>
<tr>
<th></th>
<th>NOM</th>
<th>ACC</th>
<th>GEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>1SG</td>
<td>I</td>
<td>me</td>
<td>my</td>
</tr>
<tr>
<td>3SG.M</td>
<td>he</td>
<td>him</td>
<td>his</td>
</tr>
<tr>
<td>3SG.F</td>
<td>she</td>
<td>her</td>
<td>her</td>
</tr>
<tr>
<td>3SG.N</td>
<td>it</td>
<td>it</td>
<td>its</td>
</tr>
<tr>
<td>2</td>
<td>you</td>
<td>you</td>
<td>your</td>
</tr>
<tr>
<td>1PL</td>
<td>we</td>
<td>us</td>
<td>our</td>
</tr>
<tr>
<td>3PL</td>
<td>they</td>
<td>them</td>
<td>their</td>
</tr>
</tbody>
</table>

Table 4.1: English Pronouns

---

1Nominal as opposed to verbal. The verbal equivalent would be indexing or agreement.
The first behavioural pattern we observe, is that the noun in the S/A role must bear nominative case.

(1) I arrived.
(2) * me arrived

Secondly we see that the verb agrees with this pronoun as shown in sentence (3) in which the verb agrees with the non-3\textsuperscript{rd} person singular pronoun \textit{I}, and in sentence (4) in which the form ending in -\textit{s} agrees with the 3\textsuperscript{rd} person singular pronoun \textit{he}.

(3) I arrive.
    1SG.NOM
(4) He arrive-s
    3SG.M.NOM arrive-3SG.PRES

Thus we can see that in English the noun in the S/A role must bear nominative case and that the verb agrees with it.

4.3.2 Subjecthood Tests in English

Furthermore, in English there are many syntactic tests that show that the argument bearing nominative case is the syntactic subject. In this section we will look at only two of these tests, control and conjunction reduction.

4.3.2.1 Control

In English the subject of a clause is not realised when it is controlled by an argument in the preceding clause. This has already been extensively covered in section 2.1.1.

To repeat the facts, sentence (5) below shows that the subject of the 2\textsuperscript{nd} clause to \textit{tickle him} is not realised and is controlled by and co-referential with the subject of the matrix clause. Sentence (6) shows that this behaviour is unique to the subject, as the object of the subordinate clause cannot be similarly deleted, even if a possible subject for this clause is inserted. Finally, the passive sentence (7) shows that this behaviour cannot be attributed to the arguments bearing identical semantic roles because the subject of the matrix is an \textit{AGENT} and the unrealised argument of \textit{be tickled} a \textit{THEME}.

(5) I tried [ _ to tickle Harold.]
(6) * I tried [(*Harold) to tickle _]
(7) I tried [ _ to be tickled by Harold.]
4.3.2.2 Conjunction Reduction

In English the subject of a co-ordinated clause can be unrealised when it is identical in reference to the subject of the preceding clause. Sentence (8) shows that only the nominative subject he can be interpreted as the missing argument of the second clause, while the passive in sentence (9) in which the AGENT of started shouting is deleted and is co-referential with the PATIENT of the first clause shows that this behaviour cannot be explained on the basis of semantic roles alone.

(8) He pushed me over and __, __ started shouting.
(9) He was pushed over and __ started shouting.

In both of the above examples the subject is in the nominative case, while the object me in (8) is in the accusative case.

4.3.3 Summary

The two tests of control and conjunction reduction thus allow us to identify a unique set of behaviour that is associated with the subject of a clause in English. Furthermore, we can observe that this argument always bears nominative case. Thus, in English the case and grammatical function a noun bears accurately reflect one another and are accurate predictors of one another.

4.4 German

German has a much richer system of case morphology than English distinguishing four cases both for pronouns and other noun phrases. The four cases of German are nominative, accusative, dative and genitive.

The nominative, accusative and dative forms of the 1st person singular pronoun, the 3rd person masculine singular pronoun and the masculine definite article are give in Table 4.2. These are the forms I will use in example sentences in this section.

<table>
<thead>
<tr>
<th></th>
<th>NOM</th>
<th>ACC</th>
<th>DAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1SG</td>
<td>ich</td>
<td>mich</td>
<td>mir</td>
</tr>
<tr>
<td>3SG.M</td>
<td>er</td>
<td>ihn</td>
<td>ihm</td>
</tr>
<tr>
<td>M.DEF</td>
<td>der</td>
<td>den</td>
<td>dem</td>
</tr>
</tbody>
</table>

Table 4.2: German Pronouns

As in English, we observe that it is usually ungrammatical if the pronoun which occurs before the verb is not in the nominative case.
Likewise, we observe that the verb agrees with the nominative pronoun. This is shown in sentences (12) and (13) below.

(12)  *mich/mir  komm-e  
     1SG.ACC/DAT come-1SG.PRES

(11)  *ihn/ihm  komm-t  
     3SG.ACC/DAT come-3SG.DAT

While the nominative case is used for the S/A roles, the accusative case is used for P roles. In most circumstances, it is ungrammatical if this role bears nominative or dative case. This is shown in sentences (14) and (15) below.

(14)  Er  schläg-t  mich.  
     3SG.M.NOM beat-3SG.PRES 1SG.ACC
     He’s hitting me

(15)  *Er  schläg-t  ich/mir.  
     3SG.M.NOM beat-3SG.PRES 1SG.NOM/DAT

Finally, under passivisation this P is encoded as an S/A role. It occurs in the nominative case and the verb agrees with it. This is shown in (16) below.

(16)  Ich  werd-e  ge-schlag-en.  
     1SG.NOM PASS:PAST-1SG PP-beat-PP
     I was hit.

4.4.1 Quirky Case in German

In German, unlike in English, there are several predicates in which the nominal occurs in an unexpected case. This phenomenon has received many different labels in the literature; I will use the term ‘quirky case’ to refer to it. An example of an S with quirky dative case is given in sentence (17), and an example with an S with quirky accusative case in sentence (18).

(17)  Mir  ist kalt.  
     1SG.DAT is  cold
     I feel cold
Additionally some arguments take a P with quirky case, either dative or genitive. Sentence (19) shows that the verb *hilfen* ‘help’ takes a P with dative case.

(19) *Er hat mir geholfen.*

3SG.M.NOM have:3SG 1SG.DAT PP-help-PP

He helped me.

Similarly there are a small number of verbs which take a P in the genitive case such as *gedenken* ‘remember’.

Furthermore, verbs which take a quirky P fail to passivise properly. Instead of the P being realised with nominative case and causing verbal agreement, as in sentence (16) it retains its quirky case and the finite verb has 3SG agreement, no matter the person and number of this P. This is shown in sentence (20) below.

(20) *Mir wurde geholfen.*

1SG.DAT PASS:PAST-3SG PP-help-PP

I was helped.

Finally there are some verbs which take two arguments in which the A bears dative case and the P nominative case. One such verb, *gefallen* ‘to like’, is illustrated in sentence (21) below.

(21) *Mir gefällt der Wagen.*

1SG.DAT like-3SG.PRES the:M.NOM car

I like the car.

So far we have seen that the S of a German clause can bear one of three cases, the P one of four and the A one of two cases. Which case each role can bear is summarised in Table 4.3.

<table>
<thead>
<tr>
<th></th>
<th>NOM</th>
<th>DAT</th>
<th>ACC</th>
<th>GEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>✓</td>
<td>✓</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>S</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>-</td>
</tr>
<tr>
<td>P</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Table 4.3: Quirky Case in German
4.4.2 Subjecthood in German

As in English, many syntactic tests can identify the subject of a clause in German. As many authors (Zaenen et al. 1985, Sigurðsson 2002, Bayer 2004) have shown, these tests consistently identify the nominative argument of a clause as the subject, while failing to identify arguments with quirky case as subjects.²

As in English, the two tests of control and conjunction reduction can be used to identify the subject in German.

4.4.2.1 Control

The subject of a clause is not realised when it is controlled by an argument in the preceding clause. This is shown in sentence (22) below. Sentence (23) shows that an object is not eligible to be controlled in German and the passive in (24) shows that this behaviour cannot be ascribed to the semantic roles of the arguments in question, as the subject of each clause has a different semantic role.

(22) Er versuch-t nur, [ _ sein-e Gäst-e blöd ] hin-zu-stellen.

3SG.M NOM try-3SG.PRES only, his-PL guest:PL-PL stupid down-INF-put-INF

He stupidly tries to put down [i.e. insult] his guests.

(23) * der Zeuge fürchte-te, [ (*ich) zu schlag-en, ]

the: M NOM witness fear-3SG.PAST (*1SG.NOM) INF beat-INF

(24) Der Zeuge fürchte-te [ _ ge-schlag-en zu werd-en. ]

the: M NOM witness fear-3SG.PAST, PP-beat-PP INF PASS-INF

The witness was afraid of being hit. (lit. The witness feared to be hit)

However, German quirky arguments cannot be controlled in this way. This is shown in sentence (25) in which the dative P of hilfen (see section 4.4.1) occurs sentence initially because of the passive.

(25) * Er/Ihm hoff-t, [ _ ge-holf-en zu werd-en. ]

3SG.M/DAT hope-3SG.PRES PP-help-PP INF PASS-INF

He hoped to be helped. (Zaenen et al. 1985:477)

²For a counter to these views see Barðdal (2002) and Barðdal and Eythórsson (2003) who argue that the syntactic tests in question do, in fact, treat S/A roles bearing quirky case as subjects.
4.4.2.2 Conjunction Reduction

As in English, only the subject of a co-ordinated clause can be deleted when it is identical in reference to the subject of the preceding clause. This is shown in (26) below where only the nominative subject *er* ‘he’ can be interpreted as the agent of the verb *schreien* ‘shouted’. Sentence (27), with a passive, shows that we cannot explain this phenomenon on the basis of semantic roles.

(26) \( Er_i \) hat mich\(_j\) ge-schlag-en und \( _i \), \( _j \) hat ge-schrie-n. \\
3SG.M.NOM has 1SG.ACC PP-beat-PP and has PP-shout-PP
He beat me and shouted.

(27) \( Er_i \) wurde ge-schlag-en und \( _i \), muss-te \( _j \) nach \\
3SG.M.NOM PASS:3SG.PAST PP-beat-PP and must-3SG.PAST to \\
Carthago flieh-en. Carthage flee-INF.
He was beaten and had to flee to Carthage.

When we turn to quirky arguments, we find that they are not eligible to be unrealised under conjunction reduction. This is shown in (28) and (29) which are both ungrammatical unless the material in brackets is included.

(28) \( Ich \) war hungrig und *(mich) hat ge-fror-en. \\
1SG.NOM was hungry and (1SG.ACC) has PP-freeze-PP
I was hungry and cold

(29) \( Mich \) hat ge-fror-en und *(ich) war hungrig. \\
1SG.ACC has PP-freeze-PP and (1SG.NOM) was hungry
I was cold and hungry (Bayer 2004:57)

4.4.2.3 Arguments bearing Quirky Case as Objects?

Furthermore, Bayer (2004) provides evidence from nominalisations that S/A roles with quirky case are not objects either. When a German verb + object, such as (30a) is nominalised, the object is realised either as a genitive, as in (30b) or in a prepositional phrase headed by *von* ‘from, by’, as in (30c).

(30) a. \( Die \) Polizei such-t die Kind-er \\
the:SG.F.NOM police search-3SG.PRES the:PL.ACC childPL
The police are looking for the children.

b. \( Das \) Suchen der Kind-er \\
the:N.NOM searching the:PL.GEN child-PL
The search for the children Bayer (2004:58f)

However, Bayer (2004) claims that a verb preceded by an accusative quirky argument cannot be nominalised in this way. This is shown in the sentences in (31) below with the verb *ekeln* ‘be disgusted’ which takes an accusative S.

(31) a. *Den Artzt ekel-t*
    the:SG.M.ACC doctor disgust-3SG.PRES
    The doctor is disgusted

b. *Das Ekeln des Artzt-es*
    the:N NOM disgust the:M GEN doctor-GEN

c. *Das Ekeln vom Artzt*
    the:N NOM disgust from:DEF.M DAT doctor

Thus it seems that the German quirky arguments are neither subjects nor objects. Zaenen et al. (1985:479) claim that they are OBJ, that is OBJθ, however, they provide no syntactic behaviour that these quirky arguments have in common with OBJθ in favour of this claim. I will not investigate further the precise syntactic role of German quirky arguments, suffice to say they cannot be classified as subjects and do not appear to be objects either.

4.4.3 Summary of German Morphology and Syntax

We have seen in this section that the same two subjecthood tests that can be used to identify the subject in English can be used in the same way in German. We have also seen that these tests consistently pick out a noun bearing nominative case. Finally, we have also seen that while there are a subset of predicates in German that occur with a non-nominitive nominal in what appears to be subject position, these preverbal obliques do not behave syntactically like subjects.

Thus, despite the array of cases we find on German arguments as shown in Table 4.3 when we look at case as assigned to grammatical functions, we find a much neater picture, as shown in Table 4.4

<table>
<thead>
<tr>
<th></th>
<th>NOM</th>
<th>ACC</th>
<th>DAT</th>
<th>GEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJ</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OBJ</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.4: German Grammatical Functions and Case
4.5 Icelandic

Icelandic, like German, has four morphological cases: nominative, accusative, dative and genitive. As in German, the S/A role usually occurs before the verb and bears nominative case. This is shown in sentences (32) and (33) below.

(32) Ég sef.
1SG.NOM sleep:1SG.PRES
I’m sleeping.

(33) Hún sef-ur.
3SG.F.NOM sleep:SG.PRES-3SG.PRES
She’s sleeping

Additionally, it is usually ungrammatical in Icelandic if the noun occurring before the verb bears non-nominative case.

(34) * mig/mér/mín sef
1SG.ACC/DAT/GEN sleep:1SG.PRES

(35) * hana/henni/hennar sef-ur
3SG.F.ACC/DAT/GEN sleep:SG.PRES-3SG

Finally, as in German, accusative case is used for P roles, as shown in sentence (36), and it is usually ungrammatical for these roles to appear in a non-accusative case, as in sentence (37).

(36) Hún sá mig.
3SG.F.NOM see:3SG.PAST 1SG.ACC
She saw me.

(37) * Hún sá ég/mér/mín
3SG.F.NOM see:3SG.PAST 1SG.NOM/DAT/GEN

4.5.1 Quirky Case in Icelandic

Icelandic, like German, has many predicates which select a quirky argument. However, unlike German, quirky arguments are found in all three non-nominative cases and they appear to be much more widespread in the language. Quirky arguments in Icelandic can appear with predicates taking only one argument, as in sentences (38a)-(38c) or with predicates taking two arguments, as in sentences (39a) and (39b). The examples below are taken from Andrews (2001:88).

(38) a. Bát-num hvolf-di.
boat-DEF.DAT capsize-PAST
The boat capsized.
b. **Bát-inn**  *rak*  á land.
   boat:ACC-DEF drift:PAST to land:ACC
   The boat drifted to land

c. **Verk-ja-na**  *gaet-ir*  ekki.
   pain-PL-DEF.GEN be.noticeable-3SG NEG
   The pains aren’t noticeable.

(39) a. **Strák-a-na**  *vant-ar*  mat.
   boy-PL.ACC-DEF lack-3SG food:SG.ACC
   The boys lack food.

b. **Henni**  *hef-ur*  allt af þótt  Ólaf-ur  leiðinlegur.
   3F.SG.DAT have-3SG always find:PP Olaf-NOM boring
   She has always found Olaf boring

In addition to these quirky arguments there are also some verbs in Icelandic which take a non-accusative (either dative or genitive) P, like the German verb *hilfen* ‘help’. When these verbs are passivised, this P retains its case and is found before the verb. This can be seen with the verb *kasta* ‘throw’ in sentence (40) below taken from Andrews (2001:95) which selects a dative P. Similar sentences for verbs with a genitive P could be provided.

(40) a. **Hann**  *kast-aði*  stein-um  í ljósastaur.
   3SG.M.NOM throw-PAST rock-PL.DAT at lightpost:ACC
   He threw rocks at a lightpole

b. **Stein-i-num**  var  kast-að.
   rock-SG.DAT-DEF PASS throw-PP
   The stone was thrown

In Icelandic, each of S, A and P can occur in any of the morphological cases the language possesses. This is summarised in Table 4.5.

<table>
<thead>
<tr>
<th></th>
<th>NOM</th>
<th>ACC</th>
<th>DAT</th>
<th>GEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>A</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>P</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Table 4.5: Quirky Case in Icelandic
4.5.2 The Syntactic Status of Arguments with Quirky Case

Thus we have seen that Icelandic has a similar morphological phenomenon to German: predicates select a nominal in subject position which bears unexpected case marking. However, the syntactic status of the nominals in German and Icelandic is spectacularly different. Starting with [Andrews (1976) Icelandic quirky arguments have been demonstrably shown by a wide variety of authors to be full syntactic subjects. Sigurðsson (2004:4) reports that there are 16 subjecthood tests that are shared between both nominative and non-nominative subjects. However, I will only illustrate the arguments from control and conjunction reduction.

4.5.2.1 Control

As in English and German, only subjects can be controlled, and when controlled, they are not expressed in the subordinate clause. This is shown in sentence (41) taken from (Zaenen et al. 1985:448), with the verb sakna ‘miss’ which takes a nominative subject and a genitive object.

