The Gorwaa Noun: Toward a description of the Gorwaa language

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Declaration

I have read and understood Regulation 21 of the General and Admissions Regulations for students of the SOAS, University of London concerning plagiarism. I undertake that all the material presented for examination is my own work and has not been written for me, in whole or in part, by any other person. I also undertake that any quotation or paraphrase from the published or unpublished work of another person has been duly acknowledged in the work which I present for examination.

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Abstract

Gorwaa is a South Cushitic language of Tanzania whose nouns are particularly complex. Based on detailed documentation of the language (most of which is openly accessible for consultation in an online archive (Harvey 2017)), this dissertation provides a first description of Gorwaa grammar, with a particular focus on the noun. Additionally, a grammatical analysis of Gorwaa nouns is developed using the Distributed Morphology architecture and Minimalist syntax. This offers a different perspective from the typically functional analyses available for South Cushitic languages thus far.

Following a general sketch of Gorwaa grammar, as well as a brief introduction into the theoretical framework, each subsequent chapter of the dissertation focuses on one subpart of the noun and its morphosyntactic characteristics. Composed of several identifiable subparts (e.g. the stem, the suffix, and the linker), each of which in turn presents a rich array of variants, the Gorwaa noun is an ideal entry point for inquiry into Gorwaa as a system, as adequate explanation of nouns in this language touches on all the major modalities of grammar (phonology, morphosyntax, semantics, and pragmatics).

Syntactically, the stem is formed of a root, whose characteristics (phonetic, semantic, and categorial) are determined by the larger syntactic structure in which it is found. Distinguished by two broad groups of morphosyntactic characteristics (those which are regular and those which are listed), the suffix is formed of (maximally) three syntactic heads: Cl (classifier), # (quantifier), and n (‘little n’). In order to bear a number value (Sg or Pl), nouns must be classified and quantified. Nouns unvalued for number (‘general’ number) are neither classified nor quantified. The little n head is the site of the paradigm, itself established as a grammatical formative realized as a specific suffix through instructions post-Spellout. Grammatical gender is a diacritic feature, also realized post-Spellout, making Agree a necessarily post-Spellout operation (cf. Bobaljik 2008). The linker is agreement morphology on the syntactic head D. Cases of mismatch between the form taken by the linker and the gender value of n represents the interpretable (semantic) features of the referent of the noun (itself the external argument of n), intervening in agreement relations between D and n. This mechanism is extended to account for adjectival number agreement on nouns of general number.
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This dissertation is a culmination of several years of focused work, and arguably a lifetime of more general 'formation', of which I am duly gratified, and for which I am deeply grateful. With that said, throughout my life and work, I have consistently benefitted from my sex, the colour of my skin, and the country of my birth. My privilege (male, white, Western) is not acceptable. This inequality is thrown into even sharper relief in that much of my work is based on the African continent, and is inextricably linked with African people -- both of which still face the dark impact of colonialism perhaps more directly than any other place on earth. As an academic, much of whose work has been in the assignment of meaning, there is a role for me to play in addressing these inequities. In an inaugural speech to the National Assembly, the first president of Tanzania, Mwalimu Julius K. Nyerere said “Of all the crimes of colonialism there is none worse than the attempt to make us believe we had no indigenous culture of our own; or that what we did have was worthless - something of which we should be ashamed, instead of a source of pride.”

It therefore follows that, corresponding to my professional capacity and technical ability, my work ought to help affirm what has for so long been denied: the complexity of African language/s, the depth of African history/ies, and the richness of African culture/s. Ultimately, of course, the role of linguist comes second to the role of human being. As much as successful linguistics is about formulating the perfect elicitation questions, finding the ideal consultants, and keeping tabs on the

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plethora of research data (all while supplying enough electricity to keep the batteries charged), the whole enterprise is meaningless if one comes away without having felt something. Nothing is more important than developing with our field communities relationships of trust, friendship, and shared humanity -- perhaps the ultimate cure to the prejudices which continue to detain our progress as the scientific, sympathetic species which we most certainly are. It is therefore my task to ensure that my work is a reflection of the above as truths, and not mere sanctimony.

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Needless to say, all errors found in this dissertation are mine, and mine alone.

The author,
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**Abbreviations**

A -agent of transitive clause
Abl -ablative
Amp -amplicative
Ana -anaphoric pronoun
Atten -attenuative
Aux -auxiliary
Back -background 'tense'
Comp -comparative
Consec -consecutive 'tense'
Dem1 -demonstrative, first degree deixis
Dem2 -demonstrative, second degree deixis
Dem3 -demonstrative, third degree deixis
Dem4 -demonstrative, fourth degree deixis
Emph -emphasis
Expect -expectative aspect
F -feminine gender
Fr -feminine r-type subgender
Ft -feminine t-type subgender
Imp -imperative mood
Imprf -imperfective aspect
Indef -indefinite determiner
Instr -instrumental
L -linker
Lat -lative
LPA -level pitch accent
M -masculine gender
Mk -masculine k-type subgender
Mo -masculine o-type subgender
MP -mediopassive voice
N -neuter gender
Na -neuter a-type subgender
NØ -neuter Ø-type subgender
Neg -negative
P -patient of transitive clause
  -speech act participant
Part -participle
Pl -plural number
Plur -pluraclional
PolarQ-polar question
Poss -possessive determiner
Prep -preposition
Pres -present tense
Prf -perfect aspect
Pro -pronoun
Prohib -prohibiative mood
Pst -past tense
Q -question
Reason -reason
Rec -reciprocal
Red -reduplication
Res -resumptive
RPA -rising pitch accent
S -sole argument of intransitive clause
Sg -singular number
Subj -subjunctive mood
Temp -temporal
Top -topic
Vent -ventive
1 -1st person
2 -2nd person
3 -3rd person
♀ -female sex
♂ -male sex
´ -rising pitch accent
` -falling pitch accent
ˆ -rising-falling pitch accent
1. Introduction


Gorwaa (ISO 639-3: gow), a South Cushitic language spoken in north-central Tanzania, is an endangered language, about which very little is known or available to linguists. Beginning in 2012 and extending to present, I have had the privilege of spending long periods of time living with speakers of Gorwaa in and around what may be construed as their traditional homeland of Babati district, conducting audiovisual documentation of their language. This work is one early output of that documentary and descriptive fieldwork.

While learning to speak the language (an ongoing feat, it must be admitted), perhaps one of the most mind-boggling tasks (or group of tasks) was using nouns correctly. Simply put, as a speaker of English (with some familiarity with both French (fra) and Swahili (swa)), I found ‘getting the nouns right’ in Gorwaa very difficult indeed. Four examples of this characteristic difficulty are outlined below:

**Tone:** Nouns must be pronounced with the appropriate tone, otherwise they are either misunderstood or deemed incorrect. The noun *aalutumo* ‘inheritor ♀’ must therefore be pronounced with low tone, and the noun *tlaptumo* ‘falcon’ must be pronounced with high tone. Several noun pairs exist whose meaning differs solely in whether they are produced with low or high tone. Thus, the word for ‘drum’ is *niinga*, and the word for ‘pigeon species’ is *niingá*. The word for ‘night’ is *amsi*, versus the proper name *Amsí* (typically given to a boy or girl born at night).
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LINKERS: All nouns possess a short form and a long form. The short form of the noun meaning 'cow' is *sle*, the long form of the same noun is *sleér*. Long form morphology (in this case, the high tone and the -*r*) is referred to in the South Cushitic literature as the linker, and is mandatorily present in constructions showing nominal possession, or other concepts of modification (e.g. *sleér aako* 'grandfather's cow' and *sleerí* 'this cow'), but is also present in other constructions which are clearly not modificational in nature (e.g. *aní a sleér diif* 'I hit the/a cow').

ADJECTIVAL NUMBER AGREEMENT: Some nouns can take adjectives agreeing in either singular or plural, resulting in slight changes of meaning. For example, the noun *tsaxway* 'grasshopper', could occur with an adjective like *tleér* with either singular agreement (i.e. *tsaxwáy tleér*) or plural agreement (i.e. *tsaxwáy tlét*). In the case of singular adjectival agreement, the resultant meaning is something like 'a long grasshopper'; in the case of plural adjectival agreement, the resultant meaning is something like 'a long swarm of grasshoppers' or 'a species of long grasshopper'. Conversely, some noun suffixes (like the masculine suffix -*mó*) only allow singular adjectival agreement (hence *daka'umó tleér* 'a tall baobab tree', but not *daka'umó tlét* (with an intended meaning of something like 'a species of tall baobab trees'); and some suffixes (like the neuter suffix -*du*) only allow plural adjectival agreement (hence *suledú tlét* 'tall schools', but not *suledú tleer*). However, while many suffixes can be described as taking only singular adjectival agreement (like -*mó*), taking only plural adjectival agreement (like -*du*), or taking both (like masculine -*ay*), other suffixes do not behave according to this generalization: some suffixes, it seems, can *sometimes*...
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take either singular or plural adjectival agreement, but sometimes cannot. For example, the noun *loosi* ‘beans’ (suffix -i) can occur in the construction *loosir* tleer ‘a long species of bean’ (i.e. singular adjectival agreement) and the construction *loosir* tlet ‘long beans’ (i.e. plural adjectival agreement); however, the noun *bi/ini* ‘silky blesmol’ (with the same suffix -i) can only occur with singular adjectival agreement: hence, *bi/inir* tleer ‘a long silky blesmol’, but *bi/inir* tlet (intended meaning, ‘a species of long blesmol’).