(41) Ég tal-di Guðrún-u (í barnaskap mín-um) [___ sakna
1SG.NOM believe-PAST Gudrun-ACC (in foolishnes my-DAT) miss:INF Harald-ar,]
Harold-GEN
I believed Gudrun (in my foolishness) to miss Harald.

The material í barnaskap mínum ‘in my foolishness’ in the sentence above shows that the nominal Guðrúnu is a constituent of the matrix clause and not the subordinate clause.

Likewise, subjects bearing quirky case can be controlled and are unexpressed in the subordinate clause. This is shown in the sentences in (42) for each possible quirky case. These sentences are taken from Andrews (1982:464).

Vanta ‘lack’ in sentence (42a) takes an accusative subject, batna ‘to recover’ a dative one and geta ‘be noticeable’ a genitive subject. Furthermore, the appearance of the nominative object in sentence (42b) is strong evidence that it is not a subject, as Icelandic subjects are always omitted in infinitive constructions (Andrews 2001:90).

(42) a. Hann tel-ur mig (í barnaskap sín-um) [___ vanta
3SG.M.NOM believe-3SG 1SG.ACC (in foolishnes his-DAT) lack:INF pening-a,]
money-PL.ACC
He believes me (in his foolishness) to lack money.
b. Hann tel-ur __ barn-i-nu (í barnaskap sín-um) [ ]
3SG.M.NOM believe-3SG child-DAT-DEF (in foolishnes his-DAT)

have:INF recover-PP disease-DEF.NOM

He believes the child (in his foolishness) to have recovered from the disease.

c. Hann tel-ur __ verkj-a-nna (í barnaskap sín-um) [ ]
3SG.M.NOM believe-3SG pain-PL-DEF.GEN (in foolishnes his-DAT)
gæta eki.]
lack:INF money-PL.ACC

He believes the pains (in his foolishness) not to be noticeable.

4.5.2.2 Conjunction Reduction

Like in English and German, only subjects of a co-ordinated clause can be left unexpressed when identical to the subject of the previous clause.

This is shown in sentences (43) and (44), from Zaenen et al. (1985:453). Thus sentence (43) below is grammatical. The plural subject þeir ‘they’ is interpreted as subject of the the second clause and agrees with its verb grófu ‘bury’. Sentence (44), on the other hand, is ungrammatical as only the singular subject líkið ‘the corpse’ can be interpreted as the subject of the second clause which contains a verb with plural agreement.

(43) Þeir fluttu lík-ið og grófu það
3PL.M.NOM move:PAST corpse-DEF and bury:PAST-3PL 3SG.N
They moved the corpse and buried it.

(44) * Lík-ið hræd-di þá og grófu það
corps-DEF scare-PAST 3PL.M.ACC and bury:PAST-3PL 3SG.N
The corpse scared them and bury it.

Sentence (45) shows that non-nominative subjects can also participate in conjunction reduction, while sentence (46) shows that the nominative object of these verbs cannot. The verb finnst ‘find’ in the sentences below takes a dative subject and nominative object in the same way as the verb þótt ‘find’ in sentence (39b) does.

(45) Hann segist vera duglegur, en __ finnst verkefni-ð of þung-t.
3SG.M.NOM says be:INF diligent but finds work-DEF too hard-N
He says he is diligent, but finds the homework too hard.

(46) * Hann segist vera duglegur, en mér finnst __ lat-ur.
3SG.M.NOM says be:INF diligent but 1SG.DAT finds lazy-M.NOM
He says he is diligent, but I find [him] lazy.
Thus, from the evidence from conjunction reduction and control, we can conclude that the arguments bearing quirky case in Icelandic are full syntactic subjects, while the nominals which bear nominative case with many of these two argument predicates are objects.

<table>
<thead>
<tr>
<th>GF</th>
<th>NOM</th>
<th>ACC</th>
<th>DAT</th>
<th>GEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Icelandic</td>
<td>SUBJ</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>OBJ</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>German</td>
<td>SUBJ</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>OBJ</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

Table 4.6: Morphology and Syntax in Icelandic and German

### 4.6 Summary

In this chapter we have seen that the morphological and syntactic levels of representation in a particular language do not necessarily reflect one another, though they may.

We have seen that in English the notions of case and grammatical function are not easily pulled apart, as syntactic tests, such as control and conjunction reduction, consistently show that the argument bearing nominative case is the subject.

We have also seen that in German the argument bearing nominative case is treated as the syntactic subject, even among predicates which take an argument which bears quirky case. In German, there is therefore a strong correlation between case and grammatical functions.

Finally, we have seen that Icelandic syntactic tests are not sensitive to the case that an argument bears. Arguments appearing in subject position with quirky case are treated as full syntactic subjects. Thus, in Icelandic, in contrast with German and English, the morphological level of representation does not reflect the syntactic structure of the language.

The differences in the morphological representation of grammatical functions in German and Icelandic are shown in Table 4.6. This table shows that while German has a clear correspondence between case and grammatical function, Icelandic does not.

We can therefore see that when investigating a language, the case an argument bears is not necessarily a good indication of the grammatical function that this argument bears.

Although the phenomenon of quirky case has been extensively investigated - that is the aberrant nominal marking of grammatical functions - it is not widely discussed in the literature whether a similar phenomenon can be found in languages which employ verbal indexation as a morphological means of marking the relationships among various arguments of the clause. We will see that such a phenomenon is indeed found in Tolaki.
Chapter 5

Tolaki Grammar Sketch

5.1 Introduction

To begin the grammar sketch of Tolaki, let us consider the following three sentences:

(1) Kulako. I went. 
(2) Ulako. You went. 
(3) Nolako. He/she/it went.

From these sentences we observe that the verb agrees with the subject of the sentence. However, unlike English, Tolaki is a pro-drop language and each sentence is grammatical with the subject left otherwise unexpressed. Furthermore, Tolaki has a separate affix for each of 1st, 2nd and 3rd person.

Next we will examine the short text in (4).

(4) a. Nolako idaoa nggiro’o anadalo. That child went to the market.
    b. Nopo’oli opundi. He bought a banana.
    c. Nokaa’i. He ate it.
    d. Mbule’ito. He is now home.
    e. Me’ambo pundino. His banana was tasty.

Each sentence of this text is discussed in turn, beginning with sentence (4a).

(4) a. No-lako i-daoa nggiro’o anadalo. 
   3SG-go LOC-market that child
   That child went to the market.
In sentence (4a) we see that the subject *nggiro’o anadalo* ‘that child’ is postverbal. We also see, as in sentence (3), the prefix *no*- occurs agreeing with this subject. Finally, the destination *daoa* ‘market’ is marked with the locative prefix *i*-.

(4) b. *No-po’-oli o-pundi.*  
3SG-INDEF.P-buy CN-pundi.  
He bought a banana.

Sentence (4b) includes two participants. Firstly, we observe that Tolaki is a pro-drop language; the subject ‘that child’ is the same as the previous sentence, however, the agreement prefix *no*- is sufficient to express this information. Secondly we observe that there is a postverbal THEME *opundi* ‘banana’. The prefix *po-* shows that this THEME is indefinite.

(4) c. *No-kaa-’i*  
3SG-eat-3SG  
He ate it.

In sentence (4c) we observe that in addition to agreeing with the subject, the verb can also agree with the THEME as expressed in the suffix -’i. We also see that pro-drop applies to THEME participants as well.

(4) d. *Mbule-’i-to.*  
return.home-3SG-PERF  
He is now at home  
*lit*. He has returned home.

In sentence (4d) we observe that there is a perfect suffix -*to*. Additionally, we see that the verb does *not* agree with the subject by means of the prefix *no-* as in all previous sentences, but rather by means of the suffix -’i; the same suffix that agreed with the THEME in sentence (4c).

(4) e. *Me’ambo pundi-no.*  
good banana-3SG  
His banana was tasty.

Finally in sentence (4e) we observe that the 3SG genitive suffix -*no* occurs on the noun indicating possession.

These sentences show us that a variety of morphological affixes can occur on the Tolaki verb. In addition, we see that the same participant can be encoded with different affixes in different semantic and morphological environments.

In the following section we will discuss in more detail all the morphology observed in (4). I will begin with an outline of the structure of the Tolaki Noun Phrase in section 5.2. In section 5.3 I will give a brief overview of the prepositions we find in Tolaki and finally in section 5.4 I will outline the relevant verbal morphology.
5.2 The Noun Phrase

The Noun phrase in Tolaki is maximally as in (5):

(5) NP → dem N adjP PossP RC
(6) adjP → adj adv
(7) PossP → GEN NP
(8) RC → V NP

I will discuss each of these elements below. In section 5.2.1 I will discuss the noun and its morphology. In section 5.2.2 I will discuss possessive phrases and the genitive suffixes. Finally, in section 5.2.3 I will discuss relative clauses.

5.2.1 Nominal Morphology

5.2.1.1 The Common Noun Prefix

The prefix o-, glossed ‘common noun’ occurs predictably before all two syllable common nouns when they are unmodified by an adjective. Thus in sentence (9) the prefix occurs, as there is no following adjective, while in sentence (10), which is modified thus, this prefix does not occur.

(9) Kadu-‘i-to no-momahe nggiro’o o-more laa
    (m)e-palikuku’ako wuu-no.
    ⟨NFIN⟩INTR-hair.bun-APPL hair-3GEN

That woman was beautiful enough, with her hair rolled into a bun.

(10) laa-‘i-to (m)e-reurehu more momahe.
    PROG-3ABS-PERF ⟨NFIN⟩INTR-sit woman beautiful

The beautiful woman was sitting down (Untung 2009:70)

However, the noun in sentence (11), which is also unmodified does not occur with an initial o- as it is three syllables long.

(11) Lako-no-to te’eni kadue:
    go-3GEN-PERF say dwarf.buffalo

Then the dwarf buffalo said: (Untung 2009:57)

Likewise, compound nouns do not take the o- prefix[1] as such nouns are more than two syllables long.

[1]Orthographically such nouns are usually written with a space between the parts.
(12)  a-to  lako (m)o-hoko  haka-pundi
   and-1IN.NOM go  (NFIN)INDEF.P-dig up root-banana.tree
   we will go and dig up banana tree roots.  \cite{untung2009} 28

   Similarly, when any morphology occurs on the noun that would increase its number
   of syllables above two syllables, the prefix o- does not occur. Such morphology includes
   the genitive suffixes, the locative prefix i- and the adjunct prefix ine. This is shown in
   (13) in which the genitive suffix -nggu occurs on the otherwise two syllable noun.

   (13)  Inaku pundi-nggu  mate-i-to!
      1SG  banana.tree-1GEN die-3ABS-PERF
      [As for] me, my banana tree has died!  \cite{untung2009} 29

   Finally, proper nouns (sentence (14)) and vocatives (sentence (15)) never take the
   prefix o-. Proper nouns can be preceded by the prefix i-, no matter their length, to
   indicate politeness. This is shown in sentence (14b).

   (14)  a.  No-leu  Ali
       3GEN-come Ali

   b.  Noleu  i Ali
       No-leu  i-Ali
       3GEN-come PN-Ali
       Ali arrived.

   (15)  A-u-to  petuha,  hada?
      and-2NOM-PERF descend, monkey
      Will you come down now, monkey?  \cite{untung2009} 30

5.2.1.2  Adjunct Prefixes

There are three prefixes which introduce nouns with a variety of semantic roles. These
prefixes are i-, ine= and kei=.

   The prefix i- is used for nouns which have a general locative function, indicating
   where an event took place. This is shown in sentence (16). With verbs of motion this
   prefix can also indicate a goal, as in sentence (17).

   (16)  lakonoto  lako mo'inu  i'aalaa.
       lako-no-to  lako (m)o-inu  i-aalaa
       go-3GEN-PERF go  (NFIN)INDEF.P-drink LOC-aalaa
       Then he went and drank at the river

   (17)  lako peluarako  i-pamba-laika
       go  exit  LOC-side-house
       [I] went outside to the side of the house
The prefixes *ine* and *kei* are in complementary distribution. *kei* is used with proper nouns and pronouns, while *ine* is used for common nouns. These prefixes are used with nouns which have a wide range of semantic roles, including (but not limited to) goal (18), source (19), accompaniment (20) and topic (21). It is also used to introduce the agent in main clause passives (see section 5.4.4.1.1 example (94)).

(18) *No-pe-wiso inebiri-no toono.*
3NOM-INTR-enter ADJCT.CN=ear-3GEN person
It goes inside someone’s ear.

(19) *Kupepokonda’u mombetolaki kei i Darmin.*
Ku-pe-pokonda’u ⟨m⟩O-N-pe-tolaki kei=i-Darmin.
1NOM-INTR-learn ⟨NFIN⟩INDEF.P-INTR-tolaki ADJCT.PN=LOC-Darmin
I learnt to speak Tolaki from Darmin.

(20) *Ari’aku-to lako i-Bau-bau ine=banggona-nggu.*
COmPL.1 ABS-PERF go LOC-Bau-bau ADJCT.CN=friend-1GEN
I’ve already been to Bau-bau with my friends.

(21) *Ki’onggo moburi onango tekono ine kolele.*
Ki-onggo ⟨m⟩o-buri o-nango tekono ine=kolele.
1EX.NOM-FUT ⟨NFIN⟩INDEF.P-write CN-tale concern ADJCT.CN=exam
We’re going to write a story about animals. (Stepanus 2006:54)

There is some overlap between the use of *kei/ine* and the general locative prefix *i-* in that both can be used for noun phrases with a goal semantic role. Additionally, there do appear to be some locative uses of *kei/ine*, but these are comparatively rare, one example is given in (22) below.

(22) *Ro’onggo mbowangu masigi ine wuta ni’inono.*
Ro-onggo ⟨m⟩o-wangu masigi ine=wuta ni’inono
3NSG.NOM-FUT ⟨PL⟩INDEF.P-go.up mosque ADJCT.CN=ground this
They’re going to build a mosque on this piece of land (Stepanus 2006:55)

5.2.2 Possessive Phrase

The Tolaki possessive phrase has the structure as in (23):

(23) PossP → GEN NP

GEN is filled by any of the genitive suffixes shown in table 5.1. Two examples are given in (24) and (25).
Table 5.1: Genitive Suffixes

<table>
<thead>
<tr>
<th></th>
<th>NSG</th>
</tr>
</thead>
<tbody>
<tr>
<td>1EX</td>
<td>-nggu</td>
</tr>
<tr>
<td>1IN</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>-mu</td>
</tr>
<tr>
<td>3</td>
<td>-no</td>
</tr>
</tbody>
</table>

To translate the equivalent of ‘have’, Tolaki introduces the possessed NP with existential *laa* ‘there is’ or the negative existential (*ta*)mbuiki/*(ta*)mbuoki ‘there isn’t’.

(24) *Inono gondi-mu*.  
this scissors-2GEN  
These are your scissors

(25) *Inono banggona-no ama-nggu*.  
this friend-3GEN father-1GEN  
This is my father’s friend.

(26) *Laa *otolu kaaka-nggu, tambuoki hai-nggu*.  
EXIST three eSi-1GEN, NEG.EXIST ySi-1GEN  
I have three older siblings, and no younger siblings.  
lit. There are three older siblings of mine, there are not younger siblings of mine.

As indicated in the phrase structure rules in (5), these genitive suffixes occur after any adjective modifying the noun. This is shown in (27).

(27) *Laa-’i banggona mohewu-nggu ⟨m⟩e-tamo ‘i-Aril Mokapa’*.  
EXIST-3ABS friend small-1GEN ⟨NFIN⟩INTR-name PN-Aril thick  
I have a small friend named ‘thick Aril’

5.2.3 Relative Clauses

Relative clauses in Tolaki occur after the head noun they modify. There are no affixes indexing the relativised noun and when possible the verb occurs in the non-finite form (see section 5.4.2).

An example of a relative clause with an active verb is given in (28), and an example with a passive verb in (29). As shown by (29), the A of passive relative clauses can be included with genitive suffixes (see section 5.4.4.1.1).
(28) *Ku-kokolea-’i* [\textsubscript{NP} hai-nggu [\textsubscript{RC} t(um)idu-’aku.]]
1NOM-annoy-3abs ySi-1GEN ⟨NFIN⟩punch-1ABS
I annoy my younger brother who punched me.

(29) *Ku-tidu-’i* [\textsubscript{NP} hai-nggu [\textsubscript{RC} k(in)okolea-nggu.]]
1NOM-punch-3ABS ySi-1GEN ⟨PASS⟩annoy-1GEN
I punched my younger brother whom I annoy.

lit. I punched my younger brother who is annoyed by me.

When the relativised noun is not specific, the first syllable of the relative clause is reduplicated to indicate this. If the first word of such a relative clause is only two syllables long, both are reduplicated. Two examples are given in (30) and (31) below.

(30) *Laa* toono ikita ku~k(um)ti-’aku.
EXIST person there NSPEC.RC~⟨NFIN⟩see-1ABS.
There are some people over there looking at me.

(31) *Ku’ari* monggaa momokomohaki’ikona
Ku-ari ⟨m)oN-kaa mo~⟨m)oko-mohaki-i-kona
1NOM-COMPL ⟨NFIN⟩INDEF.P-kaa NSPEC.RC~⟨NFIN⟩CAUS-hurt-3ABS-1DAT

stomach-1GEN.