**ENCAPSULATION:** In addition to occurring outside of the verb phrase, nouns may also occur inside of the verb phrase, between the auxiliary (i.e. the selector) and the main lexical verb -- the so-called ‘encapsulated position’. Therefore, in the clause *aní* slee aga diiř ‘I hit the cow’ the noun *slee* ‘cow’ is outside of the verb phrase (i.e. in ‘un-encapsulated position’), whereas in the clause *aní* a sleér diiř ‘I hit the cow’, the noun *slee* is inside of the verb phrase (i.e. in ‘encapsulated position’). As may be seen from the direct translations of each clause, the difference in position does not result in a difference in terms of content as such, but of the weight of that content. Unencapsulated nouns may refer to newly-introduced entities in the discourse, whereas encapsulated nouns rarely, if ever, perform this function.

These phenomena, among others, range from fairly straightforward to considerably complex and, collectively, are the reason why the current work is dedicated to the Gorwaa noun. Addressing these patterns provides impetus for deep exploration of Gorwaa morphosyntax and, ultimately, detailed grammatical description of the Gorwaa language: the long-term desideratum of the broader project.
Indeed, this ‘project’ does not exist in isolation: interest in the description of the wider South Cushitic language family is not without its scholarly tradition, beginning with Whiteley’s (1958) *A Short Description of Item Categories in Iraqw* and gaining considerable advances with the Iraqw grammars of Nordbudstad (1988), Mous (1993), and the major historical survey of Kießling (2002). A long list of papers may also be added to this list, including those focused on historical reconstruction (e.g. Kießling 1998, 2004, Mous 1996, and Kießling & Mous 2003) as well as description of specific grammatical constructions (e.g. Kießling 2007, Mous 2004, and Mous and Qorro 2010). Specifically, this work seeks to engage in this body of description in two ways. Primarily, by treating a South Cushitic language which has, to present, been underrepresented in literature on the family, this work will broaden the empirical basis upon which work about South Cushitic is conducted. Additionally, this work aims for a different perspective on South Cushitic, namely in taking a formal approach to questions which, to present, have been treated from a functional stance.

The division of formal and functional approaches is not neat, and runs the risk of being essentialist. As stated in Carnie and Harley (2003) “[t]here is very little agreement among linguists about which particular assumptions or methodologies mark one as a functionalist or a formalist” (1). With that said, the identification of some common dimensions along which formalist and functionalist approaches differ, and the keys ways in which those differences are manifest will prove useful in orienting this work in relation to past work on South Cushitic. The following table is based on Carnie and Harley (2003:2), itself based on Croft (1995) and Newmeyer (1998).
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Table 1.1 Formal versus Functional Approaches (adapted from Carnie and Harley 2003:2)

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Functional Approach</th>
<th>Formal Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>The role of structure in grammatical theory</td>
<td>Less reliance on structure.</td>
<td>More reliance on structure.</td>
</tr>
<tr>
<td>The role of arbitrariness in grammar</td>
<td>Grammatical arbitrariness is essentially lexical arbitrariness. Radical functionalism sees arbitrariness only in the lexicon.</td>
<td>Language, including grammar, is essentially arbitrary.</td>
</tr>
<tr>
<td>The autonomy of syntax</td>
<td>Speaking of grammatical form in isolation is meaningless: semantic and pragmatic function is central to grammatical form.</td>
<td>Several grammatical phenomena allow formal characterization without reference to their semantic or pragmatic function.</td>
</tr>
<tr>
<td>The diachronic/synchronic distinction</td>
<td>Full characterization of a grammatical system is incomplete without an understanding of the historical events that gave rise to it.</td>
<td>The goal of linguistic theory is to characterize the grammatical system of a speaker at a given moment in time, without reference to the historical pressures that gave rise to that system.</td>
</tr>
<tr>
<td>The competence/performance distinction</td>
<td>The performance system and the comprehension system are isomorphic.</td>
<td>There exists core grammatical knowledge which can be characterized independently of the production/comprehension system that realizes it.</td>
</tr>
<tr>
<td>What constitutes ‘data’ for linguistic study</td>
<td>Statistical corpus analysis, historical data, and sociological data.</td>
<td>Grammaticality judgments, typological comparison, and data from language acquisition.</td>
</tr>
</tbody>
</table>

Almost immediately, this table belies the diversity of previous work on South Cushitic, as well as what is to be covered in the current work. For example, Mous and Kooij (2006) represents a particularly structurally-oriented treatment of incorporation constructions in Iraqw. Additionally, this work does occasionally
1. Introduction

discuss certain phenomena from a historical perspective (see esp. §5.3.6.2 on the reanalysis of loanword endings). Simply put, functionalism and formalism must be seen to exist as poles of a continuum, and this work, as well as other related to it, though located more toward one pole or another, will rarely occupy one of the extremes.

With that said, it is useful to return to the four introductory ‘difficulties’ of Gorwaa outlined above, and to contrast how they have been approached in the past and how they have been approached in the current work. Using these four cases (each roughly representing a different modality of the grammar), one can see how the past analyses and the present analysis differ in terms of formal versus functional orientation.
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#### Table 1.2 South Cushitic: Formal versus Functional Approaches

<table>
<thead>
<tr>
<th>Phenomenon</th>
<th>Functional Account</th>
<th>Formal Account</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tonal Pairs</strong> [Phonology]</td>
<td>Represent a derivational device historically used to create proper names from common nouns via addition of a high tone (Kießling 2004:10)</td>
<td>Represent the synchronic existence of a series of suffix pairs differentiated solely by tone, added to a noun stem (see e.g. §5.3.2.2).</td>
</tr>
<tr>
<td><strong>Linkers</strong> [Morphology]</td>
<td>Represent a historical development from general deictics, common in AfroAsiatic (Banti 1997:100)</td>
<td>Represent the synchronic instantiation of D: obligatorily present in the syntax of nouns bearing reference, but whose pronunciation is prosodically conditioned (see Chapter 7).</td>
</tr>
<tr>
<td><strong>Adjectival Number Agreement</strong> [Semantics]</td>
<td>Represents semantic agreement. “The same noun can have a singular or plural adjective with a difference in meaning.” (Mous 1993: 204)</td>
<td>Represents agreement with the R argument for interpretable number features, if and only if the suffix is unvalued for number (see §7.4).</td>
</tr>
<tr>
<td><strong>Encapsulation</strong> [Pragmatics]</td>
<td>Represents a syntactic construction “determined [...] by pragmatic factors”: the position is for less pragmatically salient material (Kießling 2007: 145).</td>
<td>Represents a pragmatic construction determined by syntactic/phonological factors: the encapsulated noun, by being integrated into the verbal complex, loses perceptual prominence. If the speaker wishes to emphasize a new referent, that speaker will probably not use an encapsulated form to do so (see §7.3.3.1, esp. (7.20); c.f. Baker (1996: 290)).</td>
</tr>
</tbody>
</table>

As may be seen, in certain cases (such as adjectival number agreement), the analyses yielded by the new formal approach are virtually the same as those yielded by the former functional approach. In other cases (such as encapsulation), the analysis frames the phenomenon in a different way. In still other cases (tonal pairs, linkers), the two approaches lead to two final analyses.
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so different that they will surely result in visible differences in, say, glossing for a descriptive grammar of the language. What ought to be noted is that, though each pair of analyses uses a very different approach and, occasionally, arrives at a very different interpretation of the phenomenon, no single one yields an ‘answer’. Ultimately, each of these interpretations will have their use in the description of the language and, when taken together, represent a richer view of the phenomena at hand. It is in this spirit of complementarity that the current work adopts a formal approach, and it is hoped that the insight derived from it will stimulate future thought and inquiry.

Specifically, the theory which informs the formal approach taken in this work is Distributed Morphology (DM) (Halle & Marantz 1993, 1994). Because much of what follows treats the noun as a complex of smaller parts, DM seemed the most obvious framework to follow. Because DM asserts that sub-word components (i.e. morphemes) enter into structural relationships according to the same mechanisms which drive the structuring of phrases and clauses, the same vision of the syntax (i.e. Minimalism) may be adopted at all levels throughout the work.

The remainder of this chapter situates the Gorwaa language within its larger social and historical context, and provides details on the methods and methodology used to collect the data used herein.