I ate something which makes my stomach hurt.

Such reduplicated relative clauses are also used with a superlative meaning.

(32) *Rombendolu.* Inae momomahe?
Ro-mbeN-tolu. Inae mo~momahe?
3NSG.NOM-PL-three. Who NSPEC.RC~beautiful?
There are three of them. Who’s the most beautiful?

lit. They are three. Whoever [of them] is beautiful?

Relative clauses can also be headless, most commonly this occurs when the relativised referent is non-specific. This is shown in (33) below.

(33) *Nggo-nggo* monggaa kaluku, mowohu’ito.
Nggo-nggo ⟨m)oN-kaa kaluku, mowohu-’i-to
NSPEC.RC-FUT ⟨NFIN⟩INDEF.P-eat coconut, full-3ABS-PERF

Whoever eats coconut, will become full.

There are thus two strategies for relativising a noun in Tolaki. When the relativised noun is specific it occurs before the relative clause, there are no affixes indexing it and the verb is in the non-finite form when possible. In addition, when the relativised participant is non-specific the first syllable of the relative clause is reduplicated.
5.3 Prepositions

The structure of the prepositional phrase in Tolaki is given in (34).

(34) PP → Prep NP

I know of three prepositions in Tolaki *ari* ‘from’, *ronga* ‘with’ and *sambe* ‘until’.

Ari is used with to indicate a source. The noun phrase with which it combines is optionally, though not obligatorily, case marked with *kei/ine*, or in the case of physical locations *i*-. Two examples are given in (35) and (36).

(35) Kupepokonda'u mombetolaki ari kei i Darmin.
    Ku-pe-pokonda'u ⟨m⟩oN-pe-tolaki ari kei=i-Darmin.
    1NOM-INTR-learn ⟨NFIN⟩INDEF.P-INTR-tolaki from ADJCT.PN=LOC-Darmin
    I learnt to speak Tolaki from Darmin.

(36) Leu-aku-to ari i-daoa.
    come-1ABS-PERF from LOC-market.
    I’ve just arrived from the market.

In the case of *ronga* some speakers do not allow it to be combined with *kei/ine*, as in sentence (37), while some speakers do, as in sentence (38).

(37) *Ari-aku-to lako i-Bau-bau ronga kei=i-Wawan.
    COMPL-1ABS-PERF go LOC-Bau-bau with ADJCT.PN=PN-Wawan
    I’ve already been to Bau-bau with Wawan.

(38) onggo ⟨m⟩e-foto bara ronga kei=inggomiu.
    FUT ⟨NFIN⟩INTR-photo QUOT with ADJCT.PN=2POL
    [they say they] want to take photos with you.

Finally, the preposition *sambe* ‘until’ is most commonly used with a temporal meaning, in which case it does not co-occur with *kei/ine*, as in sentence (39). However, this preposition also has a spatial use, in which case it combines with the locative prefix *i*-.

(39) Lakongguto me'indio ikandoro sambe langgu o'aso.
    lako-nggu-to ⟨m⟩e-indio i-kandoro sambe langgu o'aso
    go-1GEN-PERF ⟨NFIN⟩INTR-work LOC-office until o’clock one.
    Then I worked in my office until one o’clock.

(40) No-laa luma-lumango sambe i-pulo.
    3NOM-PROG REDUP-swim until LOC-island
    He was swimming around until [he got to] the island

\(^2\)A borrowing from Malay *sampai*. 
5.4 Verbs

In this section I will provide an outline of some basic aspects of Tolaki verbal morphology which will greatly aid the reader in understanding much of the discussion that will follow. In section 5.4.1 I will demonstrate that Tolaki has four sets of affixes for indexing arguments of a verb. These consist of nominative prefixes, absolutive suffixes, dative suffixes and genitive suffixes. In section 5.4.2 I will illustrate the behaviour of Tolaki non-finite verbal forms. In section 5.4.3 I will illustrate the behaviour of the indefinite prefix $poN$-. In section 5.4.4 I will demonstrate that Tolaki has a variety of affixes which can be used for various argument structure operations. We will discover that Tolaki has a passive affix, two detransitivising prefixes, three causative prefixes as well as an applicative suffix.

5.4.1 Affixes for indexing verbal arguments

In this section I will illustrate the rich set of prefixes and suffixes that are available for a Tolaki verb to index its various arguments. Four sets of such affixes are found in Tolaki. There are nominative prefixes which can be used for indexing the A of a transitive verb or the S of an intransitive verb in certain circumstances. There are absolutive suffixes which can be used to index any of A, S or P under certain circumstances. There are genitive suffixes which are typically used on nouns to indicate possession, but which can be used to index A or S roles in certain situations. Lastly, there are dative suffixes which can be used to index arguments of a variety of roles.

The use of these affixes is very similar to that of free pronouns in a language like English, and indeed, while Tolaki does have a full set of free pronouns, these affixes appear to be in complementary distribution with them. If a free pronoun occurs to reference an argument, these affixes are not used. For this reason I talk about ‘indexation’ rather than ‘agreement’.

These affixes agree with the person and number features of the argument they index. The category person in Tolaki is best decomposed into the binary features ±SPEAKER and ±ADDRESSEE. This description is helpful as it illuminates the fact that both the +AD plural forms can be used for polite address3. Furthermore, concerning the category number, arguments are best described as either having the feature -SINGULAR specified, or having no feature specified. This description is preferable as when a non-human referent is indexed the ‘singular’ form is used unless there is separate explicit specification that there is more than one referent4. The label names used in this thesis for person

---

3What determines the choice between the ±SP forms in this situation is not clear. I suspect it is subject to dialectal variation.

4For a human referent consisting of more than one person, the NSG forms are always used regardless of separate specification of this fact (Mead 1998:280). This is not the only aspect of Tolaki morpho-syntax sensitive to the ±HUMAN distinction.
and number categories, as defined by the features described here, are given in table 5.2. Glosses with no number specified can be assumed to be SG.

<table>
<thead>
<tr>
<th></th>
<th>SG</th>
<th>-SG</th>
</tr>
</thead>
<tbody>
<tr>
<td>+SP</td>
<td>-AD</td>
<td>1</td>
</tr>
<tr>
<td>+SP</td>
<td>+AD</td>
<td>1</td>
</tr>
<tr>
<td>-SP</td>
<td>+AD</td>
<td>2</td>
</tr>
<tr>
<td>-SP</td>
<td>-AD</td>
<td>3</td>
</tr>
</tbody>
</table>

Table 5.2: Features for Person and Number in Tolaki

5.4.1.1 Nominative Prefixes

<table>
<thead>
<tr>
<th></th>
<th>NSG</th>
</tr>
</thead>
<tbody>
<tr>
<td>1EX</td>
<td>ku-</td>
</tr>
<tr>
<td>1IN</td>
<td>ki-</td>
</tr>
<tr>
<td>2</td>
<td>to-</td>
</tr>
<tr>
<td>3</td>
<td>u-</td>
</tr>
<tr>
<td></td>
<td>i-</td>
</tr>
<tr>
<td></td>
<td>no-</td>
</tr>
<tr>
<td></td>
<td>ro-</td>
</tr>
</tbody>
</table>

Table 5.3: Nominative Prefixes

The full set of nominative prefixes found in Tolaki is illustrated in table 5.3. These can be used to index the S of an intransitive verb or the A of a transitive verb.

Examples (41)-(43) illustrate arguments of an intransitive verb which bear differing semantic roles being indexed by nominative prefixes. The semantic roles are AGENT, THEME and PATIENT respectively.

(41) Kulako i'aa homa.
     Ku-lako i-aa-homa.
     1NOM-go LOC-area-forest
     I went to the forest.

(42) No-mo'ahi o'-ika.
     3NOM-salty CN-fish
     The fish is salty.

(43) No-mate masina.
     3NOM-die engine.
     The engine died.
Furthermore these prefixes can index the A of a transitive verb. This is illustrated in example (44) with an AGENT and in example (45) where the A is an EXPERIENCER.

(44) **Ku-soro-’i** oto-nggu.
1 NOM-push-3ABS car-1 GEN
I pushed my car

(45) **Hu-penasa-’i,** no-leu.
1 NOM-feel-3ABS 3 NOM-come
I feel/sense [that] he’s arrived.

Although these indexers have been called prefixes, in certain environments they do not occur prefixed to the verb. When the verb occurs after the conjunctions *ke* ‘if/when’ or *a* ‘and/so’, or if the sentence is negated using *oki*, the prefix is attracted forwards and is suffixed onto the conjunction forming a phonological word with it, as defined by stress placement. This is illustrated in examples (46)-(48) below, in which the prefix has been attracted forwards, altering the stress pattern of the previous word as well as the verb. Stress in Tolaki falls on the penultimate syllable of a word. Secondary stress is then assigned from right to left to every second syllable. Primary stress in the examples below is indicated with an acute accent and secondary stress with a grave accent.

(46) a. *No-máte masína, a kù-petúha to-óna.*
3 NOM-die engine and 1 NOM-descend PERF-then
b. **No-máte masína, á-ku petúha to-óna.**
3 NOM-die engine and-1 NOM descend PERF-then
The engine died so (then) I got out.

(47) a. *Ke ü-mbúle i-kambó-mu, iámo kolùpe-’áku.*
if 2 NOM-return LOC-village-2 GEN don’t forget-1 ABS
b. **Ké-u mbúle i-kambó-mu, iámo kolùpe-’áku.**
if-2 NOM return LOC-village-2 GEN don’t forget-1 ABS
When you return to your village don’t forget me.

(48) a. *Óki nò-kií-’i inóno o-mánu.*
NEG 3 NOM-see-3 abs this CN-chicken
b. **Okí-no kií-’i inóno o-mánu.**
NEG-3 NOM see-3 abs this CN-chicken
He didn’t see this chicken.

This concludes the sketch of nominative prefixes in Tolaki. We have seen that nominative prefixes can index the S of an intransitive verb as well as the A of a transitive verb. Furthermore, we have seen that the prefixes are attracted forward as suffixes when certain clause initial conjunctions occur, two common examples being *ke* ‘if’ and *a*- ‘and, so that’.
5.4.1.2 Absolutive Suffixes

<table>
<thead>
<tr>
<th></th>
<th>NSG</th>
</tr>
</thead>
<tbody>
<tr>
<td>1EX</td>
<td>-aku</td>
</tr>
<tr>
<td>1IN</td>
<td>-keito</td>
</tr>
<tr>
<td>2</td>
<td>-ko</td>
</tr>
<tr>
<td>3</td>
<td>-i</td>
</tr>
<tr>
<td>(-e, -o)</td>
<td>(-ero, -oro)</td>
</tr>
</tbody>
</table>

Table 5.4: Absolutive Suffixes

Tolaki also has a set of verbal suffixes which can be used to index any of the roles S, P and A. These absolutive suffixes are listed in table 5.4.

The 3rd person absolutive suffix is realised as -i or -e when the verb ends in a non-high vowel (/a/, /e/ and /o/) and as -i or -o after the high vowels /i/ and /u/. In my data the -e and -o variants are extremely rare, occurring only once each. I know of the 3NSG variants -ero and -oro only from Mead (1998:140).

Example (49) illustrates an absolutive suffix indexing an S which is the PATIENT of an intransitive verb while example (50) illustrates an absolutive suffix indexing the an S which is the AGENT of an intransitive verb.

(49) Mate-’i-to.
     die-3ABS-PERF
     He’s died.

(50) Dunggu-’aku-to   i-laika-nggu.
     arrive-1ABS-PERF LOC-house-1GEN
     I’ve arrived home.

Sentence (51) illustrates the absolutive suffix indexing the PATIENT P of a transitive verb (see example (44) for an example of a THEME indexed likewise). Examples (52) and (53) illustrate indexation of the A of a transitive verb with an absolutive suffix.

(51) *iamo sumbele-’i   nggitu’o o-manu!*
     don’t slaughter-3ABS that   CN-chicken!
     Don’t kill that chicken!

(52) ⟨M⟩o-dapa-keito-to   o-sala!
     (NFIN)INDEF.P-find-1IN.ABS-PERF CN-way!
     We’ve found a way (out)!
Do you normally eat sanggara?

As a final complication it is possible for both the A and P of a transitive verb to be indexed by an ABS suffix if an auxiliary verb is present. If this occurs the A is indexed on the auxiliary, while the P is indexed on the main verb. This is exemplified by sentence (54) in which the A and P bear different person features, which is then reflected in their differing indexation.

(54) Ari-ko-to  
COMPL-2ABS-PERF ⟨NFIN⟩-eat-3ABS?
Have you eaten it?

The observant reader will notice the strong correlation between the occurrence of absolutive indexation for the A and S and the occurrence of the suffix -to, with the sole exception of (53). This correlation is not accidental. When one of the aspectual suffixes -to ‘perfect’, -ki, ‘confirmative’-kaa ‘durative’ or -po ‘imperfective’ occurs, it is obligatory to index any S or A role with an absolutive or genitive suffix. This analysis explains why double absolutive marking is only found in clauses with an auxilliary, such as sentence (54) above. Only these clauses have two suffixal slots available; one on the auxiliary for the A and one on the main verb for the P.

Finally, while the absolutive indexers have been termed ‘suffixes’, it should be noted that various ‘adverbial’ material can occur between them and the verb. This is illustrated in sentence (55) below in which mendua occurs in this position.

(55) . . . ninggiro a-ku  
later and-1NOM talipo mendua-ko.
. . . phone again-2ABS
. . . I’ll call you back later today.

This concludes the sketch of absolutive suffixes in Tolaki. We have seen that they can be used to index the S of an intransitive verb as well as to index either the A or P of an intransitive verb. Furthermore, we have seen that if an auxiliary is present, they can index both arguments of a transitive verb.

5.4.1.3 Genitive Suffixes

The Tolaki genitive suffixes are repeated below in table 5.5. We have already seen in section 5.2.2 that their most common function is to indicate possession of a nominal.

5Confirmative is the aspect used to check whether a certain state of affairs still holds, or to assert that it does hold.
However these suffixes can also be used to index verbal arguments in a variety of situations.

One of these situations is to index the agent of a passive relativised verb. This is discussed further in section 5.4.4.1.1.

Another use of these suffixes is when there is a dependent temporal relationship between two clauses; the clause with genitive indexation being temporally dependent on the other for its time reference. Such genitive indexation is obligatory when the prefix sa- occurs, though it can occur without it. Examples (56) and (57) illustrate the indexation of an S and A respectively when the sa- prefix occurs. Example (58) illustrates genitive indexation without this prefix.

(56) Saponggiimami nggitu'o laika, note'eni i Omar: . . .
Sa-poN-kii-mami nggitu'o laika, no-te'eni i-Omar
GER-INDEF.P-see-1EX.GEN that house, 3NOM-say PN-Omar
When we had seen that house, Omar said: . . .

(57) Laa hula mondonga o-daa sambe tolu daa, butu-mami-to exist maybe half CN-hour until three hour, return1EX.GEN-PERF
i-Baho.
LOC-Baho.
Reaching Baho island, it was maybe 2:30 (lit. There was maybe half an hour until 3:00, having reached Baho.)

(58) Laa-nggu ⟨um⟩ii k(um)ii kii inono uwato, no-leu o'-ule.
PROG-1GEN ⟨NFIN⟩-REDUP-see this grub, 3NOM-come CN-snake.
while I was having a look at this grub, a snake arrived.

Another common use of genitive indexation is to index a verbal argument with the semantic role of EXPERIENCER. This most commonly occurs with the desiderative prefix moko- though is not restricted to it. Example (59) illustrates a simple use without the moko- prefix, (60) illustrates this prefix deriving an experiential predicate from a

<table>
<thead>
<tr>
<th></th>
<th>EX</th>
<th>NSG</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-nggu</td>
<td>-mami</td>
</tr>
<tr>
<td>1IN</td>
<td>-ndo</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>-mu</td>
<td>-miu</td>
</tr>
<tr>
<td>3</td>
<td>-no</td>
<td>-ro</td>
</tr>
</tbody>
</table>

Table 5.5: Genitive Suffixes

---

51

---

6Whether all such verbs are in fact nominalised will not be discussed here. The relevant observation is simply that genitive indexation can occur on verbal like predicates.
verb and example (61) illustrates a predicate which is not known to occur without the
desiderative prefix. In all cases genitive indexation is employed.

(59)  Mokula-nggu  pake-'i  inono  o-babu.
      hot-1GEN  use  this  CN-shirt
I’m hot (when) wearing this shirt.

(60)  Mokombo’inunggu  okopi.
      MokoN-po'-inu-nggu  o-kopi.
      DESID-INDEF.P-drink-1GEN  CN-coffee.
I feel like drinking (some) coffee.

(61)  Moko’au-mu?
      miss-2GEN
Are you homesick?/Do you miss (home)?

With all such predicates, nominative indexation of the S also occurs under certain
circumstances. One situation in which this occurs is when the suffixal slot is already
occupied. An example of this is sentence (62) below, in which the thing missed is
indexed with a dative suffix.

(62)  Nomoko’aunggo’oto  anamu.
      No-moko’auN-ko'o-to  ana-mu.
      3NOM-miss-2DAT-PERF  child-2GEN.
Your daughter’s been missing you.

Finally, many of these predicates with an experiencer S can occur with either nom-
inative or genitive indexation. While the predicate in both (63) and (64) below is the
same, the meanings are different, though clearly related.

(63)  Ku-mokula
      1NOM-hot
I’m angry.

(64)  Mokula-nggu
      hot-1GEN
I feel hot

In this section we have seen that it is possible to use genitive suffixes to index an
A or S when the event in which it is a participant occurs in a dependent temporal re-
lationship with another. We have also seen that genitive suffixes can be used to index
an EXPERIENCER S of a predicate, in which case they can also vary with nominative
prefixes. The occurrence of nominative prefixes rather than genitive suffixes is partially
morpho-syntactically determined.
5.4.1.4 Dative Suffixes

In this section we will investigate the fourth set of verbal indexation affixes found in Tolaki. These are dative suffixes. Because these suffixes are used to index a wide variety of non-subject participants in Tolaki, we will investigate them in some detail. In section 5.4.1.4.1 we will investigate the formal realisation of the dative suffixes. In section 5.4.1.4.2 we will investigate the historical origin of the dative suffixes. We will see that they arose out of a collapse of the Proto-Bungku-Tolaki applicative suffix *ako with a following absolutive suffix. Finally, in section 5.4.1.4.3 we will investigate perhaps the most common use of the dative suffixes, that is to index beneficiaries and recipients.

5.4.1.4.1 Form

The Tolaki datives are formally realised by a set of verbal suffixes which index the person and number of the dative argument. The forms of these suffixes are given in Table 5.6. Two variants of the 3NSG dative suffix exist: -keero and -kehero.

<table>
<thead>
<tr>
<th></th>
<th>SG</th>
<th>NSG</th>
</tr>
</thead>
<tbody>
<tr>
<td>1EX</td>
<td>-kona</td>
<td>-komami</td>
</tr>
<tr>
<td>1IN</td>
<td></td>
<td>-keito</td>
</tr>
<tr>
<td>2</td>
<td>-ko'o</td>
<td>-komiu</td>
</tr>
<tr>
<td>3</td>
<td>-kee</td>
<td>-ke(h)ero</td>
</tr>
</tbody>
</table>

Table 5.6: Dative Suffixes

After some verbal stems these suffixes have allomorphs beginning with the prenasalised stop -ngg rather than -k. In my data, some stems occur only with prenasalised allomorphs (such as te'eni ‘say’), some stems never occur with prenasalised allomorphs (such as to'ori ‘know’) and some stems show dialectal or even idiolectal variation (such as powai ‘make, do’).

5.4.1.4.2 Origin

Mead (1998:207ff) proposes that the dative suffixes found in many of the Bungku-Tolaki languages (including Tolaki) arose from a merger of the Proto-Bungku-Tolaki (PBT) suffix *ako (from earlier *aken) with a following PBT absolutive suffix. The forms he reconstructs for PBT are given in table 5.7 in the ‘Reconstruction’ column. Two variants are reconstructed for the 1SG of which the form *ako-(ko)na is the origin of Tolaki -kona. This form, which does not arise out of a regular combination of PBT *-ako + 1SG absolutive suffix, also finds reflexes in the Mori languages, and is thus reconstructed to the PBT stage. Mead (1998) states that it is “an old form of unknown

---

3This -ako suffix still exists in Tolaki independently of the dative suffixes as an instrumental applicative suffix.
and speculates that it may be the original PBT form, with the form *-ako-aku representing a later analogical formation. The form *-ako-(ko)na thus represents an early irregularity on the paradigm.

Mead (1998:210) proposes that the following sound changes took place resulting in the modern Tolaki forms:

- the loss of initial *a, [...] the second of two consecutive *k’s always weakened to glottal, and sometimes further to zero [...] and the fronting of final *o of *ako when immediately followed by a front vowel (or only glottal intervening).

These sound changes yield the dative suffixes we find in Tolaki for only three of the seven forms. Where the expected reflex does not correspond to the one found, this is additionally listed in table 5.7 in the ‘Expected’ column.

Cross paradigmatic analogy has also further modified the expected variants. The 1EX and 2NSG forms are identical to the corresponding absolutive suffixes -komami and -komiu and we can presume that they are the result of interference or paradigmatic borrowing. Furthermore, it is possible that the optional h of the 3PL form is due to influence of the free pronoun ihiro. Finally, the lack of n in the 3SG form is not unique to Tolaki but is also found in the Mori language area including Watu-Karunsi’e ke’e, and Padoe and Mori Atas -akeo (Mead 1998:209), and thus reflects another early irregularity in the paradigm found only in Tolaki and the Mori languages.

Thus, this historical account can successfully explain the form of the Tolaki dative suffixes. However, these dative suffixes are now used in Tolaki in a variety of ways, only one of which Mead (1998:244) proposes as a use of PBT *ako+PRONOUN.

He does, however, note that some authors have drawn a connections between it and 1SG forms na and ne found in the Kaili-Pamona languages Napu and Sedoa respectively.

---

Table 5.7: PBT Dative Suffixes and their Reflexes in Tolaki

<table>
<thead>
<tr>
<th></th>
<th>Reconstruction</th>
<th>Expected</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>1SG</td>
<td>*ako-aku, *ako-(ko)na</td>
<td>**kene</td>
<td>-kona</td>
</tr>
<tr>
<td>2SG</td>
<td>*ako-ko</td>
<td>**ko'ami</td>
<td>-ko'o</td>
</tr>
<tr>
<td>3SG</td>
<td>*akon-io</td>
<td>-kee</td>
<td></td>
</tr>
<tr>
<td>1EX</td>
<td>*ako-kami</td>
<td>-komami</td>
<td></td>
</tr>
<tr>
<td>1IN</td>
<td>*ako-kita</td>
<td>-keito</td>
<td></td>
</tr>
<tr>
<td>2NSG</td>
<td>*ako-komiu</td>
<td>**ko'omi</td>
<td>-komiu</td>
</tr>
<tr>
<td>3NSG</td>
<td>*ako-ira</td>
<td>**keiro</td>
<td>-ke(h)ero</td>
</tr>
</tbody>
</table>

---

54
5.4.1.4.3 **Beneficiary and Recipient** One of the main uses of the dative in Tolaki is to index an argument for whose benefit an action is performed. Such a use is illustrated in sentences (65) and (66) below.

(65) *Kuposusuanggee banggonanggu.*
*Ku-po-susu*N-*kee banggona-nggu.*
1 NOM-INDEF.P-sing-3DAT friend-1GEN
I sang for my friend.

(66) *Ku-tidu-‘i-ko’o.*
1 NOM-punch-3ABS-2DAT.
I’ll punch him for you/I’ll get him (back) for you.

The dative suffixes can also be used to index the **RECIPIENT** of a variety of verbs including *wee* ‘give’ and *mo’oluwi/mo’oliwi* ‘send’ as shown in sentences (67) and (68) below.

(67) *Ku-wee-‘i-ko’o haape-nggu.*
1 NOM-give-3ABS-2DAT mobile.phone-1GEN
I gave my mobile phone to you.

(68) *Ku-oluwi-‘i-ko’o haape-nggu.*
1 NOM-send-3ABS-2DAT mobile.phone-1GEN
I sent my mobile phone to you.

Both these sentences with a **RECIPIENT** dative are structurally identical to those with a **BENEFICIARY** dative, having the structure shown in (69).

(69) verb-ABS-DAT

For this reason, I propose that both the **BENEFICIARY** and **RECIPIENT** uses of the dative are indeed identical and do not comprise separate uses. Sentences such as (70) in which the dative participant is not clearly a **BENEFICIARY** or **RECIPIENT** also provide evidence that this is the case.

(70) *Ale-‘i-kona peanihi!*
get-3ABS-1DAT salt
Get me the salt/Get the salt for me!

However, the distinction between the semantic roles **BENEFICIARY** and **RECIPIENT** is still relevant for the grammar of Tolaki. For the verb *wee* ‘give’, we find that, in addition to the coding of participants illustrated in (67), we also find that the **THEME** can be unindexed and the **RECIPIENT** indexed with an absolutive suffix. When this is the case, the verb unexpectedly takes the prefix *poN*- This is illustrated as in sentence (71) below.
Participants with the role BENEFICIARY cannot be similarly indexed on the verb.

The reason for the two different coding strategies for the RECIPIENT, is that the verb wee has two different argument structures. The RECIPIENT is either subcategorised for, as in (72), in which case it is encoded as an object, or it is not subcategorised, in which case it is encoded in the same way as a non-subcategorised for BENEFICIARY, as in (73).

(72) ‘wee⟨AGT, REC, THM⟩’

(73) ‘wee⟨AGT, THM⟩REC’

5.4.1.5 Summary of Person indexing Affixes

Thus we have seen that Tolaki has four sets of affixes for indexing verbal arguments. These four sets and the arguments they can index are summarised in table 5.8. This does not show the conditions under which certain indexation strategies are acceptable. We have seen that the A can be indexed with ABS suffixes if an auxiliary verb is present and that the A or S can be indexed with GEN suffixes in certain temporal constructions. In other situations the A is indexed with NOM prefixes. We have also seen that the P can be indexed with dative suffixes with a certain class of verbs. Either ABS or NOM affixes can be used to index the S.

<table>
<thead>
<tr>
<th></th>
<th>NOM</th>
<th>ABS</th>
<th>GEN</th>
<th>DAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>A</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>P</td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

Table 5.8: Tolaki Verbal Argument Indexation Strategies

5.4.2 The Non-Finite Verbal Form

In this section I will discuss the use and forms of the Tolaki non-finite verb. Mead ([1998: 290ff] labels these verb forms ‘participles’. However I do not follow this convention as, while some uses of these verb forms do correspond to a ‘participle’, there are many uses which do not.

I have chosen the term ‘non-finite’ as these verb forms are used when the verb has no nominative prefixes, a usage comparable to the traditional definition of non-finite provided by Matthews [2007:139]: a verb not inflected for person or number.

9For Tolaki the definition would be ‘A verb not inflected nominatively for person or number’
5.4.2.1 Phonological Form

The non-finite forms of a variety of verbal stems with different phonological shapes are given in table [5.9] below.

<table>
<thead>
<tr>
<th>Environment</th>
<th>Basic</th>
<th>Non-finite</th>
</tr>
</thead>
<tbody>
<tr>
<td>C initial stem</td>
<td>kaa</td>
<td>kumaa ‘eat/bite’</td>
</tr>
<tr>
<td>V initial stem</td>
<td>inu</td>
<td>uminu ‘drink’</td>
</tr>
<tr>
<td>Bilabial C initial stem</td>
<td>baho</td>
<td>baho ‘bathe’</td>
</tr>
<tr>
<td>/p/ initial prefix</td>
<td>pe-baho</td>
<td>mebaho ‘bathe’</td>
</tr>
<tr>
<td>poN-kaa</td>
<td>monggaa</td>
<td>‘eat/bite’</td>
</tr>
</tbody>
</table>

Table 5.9: Non-Finite Verb Forms

If the stem begins with a bilabial consonant (/p/, /mb/, /b/, /m/ or /w/) the non-finite form is identical to the basic form. If the stem begins with any other segment, the non-finite form is marked with the affix -um immediately before the first vowel of the stem: a prefix for V initial stems and an infix for C initial stems. This relatively straightforward situation is complicated by stems which already have a prefix. If this prefix begins with a /p/ the non-finite form is realised by replacing this /p/ with an /m/. If the prefix begins with any other consonant the non-finite form is identical to the finite form.

In (74) below, I have characterised the Tolaki non-finite forms under a process-based framework after Anderson (1992). Verbs are considered specified for the binary feature ±FIN.

(74)  a. /p/ → /m/ \#\_\_\_√ROOT\# [-FIN]
    b. (C-bilabial)V → (C)umV \#\_\_\_ [-FIN]

(74a) states that if a /p/ occurs before the verb root but as a part of the word (i.e. as a prefix) of a verb bearing the feature -FIN, it becomes /m/. (74b) states that the phonological sequence /um/ is added before the initial vowel of a word with the feature -FIN if that word does not begin with a bilabial consonant. Because the environments of the two processes are mutually exclusive, the processes can be left unordered and forms such as *mumonggaa are still prevented from occurring.

There are in Tolaki a number of verbs in which the phonological sequence pe- or po- occurs as part of the stem. Thus for instance we find the verbs penggokoro ‘stand’ and pererehu ‘sit’, but no corresponding *nggokoro/*kokoro or *rerehu. Likewise we find the verb stems podea ‘hear’ and pongoni ‘beg; request’ but no corresponding *dea or *ngoni.

57
Even though this ‘prefix’ can be demonstrated to be synchronically part of the stem, i.e. through the addition of other productive morphology\(^{10}\) such as the indefinite prefix poN- for transitive verbs (i.e. *pombodea*), or a causative prefix, these ‘prefixes’ are still treated like this for the purpose of deriving the non-finite forms of the verbs. Thus we find the non-finite forms *menggokoro, mererehu, modea*\(^{11}\) and *mongoni*.

### 5.4.2.2 Verbs without a Non-Finite Form

In section 5.4.2.1 we saw that verb stems beginning with an initial bilabial consonant do not have contrasting finite and non-finite forms. There are also a number of other verbs in Tolaki not fitting this phonological criterion which do not have contrasting finite and non-finite forms.

The first set of these verbs are those occurring with the passive affix *ni-* or the accidental passive prefix *te-*. However, with verbs to which the ‘prefix’ *te-* has been fossilised such as *te'eni* ‘say’ (see section 5.4.4.1.2), there do appear to be both contrasting finite and non-finite forms. Sentence (75) below illustrates an example of such a verb.

(75) *Lakonoto owonggi tume'eninggehero banggonan'akono . . .
  Lako-no-to o-wonggi t(um)e'eniN-kehero banggona-'ako-no
go-3GEN-PERF CN-snail ⟨NFIN⟩say-3NSG.DAT friend-NSG-3GEN
  Then the snail went and told his friend . . .

There are also a large set of intransitive verbs, lacking any of the phonological or morphological properties associated with other verbs, which lack a contrast in finite and non-finite forms. Firstly, there are some verbs which only occur in the ‘finite’ form and for which no non-finite form can be derived. Most of these verbs are verbs of motion. Thus we find one set of verbs which occur with an initial *pe-* such as *peluarako* ‘exit’, *petuha* ‘go down’ and *pe'eka* ‘go up’. There are also other verbs of motion which do not have any corresponding non-finite form such as *lako* ‘go’ and *leu* ‘come’.

In addition to these verbs of motion we also find some other intransitive verbs beginning with *pe-* which have no corresponding non-finite forms. These include *pe'iwoi* ‘be watery’, *pe'ua* ‘vomit’ and *pe'ana* ‘give birth’. The fact that the last two do not have non-finite forms was brought to my attention by Mead (1998:297).

Additionally there are a number of verbs which occur with a fossilised ⟨um⟩ morpheme but which cannot have this morpheme removed. Examples include *lumaa* ‘fly’, *lumango* ‘swim’ and *humongo* ‘cough’.

\(^{10}\)It is also unclear what meaning would be assigned to these prefixes.

\(^{11}\)I also have data that shows that *podea* can also have the ‘expected’ non-finite form for verbs beginning with /p/; that is *podea*. This indicates that this *po-* is beginning to lose any status it may have as a prefix in the minds of Tolaki speakers.
Lastly there are a number of statives\footnote{That these ‘verbs’ do not have any corresponding finite form is evidence that they are actually comprise a separate word class: ‘adjectives’. Though I have not investigated it in detail, I think it is a question well worth pursuing.} which occur with an initial \textit{mo-} or \textit{me-} but do not have any corresponding forms with \textit{pe-} or \textit{po-}. Some examples with initial \textit{mo-} include \textit{mokula} ‘hot’ and \textit{movila} ‘white’. Examples with an initial \textit{me-} include \textit{merare} ‘fast’ and \textit{me’ambo} ‘good’.

In this section we have seen that there are a large number of intransitive verbs which do not occur with contrasting finite and non-finite forms. Note, however, that this is not a universal feature of intransitive verb stems, thus the verb \textit{loloia} ‘run’ has the expected non-finite form \textit{lumoloia}.

5.4.2.3 The Use of Non-Finite Forms

In this section I will illustrate the different situations in which the finite and non-finite forms are used.

Non-finite forms are used when the verb is not indexed with a nominative prefix. Two common situations in which this occurs are subject relative clauses, as in sentence (76), and when there is an auxiliary verb, as in sentence (77), or serial verb construction, as in (78), in which case any nominative prefix occurs on the previous verb\footnote{Another situation in which this occurs is for the citation form of verbs (cf. also Mead 1998:293)). One of my informants who had had some linguistic training called such forms the \textit{infinitive}}.

\begin{center}
(76) \textit{Laa banggona-nggu ingoni k(um)ii-’aku i-daa}. \textit{existence-friend-1GEN today \texttt{\langle NFIN \rangle}see-3ABS LOC-market.}
I have a friend who saw me in the market (earlier on) today.
\end{center}

\begin{center}
(77) \textit{Ki’-onggo-ki} \texttt{\langle m \rangle}o-dapa \textit{o-sala}. \textit{EX.EX.NOM-want-CONF \texttt{\langle NFIN \rangle}INDEF.P-find CN-sala.}
We will indeed find a way (out).
\end{center}

\begin{center}
(78) \textit{Lakongguto me’indio ikandoro.} \textit{go-1GEN-PERF \texttt{\langle NFIN \rangle}INTR-work LOC-office.}
Then I went and worked in the office.
\end{center}

There are two notable situations in which a verb has no nominative prefix but does not occur in the non-finite form. These are imperatives as in sentence (79) and nominalisations as in sentence (80) in which the nominalisation \textit{ponggaa’a} occurs derived from the verb \textit{monggaa} ‘eat’. In both these situations it is ungrammatical to use the non-finite form.