Following this introduction is a general sketch of Gorwaa. Providing a general introduction to the language, this chapter is intended as both an empirical contribution to a language for which no previous description was available, as
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well as to ground the reader in some basic concepts which will be further elaborated in following chapters.

The third chapter is an introduction to the formal model employed in the linguistic analysis: the Minimalist Programme and Distributed Morphology.

The fourth chapter discusses the core subject matter of the work: the noun. Following some discussion on wordhood criteria, the noun is established as composed of three major parts: the stem, the suffix, and the linker. The remainder of the chapter provides a formal DM analysis of the Gorwaa noun stem.

The fifth chapter turns to the suffix. Morphosyntactically complex, suffixes are identified as having phenomena which may be described as regular as well as phenomena which may be described as listed. This chapter treats the former characteristics, and the following chapter treats the latter. With this established, an overview of the regular phenomena ensues, as well as a detailed presentation of the suffixes of Gorwaa. From a formal (DM) perspective, these regular characteristics are accounted for as products of feature bundles being manipulated in the syntax.

The sixth chapter treats the listed phenomena of the suffix. Following an introduction to the idea of declension class (or paradigm), an overview of the listed phenomena is given, as well as a detailed presentation of the paradigms into which noun suffixes enter in Gorwaa. Formally, these listed phenomena are accounted for as realizations of rules post-Spellout.
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The seventh chapter treats the linker -- the final major part of the Gorwaa noun. Following a presentation of linker forms and the morphosyntactic distribution of the linker, it is argued that, contra previous analyses in South Cushitic, that the linker represents agreement morphology manifest on the determiner, whose pronunciation is morphophonologically conditioned. Formal analysis in this chapter is focused on accounting for agreement patterns.

Concluding, chapter eight summarizes the thesis, discusses the implications of the thesis both for South Cushitic and for formal syntax, and proposes prospects for further research.

It will be noted that this work does not include a specific 'literature review' chapter. This was a conscious decision, motivated primarily by the disparate nature of the literature drawn upon in this work. Aside from the overarching framework of Distributed Morphology and Minimalism (which are given their own dedicated chapter (see Chapter 3), there is no one concept which informs the entire work. Instead, concepts are employed when they are needed, and as the narrative progresses.

1.2 Language context

The following subsection is concerned with situating the Gorwaa language within its larger social, historical, and social-cultural context. Before doing this, however, a comment on the researcher's own situatedness (i.e. involvement within the research context) is also worthwhile.

As a university student (and during Masters-level work, a student at the local University of Dar es Salaam), it was widely recognized among the people with
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whom I was working that I occupied a position of an apprentice -- analogous to young Tanzanians conducting fieldwork on the behalf of NGOs or the central government. Research was, then, a necessary step, conducted in order to graduate and progress in my chosen field of work. As a result, many people with whom I have worked have seen themselves as teachers (either of the Gorwaa language or of the Gorwaa lifeways), and seen their knowledge and labour as a contribution to the concrete task of helping me ‘write a report’ or ‘pass an examination’. At the same time, as a white, Western-educated researcher, I am clearly also viewed as part of a lineage of foreign agents: anthropologists, philanthropists, evangelists, and colonists -- the influence of whom has had a tremendous effect on the reality of contemporary Tanzania, and not always benign. I use the word ‘agent’ consciously, as white people who do not fit into the tourist (Sw. mtalii) trope do not simply arrive in rural Tanzania for nothing -- they are there to do something. For the Gorwaa, this has meant things like converting people to Christianity, buying up land for large-scale agriculture, or surreptitiously hunting for treasure. Whatever the motivation, white interactions with the Gorwaa people are consistently an exercise of white privilege and (neo-)colonial power over a largely passive (or ‘pacified’) indigenous peasantry, and may very often be characterized as a process of extraction (of converted souls, of farmed produce, of treasure). Indeed, the current work is a product of the extraction of audiovisual material from the Gorwaa language community. Written in English, and in such a way that many well-educated Western audiences might still find opaque, the work will largely remain inaccessible and (due to differences in the Western-academic and Gorwaa epistemologies) of limited use to the Gorwaa-language community.
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How to address the (often problematic) nature of white involvement in Gorwaaland is not the purpose of this dissertation, and even if it were, such a dissertation would be of little practical use to the Gorwaa people. Instead, commitment to long-term, reflexive, engagement with the Gorwaa language community, with the ultimate goal of inverting the traditional template of interaction (power held by the outsider, extractive) in favour of a new model (power held by the Gorwaa people, creative/locally meaningful) is perhaps the most appropriate approach. Actions taken during the current research toward this new model include developing a locally-led research advisory committee, holding extensive public engagement, and committing to fair payment for language consultants, but such measures represent what can only be called a tentative beginning to addressing a very old and often pernicious issue indeed.

Following this reflection on the history of white outsiders among the Gorwaa, it may seem paradoxical (or perhaps even hypocritical) to attempt to engage in an ethnographic analysis. After all, in writing about “the Gorwaa”, is it not the underlying assumption that they are therefore some homogeneous mass, somehow bound to the dictates of tradition or “tribe”? No. To paraphrase Sanders’ (2008) comment on the Isanzu, the Gorwaa are a collection ultimately composed of individuals: some practice religion, some do not, some possess high levels of Western education, political power, and economic advantage, some do not. There are families living in towns and cities throughout the country who probably identify as Gorwaa, and there are no doubt a very few who live in Europe, America, or other parts of ‘the West’. This diversity would seem to confound any coherent approach to writing about ‘the Gorwaa’, if it were not for
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the fact that the Gorwaa often employ the term to essentialise themselves. The image of the Gorwaa given below therefore attempts to capture how the Gorwaa imagine themselves. “On this score it is important to note that anthropological projects that essentialize Others are not the same thing as anthropological projects like this one that aim to write about and through Others’ projects of essentialization” (207n5).

With that said, the following subsection offers a discussion of the Gorwaa language context, which is necessarily tentative on matters relating to Gorwaa culture. One day, a Gorwaa scholar will undoubtedly do better, but, until then, this attempts to fill the lacuna.

1.2.1 History

Oral traditions of the Datooga people state that around 1700, the leader of the Barbaig clan, Ruida, came to the Hanang area to find other groups of Datooga living alongside farmers known as ‘Gobreik’ (Wilson 1952: 42, 45). Today, this term is the Datooga word used to refer to the Gorwaa. It is argued, however (Kießling & Mous 2003: 119) that, given the time-depth, ‘Gobreik’ referred not to the Gorwaa people specifically (c.f. Thornton 1980: 199), but an earlier group of Cushitic-speaking peoples from which the Gorwaa and Iraqw peoples (and possibly Alagwa and Burunge) derive. This is corroborated by Gorwaa oral tradition, which holds the Gorwaa, Iraqw, Alagwa, and Burunge peoples to be born of one father [20151125j].

In one version of this story, the Gobreik live near the banks of the Ya’eér Qantsar (Green River) [20151125i]. In another, it is a place called Ma/angwe
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[DSC_5354_20150705b.6]. Depending on the account, changing climate or exhaustion of natural resources bred internal unrest which led to conflict between the Gobreik and the neighbouring Datooga people. Dealt a decisive defeat, the Ya’eër Qantsar-Ma/angwe settlement was abandoned\(^1\), the leader of the Gobreik fled, and the people were scattered. The people who retreated to the high plateau between Lake Manyara and Lake Eyasi performed a rite of atonement, and were subsequently spared further battles with the Datooga. These people became the Iraqw. The people who remained on the wide lowlands did not perform atonement rites, and became the Gorwaa. No mention in the oral accounts I have collected make mention here of either the Alagwa or Burunge peoples.

The Gorwaa went on to settle small communities in the area between Mount Hanang to the west and Mount Kwaraa to the east, but were frequently driven out in a long series of skirmishes with the Datooga. The arrival of another group of Nilotic speaking people -- the Maasai -- brought an end to the Datooga incursions, and seemed to allow the Gorwaa to resettle communities from the east bank of the Duuru river to the far side of Mount Kwaraa. Shortly thereafter (approximately 1885), the German colonial administrators (based in Kondoa)

\(^1\) The location of the Ya’eër Qantsar-Ma/angwe settlement remains unknown, but the site of the iron-age ruins of Engaruka is a tantalizing candidate. Archaeological evidence shows that “[... sorgum was the main crop, [...] fertilized with manure from stall-fed cattle.” (Sutton 2000: 2), an agricultural practice still used by the Iraqw and Gorwaa today. In addition to this, the Engaruka community seems to have collapsed due to a “decline in the river flows so that several of the irrigation canals could not be sustained to satisfy the demands of so intensive a system supporting so concentrated a population. [O]ne can imagine pressure on resources and unavoidable overworking, with erosion and soil-exhaustion in its train [...]]” (2). Furthermore, abandonment of Engaruka seems to have been complete by around 1700, approximately the same time Ruida saw the Gobreik at Hanang. However, many oral histories of the area place the Ya’eër Qantsar-Ma/angwe settlement much further south, with alternate inhabitants of the Engaruka settlement being the precursors of the Sonjo people.
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took control of the region, largely bringing a definitive end to large-scale raids from both the Datooga and Maasai, and allowing the area occupied by the Gorwaa to be consolidated as what is now considered Gorwaaland.