12\footnote{That these ‘verbs’ do not have any corresponding finite form is evidence that they are actually comprise a separate word class: ‘adjectives’. Though I have not investigated it in detail, I think it is a question well worth pursuing.}

13\footnote{Another situation in which this occurs is for the citation form of verbs (cf. also Mead 1998:293)). One of my informants who had had some linguistic training called such forms the \textit{infinitive}}
Additionally basic verb forms are used when the A or S is indexed by genitive suffixes (Mead 1998:292). This is illustrated in sentence (57), in which the non-finite form, *sa-mong-gii-mami, cannot be used. This behaviour is evidence that such forms are nominalisations.

Concerning example (81), my impression is that the non-finite forms marked by the change of /p/ → /m/ are being reanalysed by some speakers as the basic forms and that the distinction between the two verb forms is being lost in this environment.14 Note, that when explicitly questioned about such constructions, most native speakers judge such sentences ungrammatical.

14This ‘impression’ draws additional evidence from the fact that many part speakers of Tolaki treat the non-finite forms of such verbs as basic and use them in places that full speakers judge ungrammatical, such as in imperatives.
Examples such as (82) are slightly different\footnote{I limit my discussion here to the verb \textit{po'ia} as this is the verb which I have the most data on. Another verb with similar data is \textit{po'iso} `sleep'}. As explained at the end of section 5.4.2.1 there are a number of stems in Tolaki which always begin with the phonological sequence \textit{po-} for which no synchronic morphological use can be described. \textit{po'ia `stay, live'} is an example of such a stem; there is no corresponding \textit{*ia}. As was explained in section 5.4.2.1 these verbs are treated as having a prefix when deriving the non-finite verb form, thus we find the form \textit{mo'ia}.

However, it will be recalled from section 5.4.2.2 that there are many stative verbs that do not have a contrast between finite and non-finite forms. Such verbs include a large set which begin with the `prefix' \textit{mo-}. Sentences such as (82) indicate that some speakers are beginning to treat the verb \textit{po'ia} as one of these stative verbs, as befits its stative-like meaning. This explains the unexpected occurrence of the non-finite form in sentences such as (82); for such speakers these verbs do not contrast finite and non-finite forms.

A final complication is that there are apparently two marginally contrastive verbs in the lexicon (for at least some speakers): a morphologically stative verb \textit{mo'ia} meaning `live (permanently)’ and a morphologically non-stative verb \textit{po'ia} meaning `stay (temporarily)’. This usage is illustrated by the contrast between sentences (83) and (84) below, in which the morphologically non-stative verb cannot be used in reference to one’s permanent residence. Sentence (85) is the definition given by one of my informants for the difference between the meaning of \textit{po'ia} in contrast to \textit{mo'ia}.

\begin{align*}
(83) & \quad \text{\textit{Ku-mo'ia} \textit{i-laika dowo-nggu.}} \\
 & \quad 1\text{NOM}-\text{live} \text{LOC-house} \text{self-1GEN} \\
 & \quad \text{I live in my own home}\end{align*}

\begin{align*}
(84) & \quad ? \quad \text{\textit{Ku-po'ia} \textit{i-laika dowo-nggu.}} \\
 & \quad 1\text{NOM}-\text{stay} \text{LOC-house} \text{self1GEN} \\
 & \quad \text{I’m staying [temporarily] in my own home}\end{align*}

\begin{align*}
(85) & \quad \text{\textit{Ku-po'ia} \textit{i-laika: Oki-no laika mbu'upu'u-nggu, \text{(m)o-sewa, \text{(m)o-sara: laika-no toono.}}} \\
 & \quad 1\text{NOM}-\text{stay} \text{LOC-house: NEG-3NOM house real-1GEN,} \\
 & \quad (\text{NFIN})\text{INDEF,P-rent, (NFIN)INDEF,P-borrow, house-3GEN person.} \\
 & \quad \text{I’m staying in a house: It’s not really my house, [it’s] rented [or] borrowed:} \\
 & \quad [\text{it’s another} \text{person’s house.}}\end{align*}

Thus we have seen that the non-finite verb forms are used in Tolaki when there is no argument indexed on the verb with a nominative prefix, except if such a verb is an imperative or has been nominalised. We have also seen that there are some verbs which are apparently treated differently by different speakers. Some speakers treat such verbs
as morphologically stative, while for other speakers there are apparently two entries in
the lexicon, a morphologically stative verb and a morphologically non-stative verb.

5.4.3 The Indefinite P prefix

In this section I will discuss the use of the indefinite P prefix poN- (with the non-finite
form moN-). The occurrence of this prefix on a verb indicates that the P of the verb is
indefinite, while a verb form without this prefix is used when the P is definite. This is
shown in examples (86) and (87) below.

(86) Ku-po-lolaha  haape.
    1 NOM-INDEF.P-search phone
    I’m looking for a mobile phone

(87) Ku-lolaha-i  haape-nggu.
    1 NOM-search-3ABS phone-1GEN
    I’m looking for my mobile phone.

When the the indefinite prefix is used it is ungrammatical to index the P with ab-
solutive suffixes, as shown in example (88) below. Conversely, when this prefix is not
used, it is ungrammatical to leave the P unindexed, as shown in example (89) below.

(88) * Kuponggaa'i  o'ika.
    Ku-poN-kaa-i  o'-ika.
    1 NOM-INDEF.P-eat-3ABS CN-fish
    I eat fish.

(89) * Ku-kaa  o'-ika
    1 NOM-eat CN-fish
    I eat fish.

The indefinite P prefix is also used to make polite requests, as shown in example
(90) below taken from (Mead 1998:177).

(90) Tewali-’i-ki  ku'-onggo ⟨m⟩o-saru  la'usa-miu?
    possible-3ABS-CONF 1 NOM-want ⟨NFIN⟩INDEF.P-borrow ladder-2NSG.GEN
    If it’s possible, I would like to borrow your ladder. (lit. a ladder of yours)

Thus we have seen that if the P is indefinite then the Tolaki verb takes the prefix
poN-, while if the P is definite this prefix is absent. Furthermore we have seen that the
indexation of the P with absolutive suffixes can only be employed when the P is definite.
5.4.4 Argument Structure Affixes

In this section I will illustrate the wide variety of prefixes and suffixes that are available for various argument structure operations in Tolaki. Affixes which can be used to introduce new arguments to the verbal predicate include the causatives *poko-*, *pombo-* and *poN-*, as well as the applicative *-ako*. Affixes which ‘remove’ arguments from the predicate include the passive ⟨in⟩, the accidental passive *te-*, and the intransitiviser *pe-*. Before the discussion proceeds a note of warning is necessary. Many of these affixes are neither clearly derivational nor inflectional in nature, furthermore many verbal predicates exist which have one or other of these affixes fossilised onto them. When this is the case it is indicated by the lack of a gloss for the phonological sequence in question.

5.4.4.1 Valency Decreasing Affixes

In this section I will discuss the form and use of the Tolaki passive affix ⟨in⟩, the prefix *te-* and the prefix *pe-. All these affixes decrease the number of arguments that a verbal predicate subcategorises for.

5.4.4.1.1 The Passive

The passive affix in Tolaki has two phonologically conditioned allomorphs. Stems beginning with a voiced consonant take the prefix *ni-*, stems beginning with /s/ only ever occur with the infix ⟨in⟩. Other stems can take either form, though infixes are strongly preferred. These possibilities are illustrated in table 5.10 below.

<table>
<thead>
<tr>
<th>Environment</th>
<th>Basic</th>
<th>Passive</th>
</tr>
</thead>
<tbody>
<tr>
<td>C+voice initial stems</td>
<td><em>dapa</em> → <em>nidapa</em></td>
<td>‘find/get’</td>
</tr>
<tr>
<td>/s/ initial stems</td>
<td><em>sanggara</em> → <em>sinanggara</em></td>
<td>‘fry’</td>
</tr>
<tr>
<td>C-voice initial stems</td>
<td><em>tidu</em> → <em>nitidu~tinidu</em></td>
<td>‘punch’</td>
</tr>
<tr>
<td>V initial stems</td>
<td><em>alo</em> → <em>ni’alo~inalo</em></td>
<td>‘take’</td>
</tr>
</tbody>
</table>

Table 5.10: Passive Forms

When a transitive verb is passivised its argument structure is altered. The new subcategorisation frame of the verb is given in (91) below.

(91) ‘PASS(_‘PRED(_ , _))’

The argument which is the lowest ranked in the argument structure of the base predicate is ‘promoted’ above the other arguments and is treated as an S and is indexed with either nominative prefixes or absolutive suffixes. This is shown in sentences (92) and (93) below respectively in which the promoted argument is in bold face.
Ordinarily the most highly ranked argument of the base predicate is unexpressed as above. However, in main clauses it can be included through the use of the adjunct prefix \textit{kei/ine} (see section 5.2.1) or for some speakers the preposition \textit{ronga} (see section 5.3). This is illustrated in (94) which is identical to (92) above except for the inclusion of this argument.

(94) \begin{align*}
\text{i-Bio & no-k\langle in\rangle ii.} \\
\text{PN-Bio 3NOM-(PASS)see.} \\
\text{Bio [is the one who] was seen by me.}
\end{align*}

One common use of the passive is when the P of the base predicate is the head of a relative clause. In relative clauses the A of the base predicate can be indexed with genitive suffixes on the verb. This is illustrated in a ‘normal’ relative clause in (95) as well as an interrogative in (96) below.

(95) \begin{align*}
\text{Ku-tidu-‘i} & \text{ hai-nggu} \text{ k\langle in\rangle okolea-nggu.} \\
\text{1NOM-punch-3ABS younger.sibling (PASS)hate-1GEN.} \\
\text{I punched my younger brother who I hate.}
\end{align*}

(96) \begin{align*}
\text{O-hawo laa} & \text{ ni-owai-miu?} \\
\text{CN-what PROG PASS-do-2NSG.GEN} \\
\text{What are you doing?}
\end{align*}

Thus we have seen that when a verb is passivised the P of the base predicate is treated as the S of the derived predicate and can be indexed with nominative prefixes or absolutive suffixes. Furthermore the A of the base predicate is ordinarily left unexpressed, though it be can expressed through a prepositional phrase in main clauses or genitive suffixes in a relative clause.

5.4.4.1.2 The Accidental Passive The accidental passive prefix \textit{te-} is relatively productive, and can be used to derive an intransitive verb from a transitive verb base. When this occurs the P of the base transitive verb is the only argument expressed. It is treated as an S and can be indexed with either nominative prefixes, as in (97) or absolutive suffixes as in (98). The argument structure of such verbs is represented in (99) below.

\begin{align*}
(97) \begin{align*}
\text{Ku-tidu-‘i} & \text{ hai-nggu} \text{ k\langle in\rangle okolea-nggu.} \\
\text{1NOM-punch-3ABS younger.sibling (PASS)hate-1GEN.} \\
\text{I punched my younger brother who I hate.}
\end{align*}
\end{align*}
Unlike the passive affixes discussed above in section 5.4.4.1.1 there are no options for including the A of the base verb in such sentences. Furthermore, the semantics of the passive indicate that the event was volitionally carried out by someone, while the semantics of the accidental passive do not.

However, there is one set of verbs that begin with te- which are quite different. Regarding these verbs, the te- is fossilised onto the verb and the meaning of these verbs no longer bears a predictable relationship with the transitive base from which it is derived. Thus, though the historical relationship of te-po-sua ‘meet’ and √sua ‘find’ remains relatively transparent, teposua can be used even when the meeting is intentional and prearranged. These verbs are treated as monomorphemic in my analysis. When a P is included it can be indexed with DAT suffixes; as illustrated in sentence (75) repeated as (100) below.

(100) **Lakonoto oIonicgi tume‘eninggelerapo banggonakono ...**

Lako-no-to o-wonggi t(um)e‘eniN-kehero banggonakono-ako-no go-3GEN-PERF CN-snaill (NFIN)say-3NSG.DAT friend-NSG-3GEN

Then the snail went and told his friend ... (Untung 2009:58)

In this section we have seen that the accidental passive te- derives an intransitive verb in which only the P of the transitive base is expressed. Furthermore we have seen that there is a subclass of verbs onto which this te- is fossilised. These verbs do not have the semantics of a typical accidental passive and are analysed monomorphemically.

### 5.4.4.1.3 The Intransitive Prefix

While the passive and accidental passive suppress the A of a transitive verb, conversely the intransitive pe- (with the non-finite form me-) suppresses the P of a transitive verb. The argument structure of the derived predicate is given in (101) below.

(101) ‘INTRANS(‘PRED(,,))’

It is ungrammatical to include a P with such verbs, as is illustrated in example (102a) below.
When this prefix is used to derive a verb from a transitive verb base, it frequently has a middle voice meaning, in that the action is carried out by the A and is relevant for or affects this same argument in some way. Some examples of this alternation are illustrated in table (5.11).

Table 5.11: Middle Derivations

<table>
<thead>
<tr>
<th>Base</th>
<th>Derivation</th>
<th>Base</th>
<th>Derivation</th>
</tr>
</thead>
<tbody>
<tr>
<td>baho</td>
<td>‘wash’</td>
<td>mebaho</td>
<td>‘bathe’</td>
</tr>
<tr>
<td>tidu</td>
<td>‘punch’</td>
<td>metidu</td>
<td>‘box’</td>
</tr>
<tr>
<td>pokonda’u</td>
<td>‘teach’</td>
<td>mepokonda’u</td>
<td>‘learn’</td>
</tr>
</tbody>
</table>

This prefix can also be used to derive verbs from nouns, in which case the meaning is roughly ‘having/using N’ or ‘doing with N what N is meant to do’. Thus from the noun obangga ‘canoe, boat’ the verb mebangga ‘travel by boat’ is derived, and from poteha ‘cousin’ the verb mepoteha ‘be cousins’ is derived.

Thus we have seen that the detransitiviser me- derives an intransitive verb in which only the A of the verb base is expressed.

5.4.4.2 Valency Increasing Affixes

In this section I will discuss those affixes in Tolaki that can be used to introduce arguments into the argument structure of a predicate. I will discuss causatives, in which a new causer AGENT argument is added to the predicate, as well as applicatives in which a new INSTRUMENT is typically added to the predicate.

5.4.4.2.1 Causatives  In this section I will discuss the use of the prefixes poN-, pok- and pombo- which can be used to derive verbs with a causative meaning from other verbs.

There are two prefixes which can be used to causativise an intransitive verb, pok- and poN-. It is of note that the latter of these two prefixes is homophonous with the indefinite prefix described in section 5.4.3. The causative prefix, however, can be used
when the P is definite. Both the causative prefixes *poko-* and *poN-* introduce a new argument into the clause which is treated as an A for the purposes of verbal indexation.

If the prefix *poko-* is used, the S of the base verb is treated as a P of the derived verb and can be indexed with accusative suffixes, as shown in (103) below. This is accounted for by the argument structure shown in (104) below.

(103)  *Ku'-onggo* ⟨m⟩oko-wo'ohu-'i pis-a-nggu.
1 NOM-want ⟨NFIN⟩CAUS-new-3 ABS VISA-1 GEN
I want to renew my VISA.

(104)  ‘*poko-*⟨_, _, ‘pred(⟨_, ⟩)⟩’

Causativisation using the prefix *poN-* does not appear to allow the causee to be indexed with absolutive suffixes on the verb. It is either unindexed, as in example (105), or included as a prepositional phrase with the general adjunct preposition *kei*, as in (106). The argument structure of *poN-* causatives is given in (107) below.

(105)  *Ari’iroto* mombewiso hae banggonaro.
Ari’-iro-to ⟨m⟩oN-pewiso hae banggonaro COMPL-3 NSG ABS PERF ⟨NFIN⟩CAUS-enter in.addition friend-3 NSG GEN
They’ve added more of their friends [to a facebook group].

(106)  *Tarimakasi arikomiuto* pombewiso
Tarimakasi ari-komiu-to poN-pewiso COMPL-2 NSG ABS PERF ⟨NFIN⟩CAUS-enter kei banggonahakomiu i’inono teporombu’a
kei=banggona-hako-miu i-inono teporombu’a ADJCT.PN friend-NSG 2 NSG LOC-this meet-NMLZ
Thank you for adding your friends to this group.

(107)  ‘*poN-*⟨_, _, ‘pred(⟨_, ⟩)⟩’

Causativisation of base transitive verbs is a much more complex, and more poorly understood issue. Some speakers allow these verbs to be causativised using the prefixes *poN-, poko-* or *pombo*[^17] while other speakers reject such forms outright and require a periphrastic construction to be used. When transitive verbs are successfully causativised one of two argument structures results. One possibility is shown in sentence (108) in which the A of the base verb is indexed as the P of the causative verb. The argument structure of such sentences is shown in (109).

[^16]: The failure of this verb to occur in the non-finite form is currently unexplained.
[^17]: This prefix appears to be composed of the causative prefix *poN-* followed by the antipassive prefix *po-*. However, the occurrence of absolutive suffixes indexing the causand in (110) indicates that the internal composition of this prefix has become opaque.
(108)  *No-pombo'-inu-'aku o-rasu.*
     3NOM-CAUS-drink-1 ABS CN-poison
    He made me drink poison.
(109)  \[ \text{‘CAUS}(\_, \_\text{‘PRED}(\_, \_))’} \]

    The second possibility is shown in sentence (110) in which the P of the base verb is
    indexed as the P of the causativised predicate. The argument structure of such sentences
    is shown in (109).

(110)  *No-pombo'-inu-'i o-rasu kei=inaku.*
     3NOM-CAUS-drink-3 ABS CN-poison ADJCT.PN=1SG
    He made me drink poison.
(111)  \[ \text{‘CAUS}(\_, \_\text{‘PRED}(\_, \_))’} \]

    Though the above examples have been elicited from a native speaker of Tolaki,
    it must be emphasised that such examples are highly problematic and many speakers
    are genuinely mystified when presented with them, and use periphrastic constructions
    involving an auxiliary verb instead.

    In this section we have seen that Tolaki has three causative prefixes *poN-*
    *poko-* and *pombo-*. We have also seen that there a variety of argument structures that result
    from the application of causative prefixes. Concerning intransitive verbs, the S of the
    base verb is either treated as a P in the resulting causative construction or as an adjunct.
    Concerning the causativisation of transitive verbs, either the A or the P of the base verb
    can be indexed as the P of the derived causative verb.

5.4.4.2.2 Applicatives  In this section I will discuss the use of the Tolaki applicative
*-Cako*. C here indicates a thematic consonant which is partially lexically determined,
though which thematic consonant a stem takes is subject to variation between speakers
and/or dialects 18.

    One common use of *-Cako* is as an instrumental applicative. This is illustrated in
    examples (112) and (113) below in which the instrument with which an action is carried
    out can be included in the sentence through the use of *-Cako*. Note that the addition
    of this argument does not affect the verbal indexation pattern of the verb. The new
    argument is unindexed and indexation of other arguments remains unaltered.

(112)  *Ku-laa (m)e-tanggali-ako sikopa.*
     3NOM-PROG (NFIN)INTR-dig-APPL shovel
    I’m digging with a shovel.

18The thematic consonants that I am aware of that can occur in the productive uses of *-Cako* are /?/ (\(<\ '\>), /ŋ/ (\(<ng>\), /h/ as well as Ø.
(113) *Kupongga'ako* osiru.
   Ku-poN-kaa-'ako o-siru
   I NOM-INDEF. P-eat-APPL CN-spoon
   I eat with a spoon.

   This is not the only way to include an instrument in a Tolaki clause; other strategies include using the accompaniment preposition *ronga* ‘with’ or the verb *mombake* ‘using’.

   -Cako can also introduce arguments to the clause which are less transparently an INSTRUMENT such as in sentence (114) below.

(114) *Ku-pe-sawu-sawu-'ako* o-handu.
   I NOM-INTR-REDUP-sarong-APPL CN-towel
   I wore a towel as (though it were) a sarong.

   Although sentence (114) does not mean ‘I used a towel to wear a sarong’ (perhaps as a shoehorn is used to put on a shoe), it is still true that the towel is the means by which I am now wearing a sarong. Thus, this argument can be thought of as a kind of INSTRUMENT, although not a stereotypical one.

   Another example of the applicative suffix introducing a participant which is not clearly an instrument is with the verb *mate* ‘die’. Two examples are given in (115a) and (115b) below.

(115) a. *mate-'ako aro*
   die-APPL hunger
   to starve (die of hunger)

   b. *mate-'ako moko'uo*
   die-APPL thirst
   to die of thirst

   In these examples the introduced participant is a source or cause. However, even in this case it is possible to construe the meaning as an accompaniment, ‘die with hunger/thirst’.

   In this section we have seen that the Tolaki applicative suffix -Cako is used to add arguments to a predicate. The added argument is usually an INSTRUMENT, though we have also seen examples in which accompaniments are introduced.
Chapter 6

Grammatical Functions in Tolaki

In this chapter I will investigate the grammatical functions found in Tolaki. I will investigate only nominal grammatical functions. As demonstrated in Chapter 2, a grammatical function has a unique set of morpho-syntactic behaviour associated with it. Thus, this chapter will investigate how different Tolaki nominal participants behave under different morpho-syntactic tests.

In section 6.1 I will provide evidence for the most privileged grammatical function, subject, and the least privileged grammatical function, adjunct. In section 6.1.1 I will show that subjects can be identified in Tolaki on the basis of three tests: relativisation, plural agreement and nominative prefixes. In section 6.1.2 I will then provide evidence for an adjunct. We will see that adjuncts do not share any of the behaviour associated with subjects and even cannot appear as a bare noun phrase.

In section 6.2 I will investigate the behaviour of other participants under various morpho-syntactic tests. After identifying the coding strategies used for these participants in section 6.2.1, we will observe their behaviour under the tests of internal relativisation in section 6.2.3.1, external possession in section 6.2.3.2, secondary predication in section 6.2.3.3 and passivisation in section 6.2.3.4.

We will see that these morpho-syntactic tests do not allow us to neatly classify non-subject participants into any of the four non-subject grammatical functions provided by LFG: OBJ, OBJθ, OBL or ADJ. Rather, if we were to posit discrete categories for grammatical functions, we would be forced to posit a minimum of nine categories in order to account for the continuum-like nature of the results.

6.1 The Limits: Subject and Adjunct

I will begin my investigation by defining the limits among grammatical functions. I will discuss the most privileged grammatical function, subject, and the least privileged grammatical function, adjunct.
We will see that there is one syntactic test and two morphological tests that reliably allow us to identify the grammatical function subject in Tolaki. The tests of relativisation, plural agreement and indexation with nominative prefixes refer uniquely to the group of roles comprised of S, A and the derived S in a passive sentence.

We will also see that adjuncts fail all of these tests and cannot even be included in a clause as a bare noun phrase.

6.1.1 Subject

6.1.1.1 Relativisation

The first test that refers uniquely to the grammatical function subject in Tolaki is relativisation.

Relative clauses have been discussed in section 5.2.3. The main criteria by which we identify a relative clause are: (a.) the relativised noun phrase occurs before the verb, (b.) the verb is in the non-finite form (see section 5.4.2), and (c.) no affixes occur on the verb indexing the relativised argument.

Examples (1)-(3) show the successful relativisation of an S, A and derived S respectively. In these examples the relative clause is enclosed within square brackets.

1. *Ingoni laa [NP toono [RC i-luara ⟨m⟩o-susua.]]
   There was someone outside earlier today who sang [something].

2. *Ku-kokolea-i [NP hai-nggu [RC t ⟨um⟩i-du-’aku.]]
   I annoy my younger brother who punched me.

3. *Ku-tidu-i [NP hai-nggu [RC k ⟨in⟩o-kolea-nggu.]]
   I punched my younger brother whom I annoy.
   lit. I punched my younger brother who is annoyed by me.

On the other hand, it is impossible to relativise a non-subject participant in Tolaki. This is shown in sentence (4), which would otherwise fulfil the criteria for the successful relativisation of a P.

4. *Ku-tidu-i [NP hai-nggu [RC ku ⟨um⟩o-kolea.]]
   I punched my younger brother whom I annoy
6.1.1.2 Plural Agreement

When the subject of a clause is plural, the verb can optionally take the prefix mbeN-. Plural in Tolaki is a group of three or more. When this prefix occurs, the affixes indexing the subject are necessarily non-singular. The number of plural subjects agreeing with the verb was counted in the text *Ohada ronga Kolopua* (Untung 2009:28-35) (The Monkey and the Tortoise). In this text, of 18 eligible verbs with plural subjects, 14 took the prefix mbeN- while only 4 did not.

An example of the verb agreeing with each of a plural S, A and derived S is given in sentences (5)-(7) respectively.

(5) *Lako-ro-to mbe-lako hada dadio, . . .*

    go-3NSG.GEN-PERF PL-go monkey many

    Then the many monkeys left . . . (Untung 2009:31)

(6) *rombenggii’ito kolopua.*

    ro-mbeN-kii-’i-to kolopua

    3NSG.NOM-PL-see-3ABS-PERF tortoise

    they [the monkeys] saw the tortoise. (Untung 2009:32)

(7) *Rombinendopaki poteha’akonggu.*

    Ro-mb(in)eN-topaki poteha-’ako-nggu

    3NSG.NOM-(PASS)PL-slap cousin-NSG-1GEN

    My cousins were slapped.

Finally, the ungrammatical sentence (8), in which the only non-singular participant is the P, shows that the prefix can only agree with the subject.

(8) *ku-mbe-langgu-’iro bangguna-hako-nggu*

    1NOM-PL-hit-3NSG.ABS friend-NSG-1GEN

    I hit my friends

6.1.1.3 Nominative Agreement

Finally, only an S, A or derived S can be indexed with nominative prefixes.

The reader is referred to section 5.4.1.1 for a complete discussion of nominative prefixes indexing an A and S, and to section 5.4.4.1.1 for a more complete discussion on their use in indexing a derived S.

Examples (41), (45) and (92) from chapter 5 are repeated below as (9), (10) and (11) to illustrate the indexation of an S, an A and a derived S with nominative prefixes.

(9) *Kulako i’aa homa.*

    Ku-lako i-aa-homa.

    1NOM-go LOC-area-forest
I went to the forest.

(10) *Ku-soro-*i *oto-nggu.*
    1NOM-push-3ABS car-1GEN
I pushed my car

(11) *i-Bio no-k(in)ii.*
    PN-Bio 3NOM-(PASS)see.
    Bio [is the one who] was seen

Recall from sections 5.4.1.2 and 5.4.1.3 that absolutive and genitive suffixes are also used to index the subject under certain circumstances. Thus, while nominative prefix indexation is not the only coding strategy that can be used to index the subject, subjects are the only participants that can be coded thus.

6.1.2 Adjuncts

Subject forms the upper limit among grammatical functions, the most privileged, while adjunct forms the lower limit, the least privileged grammatical function.

Adjuncts in Tolaki fail all of the tests listed above for subjects. Furthermore, nominal adjuncts cannot appear as a bare noun phrase and must be marked with either of the prefixes *i-* or *kei/ine* (see section 5.2.1.2), or are introduced by a preposition such as *ari ‘from’* or *ronga ‘with’* (see section 5.3).

Sentence (14) shows a locative adjunct marked with *i-*; sentence (12) an adjunct marked with both the preposition *ari* and the prefix *ine*; and sentence (13) showing an adjunct marked with the preposition *ronga ‘with’*.

(12) *a-no te-bua pele-hada ari ine=kowuna*
    and-3NOM ACCID-fall palm-monkey from ADJCT.CN=bamboo
    and a monkey’s hand fell out of the bamboo  
    (Untung 2009:31)

(13) *Ku-laa (m)e-tulura ronga hai-nggu.*
    1NOM-PROG (NFIN)INTR-speak with ySi-1GEN
    I’m speaking with my younger sibling.

Furthermore as discussed in section 3.1.1.1 these adjuncts can be multiply specified, as shown in sentence (14)

(14) *Ki-laa mbe-lako i’-aa-homa i-kambo*
    1EX.NOM-PROG PL-go LOC-area-forest LOC-village
    (m)e-tamo’-ako Okonda.
    (NFIN)INTR-name-APPL Okonda.
    We were walking in a forest in a village which was called Okonda.

We can thus define the limits of grammatical functions in Tolaki: the least and most privileged grammatical functions. This is shown in table 6.1
6.2 The Middle: Objects and Obliques

In this section I will investigate grammatical functions which fall between the two extremes of subject and adjunct. I will begin by discussing the way in which these participants are coded. I will discuss a total of eight participants.

6.2.1 The Coding of Non-subject Participants.

6.2.1.1 Definite P and Indefinite P

The first two non-subject participants I will investigate are the Definite P and the Indefinite P.

Definite P’s and Indefinite P’s are in complementary distribution with one another. Definite P’s are indexed on the verb with absolutive suffixes, as in sentence (15), while indefinite P’s are unindexed and co-occur with the INDEF.P prefix poN-, as in sentence (16).

(15) Ku-soro-i oto-nggu.
    1NOM-push-3ABS car-1GEN
    I pushed my car

(16) ano po'alo o'aso boto ano ponggaa
    a-no po-al-o o-as-o b-o-to a-no poN-kaa
    and-3NOM INDEF.P-take one CLF INDEF.P-eat
    and he takes a single one [banana] and eats [it] (Untung 2009:30)

That this is always the pattern is shown in circumstances in which the P is inherently definite, such as with a pronominal P. Thus sentence (17) with a pronominal referent indexed with the absolutive suffix is grammatical, while the equivalent (18) with the prefix poN- and an unindexed P is ungrammatical.

(17) Ku-langgu-ko.
    1NOM-hit-2ABS
    I hit you.
Furthermore, an unindexed P does not usually occur with demonstratives or possessive suffixes, as these usually indicate definite referents. Thus, when talking about a grub which I had photographed, my informants found (19) with an absolutive P acceptable, while sentence (20) was judged strange.

(19) Laa-nggu k⟨um⟩iiti+i inono uwato ...
PROG-1GEN ⟨NFIN⟩REDUP-see-3ABS this grub
While I was looking at this grub ...

(20) ? Laanggu monggii-kii inono uwato ...
Laa-nggu ⟨m⟩oN-kii-kii inono uwato ...
PROG-1GEN ⟨NFIN⟩INDEF.P-REDUP-see this grub
While I was looking at this grub ...

When unindexed P’s do occur with a demonstrative or possessor, they indicate that the P is an uncertain member of a group. Thus, when asked about sentence (21) with an unindexed, but possessed P, one informant explained that “we can’t know yet who is hit”.

(21) No-po-langgu hai-nggu.
3NOM-INDEF.P-hit ySi-1GEN
He hit one of my younger siblings

Thus, absolutive indexed P’s are definite, while unindexed P’s are indefinite, even when there is no other indication of this in the clause.

We can represent the mapping of the argument structure to morphological categories of sentence (15) in (22), and that of (16) in (23).

(22) **Definite P:**

‘PRED ⟨−, −⟩’

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>NOM</td>
</tr>
</tbody>
</table>

(23) **Indefinite P:**

‘poN-PRED ⟨−, −⟩’

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>NOM</td>
</tr>
</tbody>
</table>
Another two participants which are in complementary distribution with one another are the Dative P and the Applicative P. While the usual strategy for indexing a definite P is with absolutive suffixes, a small subset of verbs in Tolaki indexes their non A argument with a dative suffix. A simple example is given below in sentence (24).

(24) ano tealonggee kolopua.
a-no tealoN-kee kolopua
and-3NOM fetch-3DAT tortoise
and he fetched the tortoise

Such verbs have a less affected P with semantic roles such as THEME or STIMULUS, rather than PATIENT. Nonetheless, among those verbs which have non-PATIENT P’s, it must be stipulated at the lexical level which take a dative P. Thus, for instance while both to’ori ‘know’ and kolupe ‘forget’ both have a P with the semantic role STIMULUS, to’ori indexes definite P’s with a dative suffix while kolupe indexes them absolutively. A sample of verbs which take a dative P is given in table 6.2. The four on which I have collected a significant amount of data are listed at the top.

<table>
<thead>
<tr>
<th>Verb</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>watu-kee</td>
<td>‘join with, go along with’</td>
</tr>
<tr>
<td>to’ori-kee</td>
<td>‘know’</td>
</tr>
<tr>
<td>te’eni-nggee</td>
<td>‘say, tell’</td>
</tr>
<tr>
<td>teposua-nggee</td>
<td>‘meet (2 people)’</td>
</tr>
<tr>
<td>teporembu-kee</td>
<td>‘meet (3 or more people)’</td>
</tr>
<tr>
<td>teporombu-kee</td>
<td>‘fetch, pick up’</td>
</tr>
<tr>
<td>tealo-nggee</td>
<td>‘follow’</td>
</tr>
<tr>
<td>eta’i-kee</td>
<td>‘pour out’</td>
</tr>
<tr>
<td>solo-nggee</td>
<td></td>
</tr>
</tbody>
</table>

Table 6.2: Verbs Taking a dative P

Synchronically this phenomenon can be analysed as a mismatch between the lexico-conceptual structure and argument structure of the relevant verb, as described for English and Tzotzil in section 3.2.1.2.

The argument structure of to’ori only contains one argument, a EXPERIENCER which is assigned the features [+HR, +LR] as befits its status as the sole argument. This is shown in (25).

1In the case of te’eni, absolutive suffixes can be optionally used to index the message, that is, what was said. Dative suffixes index the addressee.
(25) \textit{'to'ori}(EXP)’

\text{PRED( } _\_ \text{ )’}

\begin{array}{c}
+\text{HR} \\
+\text{LR}
\end{array}

(26) \textit{'to'ori}(EXP)STIM’

\text{PRED( } _\_ \text{ )’}

\begin{array}{c}
+\text{HR} \\
-\text{HR}
\end{array}

\begin{array}{c}
+\text{LR} \\
-\text{LR}
\end{array}

Thus, when the \textsc{stimulus} in the lexico-conceptual status is included, it is assigned the features \([-\text{HR}, -\text{LR}]\) and is encoded as a participant external to the argument structure, such as a beneficiary (see section 5.4.1.4.3). This is shown in (26).