The account above runs the risk of reducing the relationship of the Gorwaa and Datooga to one of cat-and-mouse antagonism. In fact, the interplay of these cultures is much more complex and nuanced. Lexical borrowings from Datooga into Gorwaa are common in semantic fields such as cattle diseases and plant and animal names (Kießling & Mous 2003: 33), and many place names in Gorwaaland are Datooga in origin. In fact, older speakers of Gorwaa often report that at least one of their parents spoke Datooga, or identified as a Datooga person themselves. To this day, Datooga traditional doctors, as well as historical figures such as the Datooga prophet Saygilo Mageena, are held in high regard. Suffice it to repeat Kießling, Mous, & Nurse (2008) in saying that “[t]he Tanzanian Rift Valley is an area with a long period of contact with unstable power relations in which the directions of influence changed over time [...]” (2), the Gorwaa-Datooga dynamic described above representing just one moment in this long interplay of different peoples.

Colonial rule (as part of German East Africa from 1885-1919, and as part of Tanganyika Territory (ruled by the British) from 1922-1961), saw a reorganization of Gorwaa society, with the existing hereditary chiefdom given unprecedented power, serving as a proxy for the German and then the British colonial administrators. Power was placed in the chiefs’ hands to collect taxes, to arrest and imprison criminals and dissenters, as well as to impose fines for non-compliance with large colonial projects, such as compulsory military service
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From this arose a strict hierarchy, at the top of which was the 
*wawutumo* ‘chief’, followed by the *ga/awusmo* ‘overseer, sub-chief’, followed by 
the *ya/abusmo* ‘steward, ward secretary’ followed by the *boyimo* (from the 
English ‘boy’): ‘village headman’. Particularly popular stories from this era 
include those relating to the communal clearing of the forests across Gorwaaland 
in order to rid the region of tsetse flies, as well as to open the land to agriculture 
[20151202d]. It was at this time that the Gorwaa began to settle to the north as 
well as to the east of Mount Kwaraa.

Independence from Britain in 1961 saw the creation of the country of 
Tanganyika, and the abolition of the chiefdoms. From independence until the 
mid-1980s, the country (renamed Tanzania upon union with Zanzibar in 1964) 
was a socialist one-party state. During this time Gorwaaland was a remote part 
of the large Arusha region, and the Gorwaa people continued to live traditionally 
as farmers and pastoralists. Babati, the largest urban centre in the area, 
remained a small outpost town, served by a post office and a health centre 
[20150805].

2003 marked the beginning of a period of great change in the area, when the 
Arusha region was divided in two, its southern half renamed Manyara, and 
Babati declared the regional capital. This has spurred a sudden, intensive influx 
of development (paving roads, building government offices, opening banks, retail 
businesses, etc.) as well as sizeable migration of people to the new capital: both 
from within the region as well as from other regions. Increasingly, electricity is 
arriving in the towns and villages all around Gorwaaland, and paved roads and 
bridges are opening up communities to the commerce, culture, and language of
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the national majority. Time will tell how the Gorwaa people will respond to these recent titanic shifts.

1.2.2 Language family

Gorwaa is a member of the Southern Cushitic group of the Cushitic family - itself a branch of the Afro-Asiatic phylum. The exact position of South Cushitic within Cushitic is a matter of some debate, with Greenberg proposing Southern Cushitic as an independent branch of Cushitic (equal with Northern, Eastern, and Central Cushitic), and Ehret (1995: 490) including Southern Cushitic within Eastern Cushitic. An internal classification of Southern Cushitic is presented in Figure 1.1.

Figure 1.1: Internal classification of Southern Cushitic (adapted from Ehret 1980a: 132)

<table>
<thead>
<tr>
<th>Southern Cushitic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mbugu Branch</strong></td>
</tr>
<tr>
<td>Ma’a (mhd; Tanzania)</td>
</tr>
<tr>
<td><strong>Rift Branch</strong></td>
</tr>
<tr>
<td>Iraqw (irk; Tanzania)</td>
</tr>
<tr>
<td>Gorwaa (gow; Tanzania)</td>
</tr>
<tr>
<td>Alagwa (wbg; Tanzania)</td>
</tr>
<tr>
<td>Burunge (bds; Tanzania)</td>
</tr>
<tr>
<td><strong>Dahalo Branch</strong></td>
</tr>
<tr>
<td>Dahalo (dal; Kenya)</td>
</tr>
<tr>
<td><strong>East-Rift</strong></td>
</tr>
<tr>
<td>Qwadza¹ (wka; Tanzania)</td>
</tr>
<tr>
<td>Aasax¹ (aas; Tanzania)</td>
</tr>
</tbody>
</table>

Kießling and Mous (2003: 2-3) note that classification of Southern Cushitic is a challenge for several reasons. Firstly, of the East-Rift branch, both languages are now assumed to be extinct, with only small amounts of lexical data remaining (see Ehret (1980a+b) for Qwadza, and Ehret (1980a), Fleming (1969), Merker (1910), Maguire (1927/1928), and Winter (1979) for Aasax). Secondly, Ma’a of the Mbugu Branch is best described as a 'mixed language' (Mous 1994), featuring Bantu morphology and two registers: one containing Cushitic roots and the other of Bantu origin. Because of this, inclusion of Ma’a in any genetic classification
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proves problematic. The status of Dahalo, whether Southern Cushitic, Eastern Cushitic (Blazek & Tosco 1994), or neither (Rowe 2000), is, ultimately, unclear. As such, Kießling and Mous (2003) focus on the internal classification of West-Rift, presented in Figure 1.2.

Figure 1.2: Internal classification of West-Rift (adapted from Kießling & Mous 2003: 2).

The internal classification is useful: for example, Gorwaa and Iraqw are mutually intelligible, which is reflected here in the relatively late split between the two languages. Limitations, however, do exist. Contact has played a large role in the development of all four of these languages, and cannot be represented genetically. For example, in the nominal suffixes -iimi, -aCee, and -aCu occur in both Gorwaa and Alagwa (whose language communities currently border each other), but not in Iraqw (which no longer borders Alagwa). Lexical borrowings from Alagwa into Gorwaa are also present.

Mutual intelligibility between Gorwaa and Iraqw is high, with several recordings having been made of Gorwaa speakers addressing Iraqw speakers with no apparent issues of comprehension [20150913a], [20150913d], [20150927a-f]. The two languages do, however, feature some considerable differences. In addition to the nominal suffixes noted above, Gorwaa also shows a different agreement pattern with several adjectives in the plural form: compare the Iraqw
muukú buuxayén with the Gorwaa muukú buuxáx (‘grey people’). The marker for third person agent is also different: compare the Iraqw guna diif with the Gorwaa nguna diif (‘he hit it(M)’). Syntactically, Gorwaa seems to feature a somewhat freer argument order than Iraqw: post-verbal nouns which index arguments, such as the Gorwaa ina tlάy gofaangw (‘the buck went’), are considered either strange or ungrammatical in Iraqw.

1.2.3 Language use and attitudes

This subsection treats language use and attitudes, 1.2.3.1 discusses the number of speakers, 1.2.3.2 discusses language use, and 1.2.3.3 discusses language attitudes.

1.2.3.1 Number of speakers

Estimates of the number of Gorwaa speakers vary greatly. This is largely due to the fact that no dedicated language survey has been conducted for Gorwaa, and very little was known about the linguistic makeup of communities in and around Gorwaaland. Ethnologue (Simons & Fennig 2017) currently puts speaker numbers at 50,000. This figure is from Kießling’s (1999) historical reconstruction of South Cushitic - and seems to be an educated guess. Indeed, the following year, Kießling (2000: 1), revises this estimate to 100,000 speakers. In a 2007 manuscript, Mous estimates the number of Gorwaa speakers at “about fifteen thousand speakers or less”. In comparison with the Iraqw people - expanding and culturally dominant in the region (and whose language is the main focus of that particular work) - Gorwaa does seem a minuscule quantity.

The first methodologically rigorous figure for Gorwaa speakers comes in the *Atlasi ya Lugha za Tanzania* (LOT 2009), in which informants (mainly university
1. Introduction

students who grew up in the administrative region of interest) were asked to indicate which languages (up to five) were spoken in each area (villages for rural areas and streets for urban areas) shown in the population census database (Tanzania Government 2002), as well as estimate what percentage of people spoke which language. Project researchers then spent 6 weeks in all regions of the country during July-August 2006 filling gaps and assessing the validity of informants' estimates (Muzale & Rugemalira 2008: 78-79). The number of Gorwaa speakers resultantly recorded in the *Atlasi* was 112,941 (LOT 2009: 3).