Historically, the monovalency of many of these verbs can be explained as resulting from the accidental passive prefix \textit{te-} becoming fossilised onto the verb (see section 5.4.4.1.2). The argument structure of these verbs originally contained two arguments. However, with the fossilisation of this prefix the historic transitivity of such verbs was lost.

Possible historical sources of the verbs beginning with \textit{te-} in table 6.2 are given in table 6.3. Reconstructions are from \textsc{Mead} (1998:424ff).

Explanations for the other forms are not so clear. One likely source is that at some point in the history of the language, the applicative suffix \textsc{-Cako} (see section 5.4.4.2.2) became an obligatory part of the verb stem, to which the absolutive suffixes later fused (see section 5.4.1.4.2).

<table>
<thead>
<tr>
<th>Modern Form</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>\textit{te'eni}</td>
<td>PBT *uni ‘sound, utterance’</td>
</tr>
<tr>
<td>\textit{teporembu/teporombu}</td>
<td>porembu ‘meeting place (in village)’</td>
</tr>
<tr>
<td>\textit{teposua}</td>
<td>mosua ‘find’</td>
</tr>
<tr>
<td>\textit{tealo}</td>
<td>mo'alo ‘get, take’</td>
</tr>
</tbody>
</table>

Table 6.3: Origin of Tolaki Dative P Verbs with initial \textit{te-}

Historically, the dative suffix arose through a combination of applicative + absolutive suffix (see section 5.4.1.4.2). It would appear then, that the ‘extra’ participant of these verbs was originally included through applicativisation with regular absolutive agreement for definite participants.

We therefore expect that when this participant is indefinite, it will be unindexed and the applicative suffix \textsc{-Cako} will appear on the verb. This is indeed what we find. An example is given in (27).

2This is the etymology suggested by an informant who used the form with medial \textit{e}, that is \textit{teporembu}. Another, etymology which would explain the forms with medial \textit{o} is that this verb is related to PBT *rombo° ‘gather’ as reconstructed by \textsc{Mead} (1998:468), in which case the word final \textit{u} is unexplained.
He met/came across some dwarf buffalo.

Synchronically, this is best analysed as a method of including the participant which exists at the lexico-conceptual structure but is absent from the argument structure of the base verb, without agreeing with it.

The argument structure of these verbs, along with the mapping of participants to morphological categories, is shown for definite D’s in (28) and indefinite D’s in (29).

(28) **Dative P:**

\[
\begin{array}{c}
\text{‘PRED } \langle - \rangle \text{ ‘} \\
\text{NOM } \text{DAT}_{\text{definite}}
\end{array}
\]

(29) **Applicative P:**

\[
\begin{array}{c}
\text{‘APPL} \langle - \rangle \text{‘PRED} \langle - \rangle\text{’} \\
\text{NOM } \text{Ø}_{\text{indefinite}}
\end{array}
\]

6.2.1.3 **Other Participants**

6.2.1.3.1 **Beneficiary** A participant with the semantic role BENEFICIARY can be indexed on the verb with dative suffixes. These participants have been more thoroughly discussed in section 5.4.1.4.3. An example of such a beneficiary with an monovalent verb is given in (30) and an example with a bivalent verb in (31).

(30) *No-laa* \(3\) **NOM**-PROG \(m\)\text{e-}indio-\text{kee} \(3\) **DAT**\text{ama-nggu}.

He’s working for my father.

(31) *Ku-tidu-‘i-ko’o*.

I’ll punch him for you/I’ll get him (back) for you.

The mapping of participants to morphological categories for sentence (30) is shown in (32) below.

(32) **Beneficiary:**

\[
\begin{array}{c}
\text{‘PRED } \langle - \rangle \text{ BEN’} \\
\text{NOM } \text{DAT}
\end{array}
\]
### 6.2.1.3.2 The Transitive Instrument and Theme

One strategy for including an instrument in Tolaki is to index it with an absolutive suffix. When this occurs, the **PATIENT/THEME** is indexed with a a dative suffix. An example is given in (33).

(33) *No-langgu-'i-kona o-kasu.*

3NOM-hit-3ABS-1DAT CN-wood

He hit me with a piece of wood.

*lit.* He hit a piece of wood to/at me.

I will refer to the instrument of such constructions as the ‘Transitive Instrument’ and the P as the ‘Transitive Instrument Theme’. An equivalent meaning can also be expressed with various periphrastic constructions, as in (34).

(34) *Nolanggu'aku mombake okasu.*

No-langgu-'aku mombake o-kasu.

3NOM-hit-1ABS using CN-wood

He hit me using a piece of wood.

When both the **PATIENT** and **INSTRUMENT** are realised by a full NP, the **PATIENT** usually precedes the **INSTRUMENT** in word order. This is illustrated in sentence (35) below, which would be interpreted as indicated unless uttered in a context that would force the asterisked reading.

(35) *No-langgu-'i-kee o-watu o-kasu.*

3NOM-hit-3ABS-3DAT CN-stone CN-wood

He hit the stone with a piece of wood.

*He hit the wood with a stone.

A non-3rd person instrument cannot be used in the Transitive Instrument construction, as shown by the ungrammatical (36a). In such circumstances a periphrastic construction, such as in sentence (36b), or the Intransitive Instrument construction (see section 6.2.1.3.3 below) must be employed instead. The pragmatic situation motivating the sentences in (36) is a dream in which an anthropomorphic piece of wood with the power of speech questions the motives behind the actions of the dreamer.

(36) a. *mbaako'i u-langgu-'aku-kee toono*

why 3NOM-hit-2NOM-1DAT person

b. *Mbaako'i u-langgu-'i toono mombake inaku?*

why 2NOM-hit-3ABS person using 1SG

Why did you hit the person (by) using me?

The mapping of the Transitive Instrument and Theme to morphological categories is given in (37).
6.2.1.3.3 The Intransitive Instrument

The final participant I will discuss is what I will call the Intransitive Instrument. Another strategy for including an instrument is to index it with a dative suffix. When this occurs, the verb takes the intransitive prefix pe-, the THEME/PATIENT is introduced with the kei/ine= prefix (see sections 5.2.1.2 and 6.1.2). An example is given in sentence (38) below.

(38) Nopedondonggee okasu ine banggonano.
    No-pe-dondoN-kee o-kasu ine=banggono-no
    3NOM-INTR-hit-3DAT CN-wood ADJCT-CN-friend-3GEN
    He hit his friend with a piece of wood.

Note that such constructions appear marginal and not all speakers accept them. A different informant from the one who provided sentence (38) found the analogous sentence (39) to be unacceptable, though still said it could be understood.

(39) ? Kupehotonggee opade ine banggonanggu.
    Ku-pe-hotoN-kee o-pade ine=banggono-nggu
    3NOM-INTR-cut-3DAT CN-machete ADJCT-CN-friend-1GEN
    I cut my friend with a machete.

The mapping of the participants to morphological categories in this Intransitive Instrument construction is shown in (40).

(40) Intransitive Instrument:
    ‘INTR( )‘PRED ( , )’ INST
    | | | |
    NOM ADJCT DAT

6.2.2 Coding Summary

We have thus identified a total of nine non-subject participants in Tolaki, including adjuncts. The coding of each of these participants is listed in table 6.4.

This is not an exhaustive list of all non-subject participants found in Tolaki. It, however, does provide a representative sample and includes all dative non-subject participants known to the author.
6.2.3 The Syntactic Behaviour of Non-subject Participants.

In this section we will investigate the behaviour of these non-subject participants under different syntactic tests. We will find that while each morpho-syntactic test is sensitive to a restricted set of non-subject participants, no test is sensitive to exactly the same set of participants as another test. Calling the most privileged non-subject participant object and the least privileged adjunct, we can observe a continuum-like scale of non-subject participants in which some participants have more behaviour in common with objects and some have more behaviour in common with adjuncts.

I will discuss five syntactic tests that have been found to consistently discriminate among non-subject participants in Tolaki. These tests are internal relativisation, external possession, secondary predication and passivisation. The results of each of these tests will be discussed in turn.

For each of these tests, only a subset of the data will be presented in the following sections. The remainder of the data showing the behaviour of each non-subject under each test is given in appendix A.

6.2.3.1 Internal Relativisation

Internal relativisation is a construction in which a non-subject occurs preverbally in a relative-clause-like construction.

The features of this construction are as follows: (a.) the relativised NP occurs preverbally, (b.) a dative beneficiary must occur on the verb (c.) the relativised NP is indexed on the verb as expected.

---

Table 6.4: Coding of Tolaki Non-Subject Participants

<table>
<thead>
<tr>
<th>Agreement</th>
<th>ABS</th>
<th>DAT</th>
<th>APPL</th>
<th>INDEF.P</th>
<th>INTR</th>
<th>Bare NP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Definite P</td>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td>2. Indefinite P</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>✓</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td>3. Dative P</td>
<td>-</td>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td>4. Applicative P</td>
<td>-</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td>5. Trans Inst</td>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td>6. Trans Inst Thm</td>
<td>-</td>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td>7. Intrans Inst</td>
<td>-</td>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>8. Beneficiary</td>
<td>-</td>
<td>✓</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td>9. Adjunct</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

---

Mead (1998:370) reports that Tolaki objects can be relativised, in the same way subjects can be, if a beneficiary occurs. He provides sentence (i) as an example:

---

81
The verb does not occur in the non-finite form as it does for normal relative clauses. Additionally the relativised NP cannot be the P of another verb. An example of an internally relativised indefinite P is given in sentence (41) below, note that without the dative beneficiary this sentence becomes ungrammatical, as in (42).

(41) Humbee laha’-a-no o-tee u-po-wai-kona?
where location-NMLZ-3GEN CN-tea 2NOM-INDEF.P-make-1DAT
Where is the tea you made for me?

(42) * Humbee laha’-a-no o-tee u-po-wai?
where location-NMLZ-3GEN CN-tea 2NOM-INDEF.P-make
Where is the tea you made?

All non-subject participants, including adjuncts, can be internally relativised. Even dative beneficiaries themselves can be relativised in this way. This is shown in (43) below, in which the beneficiary NP banggon'a'akomu ‘your friends’ has been relativised.

(43) Ikeni laa banggon'a-ako-mu ku-po-wai-kehero-ko'o
here EXIST friend-NSG-2GEN 1NOM-INDEF.P-make-3NSG.DAT-2DAT
o-tee ihawi.
CN-tea yesterday.
Here are your friends for whom I made tea for you yesterday.

However, it appears that an A cannot be internally relativised. This is shown in (44) below.

(44) * Humbee laa’-a-no banggon'a-mu no-langgu-'i-ko'o
Where location-NMLZ-3GEN friend-2GEN 3NOM-hit-3ABS-2DAT
o-kasu.
CN-wood
Where’s your friend who hit the wood for me?

OGANDU ASO LEP A SUMOLONGGEEKEE ITONGA MBADA
O-gandu aso lepa s(um)oloN-kee-kee i-tongaN-pada
CN-corn one basket (NFIN) pour-3DAT-3DAT LOC-middle-field
the basket of corn which had been poured out for him in the middle of the field

While my informants found this (and equivalent) examples ungrammatical, exploring this construction lead to the discovery of the internal relative construction.

4The word for location has two variant forms, one with a medial h: laha’a and one without: laa’a

82
6.2.3.2  External Possession

External possession is a test in which the possessor of a participant is indexed on the verb with dative suffixes under certain semantic and pragmatic conditions. An example is given in sentence (45).

(45) *No-langgu-'i-kona hai-nggu*

3NOM-hit-3ABS-1DAT ySi-1GEN

He hit my younger brother.

In such sentences the possessor is indexed twice in the sentence, once with a dative suffix on the verb and once with a genitive suffix in the possessed NP.

Sentence (45) is also grammatical without a dative suffix indexing the possessor, though external possession is in general preferred. When asked to explain the difference between sentence (45) and the equivalent without external possession, one native speaker felt as though the sentence without external possession described an accident, while that with external possession was a deliberate attempt to harm.

In situations where the action performed is beneficial for the possessor of the P, it is unclear whether the dative is a simple benefactive or whether it is due to external possession. An example is sentence (46) below.

(46) *Oheo, pe’eka kabusa-’i-keito ana-ndo tewuta-’i-to.*

Oheo, ascend clean-3ABS-1IN.DAT child-1IN.GEN defecate-3ABS-PERF

Oheo, come up and clean our child (for us), he’s become dirty. (Mead 1998:238)

This sentence is ambiguous between the external possession structure shown in (47b), in which the possessor of the NP is encoded twice, once with a genitive suffix in the NP and once with a dative suffix on the verb, and the structure in (47a) in which the dative encodes a beneficiary which happens to be coreferential with the possessor of the NP.

(47) a. CLEAN ( SUBJ, OBJ:[( POSS ) THM ]) BEN
    imp  GEN_i  ABS  DAT_i

b. CLEAN ( SUBJ, OBJ:[( POSS ) THM ])
    imp  DAT  ABS
    GEN

While a sentence such as (45) is also similarly structurally ambiguous, the beneficiary reading in (47a) is pragmatically highly unlikely, and speakers can clearly distinguish between the two meanings.

Sentences such as (46) in which the structure is ambiguous form a bridge between the two constructions and perhaps explain how external possession developed in Tolaki.
When we turn to those participants which are eligible to be externally possessed, we find that all non-subject participants except for an Indefinite P, an Applicative P and an Adjunct are eligible to have their possessor indexed on the verb with dative suffixes.

While Definite P’s can be externally possessed, as in sentence (45), Indefinite P’s cannot. This is shown in sentence (48) which is pragmatically odd as the dative can only be interpreted as a beneficiary, as in the structure in (47a).

(48) ? Nopolanggunggona hainggu.
    no-po-langguN-kona hai-nggu
3NOM-INDEF.P-hit-1DAT ySi-1GEN
He hit some/one of my younger siblings for me.

Finally, the data for beneficiaries on external possession in sentences such as (49) is inherently ambiguous between the structures shown in (47).

(49) Ku-po-wai-keero-ko'o banggonamu o-tee.
    1NOM-INDEF.P-make-3NSG.DAT-2DAT friend-2GEN CN-tea
I made tea for your friends [for you].

6.2.3.3 Secondary Predication

Secondary predication in Tolaki was tested using the depictive secondary predicate molangu ‘drunk’.

The adjective molangu ‘drunk’ can be included in a sentence in several ways. The first is in a separate verb phrase headed by the auxiliary laa. When this is the case nominative prefixes can optionally occur indexing the subject:

(50) Kuteposuanggee banggonanggu, (no)laa molangu.
    Ku-teposuaN-kee banggona-nggu (no)-laa molangu
1NOM-meet-3DAT friend-1GEN (3NOM)-PROG drunk
I met my friend, he was drunk.

Secondly, the adjective can be included internally in the NP it modifies, either before the noun it modifies, as in sentence (51), or after the noun it modifies as in sentence (52). In the case of sentence (52) the adjective can be shown to be internal to the noun phrase it modifies because a possessive clitic occurs after it. (See section 5.2 for further discussion on the structure of the NP in Tolaki)

(51) Ihawi ku-kii-’i [ molangu banggonanggu. np ]
yesterday 1NOM-see-3ABS drunk friend-1GEN
Yesterday I saw my drunk friend.
Finally, the adjective can occur clause finally, but external to the noun phrase it modifies. A simple example is shown by sentence (53). In this sentence the boundary of the noun phrase is indicated by the position of the possessive clitic.

(53) *No-leu [banggona-nggu, NP] molangu, 
  3NOM-come  friend-1 GEN drunk
  My friend arrived drunk.

When the secondary predicate occurs external to the noun phrase it modifies, only certain participants are eligible to launch it. The participants which cannot launch it are a Beneficiary, Transitive Instrument, Theme or Adjunct.

Sentence (54), shows an Adjunct cannot launch a secondary predicate. When presented to informants, this sentence was accompanied by laughter, as the only grammatical interpretation is one in which the dative instrument ‘water’ launches the secondary predicate; rather than the pragmatically more likely prepositional adjunct.

(54) Kupebahongee iwoi kei i Bio molangu, 
  Ku-pe-bahoN-kee iwoi, kei=i-Bio, molangu, i
  1NOM-INTR-wash-3DAT water ADJCT.PN-PN-Bio drunk
  I washed Bio with drunk water.
  *I washed Bio with water [while he was] drunk.

6.2.3.4 Passivisation

The final syntactic test I will discuss is passivisation. In section [6.1.1] we saw that in Tolaki the A/S role maps onto the grammatical function subject. However, when a verb is passivised, the P is assigned the grammatical function subject, and the A can be optionally included with the prefix kei/ine= (see section [5.4.4.1.1]).

Only a Definite P, an Indefinite P or an Applicative P are eligible to be the input of a passive. A typical example is given in sentence (55) below, in which the passive has been used in order to allow the PATIENT of the verb to be relativised.

(55) hai-nggu ni-langgu-mu 
  ySi-1 GEN PASS-hit-2GEN
  My younger sister who you hit

When an Indefinite P is passivised, the verb does not retain the INDEF.P prefix. However, we find that indefinite participants can still be the input to the passive, as in sentence (56).
In order to passivise the Dative P of a verb like to'ori, the participant must be first applictaivised. Thus, sentence (57) is ungrammatical, while sentence (58) with an applicative suffix is grammatical.