In an attempt to arrive at a yet sharper conclusion, I recorded population figures from the latest available census data (Tanzania Government 2014) for each ward within both Babati Town and Babati District - the area within which Gorwaaland is located - and made an estimate on what percentage of inhabitants speak Gorwaa. An additional 2,500 speakers have been added to places where small communities or individual families of Gorwaa speakers may live which are outside of the survey area (places like Mto wa Mbu, Arusha, and Dar es Salaam).
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Table 1.3: Estimate of Gorwaa-speakers by ward

<table>
<thead>
<tr>
<th>Ward</th>
<th>Population</th>
<th>Percentage of Gorwaa speakers</th>
<th>Number of Gorwaa speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Babati Town</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Babati</td>
<td>16,718</td>
<td>30%</td>
<td>5,015</td>
</tr>
<tr>
<td>Mutuka</td>
<td>4,910</td>
<td>60%</td>
<td>2,946</td>
</tr>
<tr>
<td>Nangara</td>
<td>7,468</td>
<td>30%</td>
<td>2,240</td>
</tr>
<tr>
<td>Singe</td>
<td>6,620</td>
<td>50%</td>
<td>3,310</td>
</tr>
<tr>
<td>Bonga</td>
<td>9,603</td>
<td>40%</td>
<td>3,841</td>
</tr>
<tr>
<td>Bagara</td>
<td>28,920</td>
<td>30%</td>
<td>8,676</td>
</tr>
<tr>
<td>Sigino</td>
<td>10,038</td>
<td>30%</td>
<td>3,011</td>
</tr>
<tr>
<td>Maisaka (Maisák)</td>
<td>8,831</td>
<td>30%</td>
<td>2,649</td>
</tr>
<tr>
<td>Babati District</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magara</td>
<td>15,336</td>
<td>5%</td>
<td>767</td>
</tr>
<tr>
<td>Nkaiti</td>
<td>14,150</td>
<td>5%</td>
<td>708</td>
</tr>
<tr>
<td>Mwada</td>
<td>16,139</td>
<td>5%</td>
<td>807</td>
</tr>
<tr>
<td>Mamire</td>
<td>9,014</td>
<td>60%</td>
<td>5,408</td>
</tr>
<tr>
<td>Gallapo (Galapoo)</td>
<td>19,578</td>
<td>50%</td>
<td>9,775</td>
</tr>
<tr>
<td>Qash</td>
<td>19,549</td>
<td>50%</td>
<td>9,774</td>
</tr>
<tr>
<td>Ayasanda</td>
<td>6,182</td>
<td>90%</td>
<td>5,564</td>
</tr>
<tr>
<td>Gidas</td>
<td>7,392</td>
<td>80%</td>
<td>5,914</td>
</tr>
<tr>
<td>Duru</td>
<td>11,526</td>
<td>60%</td>
<td>6,916</td>
</tr>
<tr>
<td>Riroda</td>
<td>12,179</td>
<td>80%</td>
<td>9,743</td>
</tr>
<tr>
<td>Arri (/Ari)</td>
<td>14,146</td>
<td>50%</td>
<td>7,073</td>
</tr>
<tr>
<td>Dareda</td>
<td>22,880</td>
<td>15%</td>
<td>3,432</td>
</tr>
<tr>
<td>Dabil</td>
<td>16,781</td>
<td>10%</td>
<td>1,678</td>
</tr>
<tr>
<td>Ufana</td>
<td>20,189</td>
<td>10%</td>
<td>2,018</td>
</tr>
<tr>
<td>Bashnet</td>
<td>13,367</td>
<td>15%</td>
<td>2,005</td>
</tr>
<tr>
<td>Madunga</td>
<td>21,094</td>
<td>15%</td>
<td>3,164</td>
</tr>
<tr>
<td>Kiru</td>
<td>13,119</td>
<td>30%</td>
<td>3,936</td>
</tr>
<tr>
<td>Magugu</td>
<td>32,774</td>
<td>30%</td>
<td>9,832</td>
</tr>
<tr>
<td>Baoy (Bo/ay)</td>
<td>6,565</td>
<td>60%</td>
<td>3,939</td>
</tr>
<tr>
<td>Nar</td>
<td>11,186</td>
<td>5%</td>
<td>559</td>
</tr>
<tr>
<td>Endakiso</td>
<td>9,246</td>
<td>60%</td>
<td>5,548</td>
</tr>
<tr>
<td>OTHER AREAS</td>
<td></td>
<td></td>
<td>~2,500</td>
</tr>
</tbody>
</table>

**Total:** 132,748

The total yielded by this exercise is 132,748. This number represents, to the best of my knowledge, the total possible number of Gorwaa speakers. A more nuanced figure can be arrived at by adding up only those areas which I believe Gorwaa to be actively spoken and used in everyday life (shaded above): this yields a total of 79,751. These two numbers would suggest that, taken together, 60% of Gorwaa speakers are using Gorwaa actively. The remaining 40% may
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know Gorwaa, but are probably not using it extensively, nor passing it on to their children.

1.2.3.2 Language use

Further tentative generalizations may be reached from personal observation. Based on interactions observed among Gorwaa families, the language falls somewhere between 6b and 7 on the Expanded Graded Intergenerational Disruption Scale (EGIDS) (Lewis and Simons 2010). EGIDS Level 6b describes a threatened language status: one in which the language is not being passed onto children reliably enough for numbers of speakers to remain stable into the coming generations. As time goes on, “there will be fewer speakers or fewer domains of use or both” (13). EGIDS Level 7 describes a shifting language status: a situation in which the language is clearly not being passed on to younger generations.

In Babati Town, parents of Gorwaa families commonly understand Gorwaa, and may use Gorwaa among themselves in the home. Children, however, either understand Gorwaa but do not use it, or may only know basic items such as greetings and how to form questions. Either way, it is rare to observe Gorwaa children using Gorwaa, even in the home. The language used outside the home, in virtually all interactions, is Swahili. Barring a further, more nuanced, examination of language use among Gorwaa people in this urban setting, Gorwaa may be assessed as 7 (shifting) in Babati Town.

More rural areas (Babati District) see more robust use among all generations, even the youngest, but the domains in which Gorwaa is used are increasingly
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restricted. Virtually all speakers of Gorwaa also speak Swahili (see Appendix A),
and it is considerably more common to hear Swahili being spoken in social
spaces (at the shop, at worship, etc.) than Gorwaa. Public life (see Muzale and
Rugemalira 2008) is dominated by Swahili: school, healthcare, and most all
interactions with government officials of every level is conducted in Swahili. In
the home and among neighbours, Gorwaa may still be heard, but code-switching
is ubiquitous2. Rapid societal change (introduction of new farming methods and
technology, arrival of electricity, cash-based trade, mobile phones, computers,
etc.) brings with it entirely new semantic domains, virtually all of which are seen
as more efficient to talk about in Swahili than Gorwaa. As such, though
intergenerational transmission of Gorwaa is occurring in these rural areas, the
language is clearly losing domains, and the competence of younger speakers
must be seriously questioned. Gorwaa may therefore be assessed as 6b
(threatened) in Babati District.

Language of early schooling (roughly ages 5-13) in Tanzania is Swahili, with
English as a taught language. Later schooling (roughly ages 14-19) is in English,
with Swahili as a taught subject. Virtually no schools offer provision for local
languages (i.e. languages which are not Swahili or English), either as languages of
instruction or taught languages. Historically, literacy (in Swahili) among Gorwaa
speakers was very low, with a marked improvement in the Ujamaa period
following independence in 1961, followed by a decline following restructuring of

---

2 Though very common in most speech situations, code-switching is relatively rare in
the corpus (though see [20151025], and [20150811c-f]). This might be explained by the
fact that those recorded knew that the research was being conducted on the Gorwaa
language, and were therefore conscious to ensure they were speaking in Gorwaa, and
not Swahili.
the economy to a capitalist model, which began in 1986. Today, while many Gorwaa speaking children do attend school, education may be disrupted or not completed depending on the economic fortunes of the family. Illiteracy among young adults is not uncommon. Literate Gorwaa speakers will be literate in Swahili (which employs the Roman alphabet), and possibly English.

In 1977, an Iraqw translation of the Old Testament was produced by the Tanzania Bible Society which employed a writing system developed principally by the Catholic mission at Tlawi. As an appendix, a glossary of Gorwaa terms were included in order to make the book useable by the Gorwaa speaking Christian community as well. Though the book (nor Gorwaa-language worship) never became particularly widespread, it did establish the Iraqw writing system as the standard for Gorwaa as well. With that said, a great diversity of non-standard writing conventions are in use (e.g. [20150815m], [20150920n], [20151001z], [20151127g], and [20151127h]), and the language is not very commonly seen in written form.

In addition to the Gorwaa of everyday interaction, several specific genres of Gorwaa also exist. Though these have not been given enough attention so as to be discussed in any great detail, they will briefly mentioned below.

Riddles, a common way of passing the time following the evening meal and before bed, are often based on guessing the identity of a cryptic description. A teller will pose their riddle, and others will provide a guess. If nobody guesses correctly, the riddle either goes unanswered, or may be 'bought' from the teller
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by offering a village, town, or city (I once observed a particularly good riddle sell in exchange for all of Canada).

(1.1) Sinik!

\[ \text{My calabash is small,} \\
\text{It has two mouths,} \\
\text{And has much oil that never runs out.} \]

[Answer: the nose]

Another speech genre is the firoo: a litany-like pronouncement, usually asking for the intercession of the indigenous god Loo’aa. The contents of the firoo seems relatively variable, and I have yet to observe the more formulaic sluay as described for Iraqw (Thornton 1977, Wada 1978, Kamera 1987/1988, Beck & Mous 2014).

As a genre, Gorwaa song represents a diverse array of material, often associated with particular events or occasions. Wedding songs (e.g. [20160229n]), dancing songs (e.g. [20160120h]), songs of praise and songs of victory (e.g. [20151004f]), farming songs (e.g. [20150903f]), and circumcision songs (e.g. [20151202a]) are all examples which have been recorded. Certain songs are typically only sung by men, such as some of the Mandaa songs (e.g. [20160927c]), and certain songs are typically only sung by women (e.g. [20160225t]).

(1.2) Singer 1: oo yoo hee balilohee umalohee oo yoo hee [20160225t.10-13]

Singer 2: Buraâ of the house of Para you are moonlight hee hee

Singer 1: oo yoo hee balilohee umalohee oo yoo hee

Singer 2: ee hee you are shining moonlight hee hee

Songs may be thematically-linked to the occasion for which they are sung, but may also be wholly different. Typical themes include highly poetic entreaties to lovers, descriptions of parties and their attendees, as well as historical events.

Songs are often performed unaccompanied, but may also be sung along with
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music from the **seense** (lute/guitar, see e.g. [20160127o], [20160217o], [20160217zc]), **irimba** (mbira, thumb piano, see e.g. [20160210j], [20160217d], [20160210a]), **gidondoori** (musical bow with a gourd resonator, see e.g. [20161112d], [20161112e], [20161112w-z]), **foori** (flute, see e.g. [20160217]), [20161113f], [20160217ze]), and the **niinga** (drum, see e.g. [20151004d], [20151001w]). To date, over 250 recordings of Gorwaa songs have been made.

The mystical monologues (or perhaps dialogues) into which traditional doctors enter during the performance of various rites represent another genre of speech. Due to the secretive nature of this type of speech, the only recorded examples are that of the diviner reading stones in order to determine a client’s prospects (e.g. [20151003d-e], [20151211c-e]). Cursory examination shows these sessions are highly structured, and feature specialized vocabulary.

1.2.3.3 **Language attitudes**

As with language use, no dedicated survey of language attitudes has been undertaken for Gorwaa, and as such, the generalizations made here are tentative. Overall, there appears to be a rather sharp divide in language attitudes, particularly in terms of age, as well as identification with a rural versus urban way of life. Typically, older Gorwaa speakers from rural areas tend to be most enthusiastic about their language, seeing it as useful in the widest range of domains, and valuable as a badge of a culture with which they strongly identify. Younger Gorwaa speakers in more urban areas tend to view Gorwaa as being less useful in day-to-day life, and, in some cases, tend to be somewhat embarrassed to be heard speaking Gorwaa, especially when non-Gorwaa speakers are present. A large proportion of younger speakers have gone so far
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as to eliminate the concept of Gorwaa altogether, in favour of the exonym
‘Mbulu’. Mbulu, name of the largest Iraqw settlement, has recently emerged to
subsume both the Iraqw and the Gorwaa peoples, cultures, and languages, and is
perhaps the most common way for both Gorwaa and Iraqw youth to refer to
themselves. Resultantly, many young Gorwaa speakers typically refer to
themselves as of Mbulu ethnicity, and to the language which they speak as Mbulu
or Kimbulu. Superficially, this simply represents the adoption of a new title, as
the language which speakers use remains the same. In the longer-term this
perhaps represents a larger shift to Iraqw, as the Gorwaa are most certainly the
minority within this neo-ethnicity.

With that said, there has been considerable interest from Gorwaa speakers of all
ages in the work surrounding the current Gorwaa language documentation, with
the contribution of some (considerably elderly) consultants resulting in a large
body of data (such as songs, traditional justice, and uncommon or archaic
vocabulary) being collected in a relatively short period of time. Younger
speakers directly involved in the translation and transcription of the material
have become researchers in their own right, and are taking increasing ownership
of the project, and ultimately the documentation and description of their own
culture. Such energy would seem to suggest that those exposed to the full
richness of the language tend to approach it with new esteem, and may be a
route to explore should the speaker community ever desire to further valorize
Gorwaa.
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1.2.4 Linguistic Environment

The eastern branch of the East African Rift is unique in that it is the only area where all four major African language phyla (Afro-Asiatic, Khoisan, Niger-Congo, and Nilo-Saharan) have been in sustained contact. The convergence in parts of the grammatical structures of the languages in this region has led Kießling, Mous & Nurse (2008) to propose a Rift Valley Linguistic Area, comprised of the 13 languages shown in Table 1.4.

Table 1.4 Languages of the Rift Valley Linguistic Area

<table>
<thead>
<tr>
<th>Phylum</th>
<th>Language (Alternate Names)</th>
<th>ISO 639-3</th>
<th>Number of Speakers (from Ethnologue)</th>
<th>Major Published Works</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gorwaa (Fiome) [gow]</td>
<td></td>
<td>50,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Alagwa (Uasi) [wbi]</td>
<td></td>
<td>30,000</td>
<td>Mous (2016)</td>
</tr>
<tr>
<td></td>
<td>Burunge [bds]</td>
<td></td>
<td>30,000</td>
<td>Kießling (1994)</td>
</tr>
<tr>
<td>Nilo-Saharan</td>
<td>Datooga [tcc]</td>
<td></td>
<td>88,000</td>
<td>Rottland (no date)</td>
</tr>
<tr>
<td>Niger-Congo</td>
<td>Nyaturu (Limli) [rim]</td>
<td></td>
<td>801,000</td>
<td>Olson (1964a) Olson (1964b)</td>
</tr>
<tr>
<td></td>
<td>Mbugwe (Buwe) [mgz]</td>
<td></td>
<td>24,000</td>
<td>Mous (2004b)</td>
</tr>
<tr>
<td></td>
<td>Nyilamba [nim]</td>
<td></td>
<td>613,000</td>
<td>Johnson (1923/26)</td>
</tr>
<tr>
<td></td>
<td>Isanzu (Ihaansu) [isn]</td>
<td></td>
<td>32,400</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Kimbu (Yanzi) [kiv]</td>
<td></td>
<td>78,000</td>
<td></td>
</tr>
<tr>
<td>Isolate</td>
<td>Hadza [hts]</td>
<td></td>
<td>650</td>
<td></td>
</tr>
</tbody>
</table>

Today, Gorwaaland is located roughly in the geographic centre of this linguistic area. With that said, not all of the languages presented in Table 1.1 are in any sort of regular contact with Gorwaa. Day-to-day contact between contemporary
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Gorwaa communities and other languages is largely limited to Iraqw, Rangi, Mbugwe, Alagwa, and Datooga.

Cultural ties and everyday contact between Gorwaa speakers and Iraqw speakers are strong and frequent. In addition to arrivals of Iraqw farmers in the northwestern villages of Gorwaaland over the past several generations, communities all along the B143 road from Babati to Katesh are, more or less, mixed Iraqw-Gorwaa. Intermarriage between Gorwaa speakers and Iraqw speakers is common. Gorwaa speaking elders and traditional leaders were often observed travelling to Iraqwland in order to help resolve conflicts, and customary leaders (including chiefs, rainmakers, and traditional doctors) of both ethnicities regularly meet to conduct major rites. As mentioned above, Gorwaa speaking youth mix with their Iraqw speaking counterparts in urban areas including Babati, Mbulu, Katesh, Dareda, and further afield, Arusha, which has lead to the emergence of a larger Mbulu identity, comprising both.

Similarly, contact between Gorwaa speakers and Rangi speakers is also very frequent. Communities toward the south and east of Gorwaaland, such as Bonga and Galapoo are typically mixed Rangi-Gorwaa. Perhaps due to religious differences (the majority of Gorwaa speakers are Christian, while most Rangi speakers are Muslim), intermarriage and greater cultural integration is not as profound as that of Gorwaa and Iraqw.

Gorwaa and Mbugwe communities are in contact to the north of Gorwaaland, and towns such as Magugu and Kiru are mixed, with speakers of Gorwaa and Mbugwe living and working side-by-side.
As with Rangi, though perhaps not to the same degree, Alagwa and Gorwaa communities are in contact in extreme southern communities, such as Bereko. Again, because the majority of Alagwa are Muslim, contemporary contact between Gorwaa and Alagwa communities is not as extensive as that between Gorwaa and Iraqw.