(57) * kaaka-mu t(in)o'ori-nggu
    eSi-2GEN (PASS)know-1GEN

(58) kaaka-mu t(in)o'ori-ako-nggu
    eSi-2GEN (PASS)know-APPL-1GEN
    Your older sister who I know

Likewise, Transitive Instruments cannot be an input for the passive. Thus, the passive in (60) is ungrammatical.

(59) No-langgu-'i-kona o-kasu.
    3NOM-hit-3ABS-1DAT CN-wood
    He hit me with a [piece of] wood.

(60) * o-kasu ni-langgu-kona
    CN-wood PASS-hit-1DAT

However, this is not a restriction blocking participants with the semantic role INSTRUMENT from undergoing passivisation, as instruments can also be included in a sentence with the applicative suffix (see section 5.4.4.2.2), in which case they are an eligible input to the passive, as in sentence (61).

(61) o-kasu ni-langgu-ako kei=inaku
    CN-wood PASS-hit-APPL ADJCT.PN=1SG
    The piece of wood with which I was hit

6.2.4 Summary of Results

A summary of the results of each syntactic test can be found in Table 6.5. This table also summarises the morphology used to code each participant. Subjects are also included in this table. A tick (√) indicates that a participant ‘passes’ the test, a dash (−) indicates that it does not while neither ( ) indicates that the data is currently insufficient to judge either way.

The results of those tests that distinguish between non-subject participants are presented in Figure 6.1. A score of 0.1 indicates the participant fails the test, 0.5 insufficient data and 1 that a participant passes the test. In this graph the results for Applicative P and Indefinite P are combined, as are the results for the Dative P and Intransitive Instrument.
<table>
<thead>
<tr>
<th></th>
<th>Syntactic Criteria</th>
<th>Morphological Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Int Rel</td>
<td>Ext Rel</td>
</tr>
<tr>
<td>Subject S</td>
<td>✓  ✓  ✓</td>
<td>✓  ✓  -</td>
</tr>
<tr>
<td>Subject A</td>
<td>✓  ✓  ✓</td>
<td>✓  ✓  -</td>
</tr>
<tr>
<td>Definite P</td>
<td>-  -</td>
<td>✓  ✓  ✓</td>
</tr>
<tr>
<td>Indefinite P</td>
<td>-  -</td>
<td>✓  ✓  ✓</td>
</tr>
<tr>
<td>Dative P</td>
<td>-  -</td>
<td>✓  ✓  ✓</td>
</tr>
<tr>
<td>Applicative P</td>
<td>-  -</td>
<td>✓  ✓  ✓</td>
</tr>
<tr>
<td>Trans Inst</td>
<td>-  -</td>
<td>✓  ✓  ✓</td>
</tr>
<tr>
<td>Trans Inst Thm</td>
<td>-  -</td>
<td>✓  ✓  ✓</td>
</tr>
<tr>
<td>Intrans Inst</td>
<td>-  -</td>
<td>✓  ✓  ✓</td>
</tr>
<tr>
<td>Beneficiary</td>
<td>-  -</td>
<td>✓  ✓  ✓</td>
</tr>
<tr>
<td>Adjunct</td>
<td>-  -</td>
<td>✓  ✓  ✓</td>
</tr>
</tbody>
</table>

Table 6.5: Morphe-Syntactic Tests for Grammatical Functions
Figure 6.1: Non-Subject Participants
6.3 Conclusions

These results show that if we were to posit discrete categories for Tolaki non-subject participants we would be forced to posit a minimum of six categories; two more than are provided for by current models of LFG.

However, even this characterisation is a best case scenario and assumes that further testing with additional morpho-syntactic tests and non-subject participants will not reveal yet more distinctions.

In fact initial results from quantifier float suggest that this is indeed the case. While it has not yet been tested thoroughly for every participant, a Beneficiary can launch a floating quantifier while a Transitive Instrument Theme cannot; this would force us to identify seven non-subject categories.

<table>
<thead>
<tr>
<th>Cont.</th>
<th>Bare NP</th>
<th>2\textsuperscript{nd} Pred.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. SUBJ</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>B. OBJ</td>
<td>-</td>
<td>✓</td>
</tr>
<tr>
<td>C. OBL</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>D. ADJCT</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Table 6.6: English Syntactic Tests

Furthermore, these tests cannot all be described as unidirectional. The idea of unidirectionality is best explained by reference to a subset of English data. In section 2.1.1 we saw that only the subject is eligible to be controlled in English, we also saw in section 2.1.5 that subjects, objects and obliques, but not adjuncts, can launch a secondary predicate. Additionally only a subject and object can be expressed in a bare noun phrase. This data is summarised in Table 6.6.

Each test is sensitive to a progressively more restricted set of grammatical functions, and the scope of each test can be partially predicted on the basis of others. If a grammatical function is eligible to be controlled it is eligible to be expressed in a bare noun phrase, likewise if a grammatical function is eligible to be expressed in a bare noun phrase it is eligible to launch a secondary predicate. Maximal unidirectionality is defined formally in (6.3).
Maximal Unidirectionality

(62) Given a scale of GFs ranging from SUBJ(1) through OBJ(2) to ADJCT(n), there is no syntactic privilege that applies to GF(x) such that GF(x − 1) is not eligible to participate in the same privileges.

Another way of representing unidirectionality is as in Figure 6.2, where uppercase letters represent grammatical functions and the lines represent groupings of grammatical functions to which a test is sensitive.

However, Tolaki morpho-syntactic tests operate in what appears to be an almost haphazard way. This is shown in figure 6.3, in which nine of the tests are represented. While each test is sensitive to a unique set of grammatical functions, they are not progressively more restricted.

Figure 6.3: Non-Unidirectional Tests

A₁ = Subject S
A₂ = Subject A
B = Definite P
C = Indefinite P
D = Dative P
E = Transitive Instrument
F = Transitive Instrument Theme
G = Beneficiary
H = Adjunct

r = Relativisation
s = Plural Agreement
t = NOM
u = Passivisation
v = DAT
w = ABS
x = External Possession
y = 2nd Predication
z = Bare NP
Furthermore, these complications do not exist only among non-subject participants. While the grammatical relations A and S have been grouped together in Tolaki as the subject, these two roles do not have exactly the same set of behaviour. While an S can launch a secondary predicate and be internally relativised, an A cannot.

Instead of positing discrete categories of grammatical functions for Tolaki, a better way to model the data is to posit a continuum of functions. Within this continuum ‘subject’ defines the upper limit of grammatical functions, the maximum amount of behaviour associated with a grammatical function, while ‘adjunct’ defines the lower limit, the minimum amount of behaviour associated with a grammatical function.

Other participants exist on this continuum somewhere between these two limits, some are more privileged than others and are thus more or less ‘subject-like’.

One way to model this continuum is to simply sum the number of tests which a participant is sensitive to. This is done in Figure 6.4. However, this graph does not capture the non-unidirectionality of the tests and from it the best analysis of the Tolaki data appears to be to posit 9 grammatical functions. A graph which captures the continuum-like nature of grammatical functions and their non-unidirectionality is given in Figure 6.5.

The Transitive Instrument and Beneficiary scored 0.5 for External Possession, reflecting that the data is currently ambiguous. The Transitive Instrument Theme was assigned 1 for Internal Relativisation, as the data strongly predicts it would.

---

Figure 6.4: Continuum of Grammatical Functions

---

91
Figure 6.5: Continuum of Grammatical Functions Test by Test: A score of 0.3 or lower indicates that a participant is not sensitive to a test, a score of 1 or higher indicates a participant is sensitive to a test. In order to make all lines visible, scores have been randomised by ±0.3.
However, none of these representations explains why Tolaki participants have this continuum-like behaviour. It is possible to reach an explanation by proposing that the morphology we have been treating as inflectional is, in fact, derivational.

Tolaki transitive verb roots are defective, thus while it is possible to identify a disyllabic root $\sqrt{kaa}$ meaning ‘eat’, this form never surfaces. As noted by Mead (1998:156) the transitive verb in Bungku-Tolaki languages is always accompanied by extra morphology. In Tolaki, even imperatives must be accompanied minimally by the indefinite P prefix or an absolutive suffix.

I propose that each affix is derivational and alters the argument structure of the predicate. As the argument structure of a predicate is slightly altered, so too is the morpho-syntactic behaviour of the participants slightly altered.

One such example, that we have already briefly touched upon, is the difference between so called Dative P verbs and canonical transitive verbs. Thus we saw in section 6.2.1.2 that the argument structure of Dative P verbs differs from that of canonical transitive verbs as their non-subject is assigned [-LR]. The argument structures of the canonical transitive verb kaa ‘eat’ and the Dative P verb to’ori are given below:

(63) ‘kaar(AGT, THM)’
    ‘PRED(→ , → )’
    [ +HR ] [ +LR ]
    [ -HR ] [ -LR ]

(64) ‘to’ori(EXP)STIM’
    ‘PRED(→ )’
    [ +HR ]
    [ -HR ]

I propose that the difference in morpho-syntactic behaviour between these two non-subject participants can be explained by their different argument structure.

Extending this idea further, I propose that the difference in behaviour between other participants is likewise be explained in this way. Observe the two sentences below:

(65) Noponggaa o’ika.
    no-poN-kaar o-ika.
    3NOM-INDEF: P-eat CN-fish
    He eats some fish.

(66) Nokaa’i o’ika.
    no-kaar-i o-ika
    3NOM-eat-3ABS CN-fish
    He eats the fish.

We have seen that the P argument of each of these sentences does not have the same morpho-syntactic behaviour. Therefore, I propose that each involves a different argument structure derivation. In the case of (65) the new derivation prespecifies that the P is indefinite in reference, in the case of (66) the new derivation prespecifies that the P is 3rd person and definite:

(67) ‘poN-(→ INDEF) ‘kaar(→ )’

(68) ‘-i(→ , 3PERS:DEF) ‘kaar(→ )’

93
Appendix A

Data

In this appendix I provide the data for the behaviour of each non-subject participant identified in section 6.2.1 under the syntactic tests described in section 6.2.3. I also provide the relevant data for the subject and adjunct. In this appendix an asterisk indicates that the sentence does not have the reading indicated if the participant passed the test. Thus, many of the asterisked examples under External Possession are in fact grammatical, but the dative suffix must be interpreted as a beneficiary and cannot be interpreted as indexing the possessor of the participant in question.

A.1 Internal Relativisation

Subject S

(1) * Humbee laa-'a-no nggitu'o toono no-laa
   where location-NMLZ-3GEN that person 3NOM-PROG
   ⟨m⟩e'-indio-komiu?
   ⟨NFIN⟩INTR-work-2NSG.DAT
   Where’s that person who’s working for you?

Absolutive P

(2) ✓ Laa ikeni banggona-nggu ku-dondo-'i-kee kaaka-nggu ihawi.
    EXIST here friend-1GEN 1NOM-hit-3ABS-3DAT eSi-1GEN yesteday
    Here is my friend I hit for my older brother yesterday

(3) ✓ Humbee laa-'a-no banggona-mu no-langgu-'i-ko'o
   Where location-NMLZ-3GEN friend-2GEN 3NOM-hit-3ABS-2DAT
   o-kasu.
   CN-wood
   Where’s your friend who hit the wood for me?
There is one of my friends here that I hit for my older brother yesterday.

There are [some] dwarf buffalo here that I came across for you yesterday.

Here is my friend that I met for you yesterday.

Here is the wood that the bad man hit you with.

There is wood here that I hit my friend with for you.

Here are your friends for whom I made tea for you yesterday.
Adjunct

(10) ✓ Hei, ikeni laa'ano bukunggu kupepokonda’u
Hei, ikeni laa’a-no buku-nggu ku-pe-pokonda’u
hey, here location-NMLZ-3GEN buku-1GEN 1NOM-INTR-learn
mombetolaki nggitu’o oleo.
⟨m⟩oN-pe-tolaki nggitu'o oleo
⟨NFIN⟩INTR-tolaki that day.
Hey, here’s the book that I learnt Tolaki from that day!

A.2 External Possession

Subject

(11) * no-mo’isa-kona haape-nggu
3NOM-fall-1DAT mobile.phone-1GEN
My mobile phone fell.

Absolutive P

(12) ✓ Iamo kii-i-kona poto-nggu, mosa’a!
don’t see-3ABS-1DAT photo-1GEN, bad
Don’t look at my photo! It [the photo] is bad.

Unindexed P

(13) * nopolanggunggonala hainggu
no-po-langguN-kona hai-nggu
3NOM-INDEF.P-hit-1DAT ySi-1GEN
He hit some/one of my younger siblings

Applicative P

(14) * Nopondeposuaangggokona onituno puenggu.
No-poN-teposua-nggoN-kona onitu-no pue-nggu
3NOM-INDEF.P-meet-APPL-1DAT ghost-3GEN grandparent-1GEN
He met the ghost of my grandfather.

Dative P

(15) ✓ Ki-to’ori-kee-ko’o kaaka-mu, ine=laa’a-no
1EX.NOM-know-3DAT-2DAT eSi-2GEN, ADJCT.CN=location-NMLZ-3GEN
We know where your older brother is.

\[1\]The applicative suffix -ngako optionally reduces to the form -nggo before another dative suffix.
Theme Dative

(16) ✓ Ku-kali-'i-ko'o o-watu haape-mu.
1 NOM-throw-3 ABS-2 DAT-CN stone mobile.phone-2 GEN
I threw a rock at your phone.

Instrumental Dative

(17) ✓ Mbaako'i upekalinggeekona haapenggu
Mbaako'i u-pe-kaliN-kee-kona haape-nggu
why 2 NOM-INTR-throw-3 DAT-1 DAT mobile.phone-1 GEN
ine watu.
in=watu
ADJ CT-CN=stone
Why did you throw my phone at the rock?

Prepositional Adjunct

(18) * u-penggokoro-kona ine=meda-nggu
2 NOM-stand-1 DAT ADJ CT-CN=table-1 GEN
You stood on my table!

The data for Beneficiaries and External Possession is inherently ambiguous, as discussed in section 6.2.3.2.

A.3 Secondary Predication

Subject, S

(19) ✓ No-leu banggona-nggu molangu,
3 NOM-come friend-1 GEN drunk
My friend arrived drunk

Subject, A

(20) * Ku-kii-'i i-Bio molangu,
1 NOM-see-3 ABS PN-Bio drunk
I saw Bio [while I was] drunk.

Absolutive P

(21) ✓ Ku-kii-'i i-Bio molangu,
1 NOM-see-3 ABS PN-Bio drunk
I saw Bio [while he was] drunk.
(22) ✓ Kupombodea hainggu molangu
  Ku-poN-podea hai-nggu, molangu,
  1NOM-DEF.P-hear ySi-1 GEN drunk
  I heard some of my younger brothers [being] drunk.

Applicative P
(23) ✓ Kupondeposuangako hainggu molangu
  Ku-poN-teposua-ngako hai-nggu, molangu,
  1NOM-DEF.P-meet-APPL ySi-1 GEN drunk
  I came across my younger brother [while he was] drunk.

Dative P
(24) ✓ Kuteposuanggee hai-nggu molangu.
  Ku-teposuaN-kee hai-nggu, molangu,
  1NOM-meet-3 DAT hai-1 GEN drunk
  I met my younger sibling [while he was] drunk.

Absolutive Instrument
(25) ✓ Ku-baho-'i-kee iwoi, i-Bio molangu,
  1NOM-wash-3ABS-3DAT water PN-Bio drunk
  I wash Bio with water [while it is] drunk.

Theme Dative
(26) * Ku-baho-'i-kee iwoi i-Bio molangu,
  1NOM-bathe-3ABS-3DAT water PN-Bio drunk
  I wash Bio with water [while he is] drunk.

Instrumental Dative
(27) ✓ Kupebahonggee iwoi, kei i Bio molangu,
  Ku-pe-bahoN-kee iwoi kei=i-Bio molangu,
  1NOM-INTR-wash-3DAT water ADJCT.PN=PN-Bio drunk
  I was Bio with water [while it is] drunk.

Beneficiary
(28) * Kulaa me'indiokee banggonanggu molangu.
  Ku-1aa (m)e-indio-kee banggona-nggu, molangu,
  1NOM-PROG (NFIN)INTR-work-3DAT friend-1 GEN drunk
  I worked for my friend [while he was] drunk.

Prepositional Adjunct
(29) * Ku-pe-pokonda'u ine=banggona-nggu, molangu,
  1NOM-INTR-learn ADJCT.CN-friend-1 GEN drunk
  I learnt from my friend [while he was] drunk
A.4 Passivisation

Absolutive/Unindexed P

(30) ✓ No-ni-langgu hai-nggu.
3NOM-PASS-hit ySi-1GEN
My younger sibling was hit.

Applicative P

(31) ✓ Owose mbu'upu'u kadue t(in)eposua-ngako-nggu ihawi.
big real dwarf.buffalo (PASS)meet-APPL-1GEN yesterday
The dwarf buffalo which I came across yesterday were really big.

Dative P

(32) * kaaka-mu t(in)o'ori-nggu
eSi-2GEN (PASS)know-1GEN
Your older sibling who I know.

Absolutive Instrument

(33) * no-ni-langgu-kona o-kasu
3NOM-PASS-hit-1DAT CN-wood
I was hit with a piece of wood.
References