Evidence from the very recent past (perhaps only one or two generations) shows that contact between Gorwaa speakers and speakers of the various Datooga dialects was very strong. Indeed, in addition to the 3 Gorwaa consultants who considered themselves fluent in Datooga, at least 13 Gorwaa consultants reported that Datooga was either the first or second language of one or both of their parents (see Appendix A). The Gorwaa still rely on Datooga traders for the metalwork bracelets worn by many Gorwaa people following marriage, as well as for soda harvested from the alkaline Lake Balangida.

Within Gorwaaland itself, speakers are (and historically have been) highly mobile. Because of strict rules regarding intermarriage, it was very common for women to marry into families in villages quite distant from their own. More recently, the concentration of services in a handful of communities has resulted in high levels of movement from one area to another: secondary-level students may live in a different community from their families during term time, and expecting mothers commonly travel from rural areas to Babati in order to give birth in the larger hospitals. The recent improvements in roads and construction of bridges will only further facilitate this tendency.
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Historically, Gorwaa speakers did not typically leave Gorwaaland, save for reasons related to grave illness, specialist training, or military service (see [20151202e], [20160225o]). Today, this situation is markedly different, with young men travelling all around central Tanzania for odd jobs or work tending cattle, secondary school graduates moving to Arusha, Dodoma, or Dar es Salaam for skilled employment or post-secondary education, and families settling in Arusha to take up jobs with large companies or as independent entrepreneurs. Indeed, remittances from families employed in larger urban centres is often used to help support ageing parents or younger siblings. This is a relatively new phenomenon, whose impact on the language environment of Gorwaaland has yet to be observed.

1.2.5 **Language name**

The earliest references to the Gorwaa in Western literature come from German explorers (Seidel 1910; Obst 1913; Reche 1914; Heepe 1930), in which the people and language were both referred to as Fiome, Fiomi, or Ufiomi. This seems to be derived from one of the names given to the volcanic mountain to the immediate east of Babati town, today known as Mount Kawaraa. Indeed, the area of government-protected forest atop Mount Kawaraa is today named Ufiome Nature Reserve. Some speakers refer to themselves as Fiomi (or the Swahilized Mfiomi or Wafiomi for ‘Fiomi person’ and ‘Fiomi people’, respectively), and their language as Fiomi (or the Swahilized Kifiomi ‘Fiomi language’), but this is not particularly widespread. This is interesting, however, in that it establishes this area as somehow salient to identifying the Gorwaa people and their land. This is
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perhaps unsurprising, in that Mount Kwaraa is an imposing free standing
mountain: the highest within Gorwaaland and visible for miles in any direction.

More common is the glottonym and ethnonym Gorwaa. Reconstructed as
*goburaa for West Rift, Kießling and Mous (2003) suggest that it was the name
used to refer to the “ethnic group closely related or part of [Proto-West-Rift],
[Proto-North-West-Rift], or [Proto-Iraqwoid] community” (119). In many ways
the most “archaic continuation of [Proto-Iraqwoid]” (33), it is not surprising that
the Gorwaa language would maintain a glottonym and ethnonym most closely
related to the proto-group. In early academic work conducted by the British (e.g.
Bagshawe 1925; Whiteley 1958), and much work conducted since (e.g. Wada
1984), this (or variants, including Gorowa and Goroa) was the name used to
refer to both the people and the language. The Gorwaa themselves employ the
woman’. The language is known as tsifrír Gorwaa ‘language of the Gorwaa
people’, or, slightly less commonly, Gortí’i ‘Gorwaa language’. Swahili renders
these forms as Mggorowa ‘Gorwaa person’, Wagorowa ‘Gorwaa people’, and
Kigorowa ‘Gorwaa language’.

With that said, and as mentioned above, the term Mbulu is gaining in popularity,
especially among urban youth. Derived from the name of the largest urban
centre of Iraqwland, it is assumed that this is an outward sign of a newly-
emerging identity, designed to serve as a cover-term for ‘speaker of a Cushitic
language’ or ‘person of Cushitic origin’ -- a useful handle in the multiethnic mixes
of new centres, such as Arusha. Compare Mchaga as a cover term for a speaker
of the various, very different Chaga dialects, and Mang’ati as a cover term for a
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speaker of one of the Datooga dialects. As such, as speakers of Kirombo or Kimoshi are subsumed under Kichaga (spoken by an Mchaga), and as speakers of Barbaig or Tsimajega are subsumed under Kimang’ati (spoken by a Mang’ati), so too are speakers of Gorwaa subsumed under Kimbulu (spoken by an Mbulu).

Whether this term becomes widely adopted, and whether it eventually replaces Gorwaa altogether will depend on attitudes of speakers themselves.

1.2.6 Existing literature

August Seidel’s Die Sprache von Ufiomi in Deutsch-Ostafrika (1910) is the first reference to the Gorwaa language in Western literature. Following this, the most significant work is Martin Heepe’s Fiome Texte (1930), a transcription and translation of a Gorwaa folk tale. Further linguistic work has either treated Gorwaa as part of a larger comparison of South Cushitic (Kießling 1999; Kießling & Mous 2003), or has remained unpublished (Maghway 2009; Nahhato, Margwee, and Kießling 1994). All publications may be found on the Gorwaa Glottolog page.

1.2.7 Notes on culture

The following covers several areas of Gorwaa life relevant to language maintenance or to Gorwaa’s historical relationship to other language communities in the area. This description is cursory at best, and much remains to be learned from further ethnolinguistic documentation. 1.2.6.1 treats natural resource use, and 1.2.6.2 treats Gorwaa clans.
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1.2.7.1 Natural resources

As a primarily agro-pastoralist people, Gorwaa livelihoods rely heavily on the land for both the production of crops, as well as the grazing of zebu cattle, goats, and sheep. Forests are also essential for providing food, fuel, building materials, and medicine. At the same time, according to traditional Gorwaa belief, the natural world is imbued with a certain sanctity, around which have grown indigenous land management practices and institutions inspired by myth (c.f. Arhem et al. (2004), writing about the Piraparaná, Colombia). Any change to the allocation, utilization, and management of natural resources has a direct impact on Gorwaa speakers’ everyday lives, as well as the maintenance of the Gorwaa language.

Historically (Maganga 1995: 105-118) all land in Gorwaaland was held by the wawutumo ‘paramount chief’, and tenure of arable land was based on membership in traditional community and occupancy on the land to be used. Absentee landlordism was therefore disallowed. Grazing land was mainly designated as a community common, as were forests (subject to significant restrictions to be mentioned below). Waves of immigration (first represented by European settlers in the 1940’s and continuing today with groups from land-scarce regions such as Kilimanjaro) and land expropriation (such as that conducted for the establishment of Tarangire National Park in 1969) has resulted in traditional land allocation norms being upended, especially with regards to ownership. Maganga (1995: 115) notes that buying land has now become normal, with the majority of buyers not indigenous to the Gorwaa-
speaking area. Languages being introduced by new migration include especially the various dialects of Chaga.

Resource utilization is also changing: where sorghum and millet were once the staple crops of the Gorwaa, the cultivation of maize has increased so much that some of the indigenous varieties of sorghum grown a generation ago have all but disappeared [DSC_5354_20150705b.59-69]. Population pressures have likewise put strain on common grazing areas and forests (Maganga 1995: 117-118).

Traditional resource management is perhaps best illustrated in the practices and institutions inspired by indigenous myth. Maganga (1995: 131-132) notes that Gorwaa rituals and social gatherings often take place in forests and sacred groves carefully preserved for these purposes, that large trees (especially *ficus*) are protected as dwellings of rain-bringing sprits, and that “land blessing ceremonies under which various unsustainable land use practice[s] were prohibited were part and parcel of the traditional Gorowa religion” (132). This is evident in recordings such as [20151126c] in which Aakó Manangu Qamsillo describes the sacred /aantsimó fig tree, and [20151223b] in which Aakó Bu’ú Saqwaré and Paschal Bu’ú discuss the history of the *qalalandí* tree at the centre of Yerotoni village. Maganga notes that the adoption of Christianity and Islam threaten to undermine this spiritually-inspired resource management system, as there is a danger that “many of the resource conservation norms and practices may be dismissed as merely traditional superstitions” (132).

The direct consequences of recent changes in resource allocation, utilization, and management have had a profound impact on transmission and maintenance of
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the Gorwaa language throughout the Gorwaa-speaking area. The relatively new phenomena of absentee landlordism and purchase of traditional Gorwaa land by non-Gorwaa speakers has resulted in the introduction of not only new languages in the area, but also a new higher class of landowners who, crucially, do not speak Gorwaa. Gorwaa speakers looking for work on this land are incentivized to either learn the language of the landowners (I have worked with at least one consultant who learned Somali (som) expressly for this reason), or to use the national language, Swahili. The widespread switch from sorghum and millet to maize cultivation has resulted in the disappearance of a whole series of cultural occasions -- indeed, some of the most important social gatherings of the year were based on the precise stages during the ripening and harvest of the first sorghum. In addition to the songs, dances, specialized clothing, and instruments which are being steadily forgotten, Gorwaa speakers have lost an opportunity to come together as a community, to socialize, and, as one speaker put it to me, “be Gorwaa”. This social atomization of the Gorwaa language community is mirrored in a very literal sense by the physical atomization of the Gorwaa language community caused by soil erosion. Both population pressure and a decline in adherence to traditional resource management practices has resulted in continuous cultivation of arable land, overgrazing, and a rapid increase in cutting trees. Maganga notes the formation of gullies (we/eeri) in Nangara village (1990:125), carrying precious soil away and into Lake Babati. This phenomenon is widespread throughout the Gorwaa speaking area: Endabeg’s we/eeri are described in [20150722f], and [20150810c]. These gullies have grown rapidly, Ayi Raheli Lawi told me that the wide Wa/aángw Endabeg -- over ten meters deep, and just as wide in places -- was formed in her lifetime. In addition to
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reducing the agricultural potential of wide swathes of Gorwaaland, these gullies have split communities, resulting in a situation where regular contact between one-time neighbors is impossible, particularly for the elderly. Given that elders held (and still hold) an important place in Gorwaa society as arbiters, teachers, and knowledge-holders, this type of extreme erosion will most certainly have an effect on Gorwaa language maintenance.

1.2.7.2 Clans

Gorwaa people are divided into a large number of clans. Today used primarily as a reference for determining whom one may marry and whom one may not, a large number of ritual taboos and requirements were traditionally associated with clan affiliation. For our purposes, Gorwaa clans give an idea of historical relationships to other language communities in the Tanzanian Rift Valley.

Even today, a Gorwaa person will generally know his or her clan (inherited from their father), as well as that of their mother, as this represents the bare minimum for restrictions on whom one may marry. Marrying among the same clan, or into the clan of one’s mother, is disallowed (hatik). Depending on the clan, there may be further restrictions on marriage, all of which are generally determined by a group of elders.

In traditional Gorwaa culture, clan affiliation dictated several aspects of a person’s daily life: certain clans were required to build their houses with the cooking fire on the right-hand side, whereas others would have it on the left. The Qooloo clan was not allowed to eat greens made with the vegetable qooli. In a restriction which resembles those on natural resources (discussed above), many clans were sanctioned from using certain species of trees, either in building their
homes, or as fuel. Members of the clan *Harna’aa* would be met with misfortune if they owned cattle with a brindled coat.

Some clans were associated with particular functions in society. The aforementioned clan *Harna’aa* is the clan of the paramount chief (*wawitumo*), a role inherited from father to eldest son. The clan *Haryaambi* are the rainmakers for all of Gorwaaland.

Clan names sometimes appear to be semantically transparent: *Harhumay* (har- ‘clan’ + humay ‘earth dug from the floor of a house and placed on the roof’), *Har’aari* (har- + aari ‘prophecy’), and *Kuuntoo* (kuuntoo ‘grain containers’) are all examples. Still others seem to derive from other words (see *Qooloo-qooli* above): the clan *Gilawee*, known for being unlucky, is quite similar to gila’ ‘to quarrel’. Still other clan names seem non-decomposable: *Gaytu*, *Sumaye*, and *Har’iwa/ay* are examples.

In terms of the historical relationships which clans suggest, many of which are recorded in the individual clan histories: the clan *Harna’aa* are said to be descended from Datooga peoples, whereas the clan *Harahama* is said to be descended from the Maasai. Both the clans *Harxoopa* and *Warindoo* are said to be of Alagwa derivation. Perhaps most well-known is the story of the rainmaker clan *Haryaambi*, known to have descended from the Isanzu people of current-day Singida region. Aakó Rashid Layda tells the story of the arrival of these rainmakers as refugees in Gorwaaland in [20160202h]. To this day, the Isanzu people are known as the rainmakers of the Tanzania Rift Valley *par excellence* (e.g. Sanders 2008, Dadi (no date: 52-55)). More concretely, several of the clans
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are shared between the Gorwaa and the Iraqw: the Gorwaa clan Sumaye is known as Sumawee among the Iraqw - many others simply replace the prefix har- with hay-, the Gorwaa clan Harsule becomes the associated clan Haysule in Iraqw.

1.3 Methods and methodology

Because the current work relies heavily on a single body of data, the following section makes the process of collecting, processing and presenting this data explicit. Subsection 1.3.1 provides information about participants in the study. Subsection 1.3.2 details the data collection. Subsection 1.3.3 outlines the speech genres collected. Finally, subsection 1.3.4 discussed accessing, finding, and using the data.

1.3.1 Information about participants in the study

All participants in the study have provided their informed consent. Prior to participation, speakers were introduced to the project and, where necessary, equipment such as the voice recorder and video camera. Usually, speakers’ informed consent was formalized in a dialogue with the researcher (1.3) based heavily on Bowern 2008 (220-221), which were recorded and are available as part of the larger deposit of recorded materials³.

³ Most consent (and most research in general) was conducted in Swahili, and a Swahili version of this script is provided in Appendix B. In circumstances where the consultant did not speak Swahili, an interpreter was employed to translate the Swahili into Gorwaa.
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(1.3) **ENGLISH SCRIPT FOR ORAL CONSENT DIALOGUE**

- I want to talk some things over, so that we understand our work. Is that alright?
- You have the right to stop working with me at any time, and you don’t have to tell me why you want to stop.
- You will be paid X Tanzanian shillings per hour of work, or products equal to this value. Is this alright?
- Is it alright if our work is recorded with a voice recorder or video camera? I record our work so I can ensure that I heard the words correctly, and so other people can listen to the words and stories later.
- If you are uncomfortable with being recorded, we can turn off the voice recorder and video camera at any time. You don’t have to give a reason why.
- Is it alright if other people listen to or watch the recordings we have made? Other researchers? Students? Your family? Other people from this area?
- Is it alright if I tell other people that you are working on the Gorwaa language with me? For example, is it alright if I put your name on a list of people who have contributed to this work? If not, is it alright if I refer to you by a made-up name? (ask for alias)
- Is it alright if I put our work in a language archive? A language archive is a place where you can put work like this, so that even if my personal copies are destroyed or damaged, the work remains safe.
- Is it alright if I write (books) about the Gorwaa language?
- Is it alright if I use this work for other purposes? For example, perhaps today I have made a recording to help me understand the sounds of Gorwaa. Is it alright if I listen to this work at a later date to learn about the words or the grammar of Gorwaa?
- Thank you, I have finished all of my questions for you. Before we begin our work, do you have any questions you would like to ask me, or anything you would like to say to me?

Typically, participants were paid a salary of 4,000 Tanzanian shillings per hour of work. Time worked referred to time spent with researcher, even if this was not recorded. Rehearsing narratives, doing ‘practice-runs’ of elicitation questions, finding suitable locations to record, etc. all counted toward paid time.

In 2015, 4,000 Tanzanian shillings was equivalent to approximately 1.85 GBP. A Tanzanian secondary school teacher at the lower end of their pay-scale in 2015 could expect to earn approximately the same. Thus, this was an hourly amount which seemed commensurate with the skill set of a language consultant.

Participants who were known in the community as specialists (diviners or
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traditional healers, for example) would sometimes be paid slightly more. In most cases, participants were paid in cash. In some cases (such as individuals dealing with issues such as gambling addictions or alcoholism), salaries were paid in commodities such as sugar, rice, or airtime vouchers.

126 Gorwaa speakers are represented in the sample. With this said, however, the amount of material from each participant varies greatly, from over 20 hours’ worth of targeted elicitation with one participant, to perhaps a single utterance in the background of a group discussion from another. Indeed, I estimate that 10% of the participants make up for close to 80% of the recordings.

Of the participants, 88 were male and 38 were female. This disparity in gender representation was due to several factors, the most important perhaps being that I am male, and I was therefore often limited in the age range of women with whom it was deemed appropriate to have contact, as well as in what kinds of women's domains I could effectively work. For example, older women were generally deemed appropriate to work with, whereas opportunities to work with younger women around my age were not very common. This also has to do with the disproportionate amount of labour expected of younger women: with virtually all domestic duties considered the job of women, finding time to

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4 This figure excludes recordings made of large groups, such as the Subira Elim Pentekoste Adult Choir of Endabeg, the Yeroton Cultural Group, or the Group at Ayá Manangu on 09/10/2015, during which it was deemed impractical (or simply impossible) to collect information on each individual present. In terms of permission, informed consent for group recordings was sought from group leaders (such as the choir conductor for the church choir) or heads of a household (e.g. Manangu Qamsilo for the recording made at his home). If the group was an established entity (such as the Yeroton Cultural Group), remuneration was made in the form of a donation to the group. If the group was less established (such as the group at Ayá Manangu), a suitable remuneration was discussed with the owner of the household (in that particular case, remuneration was in the form of a large crate of soda).
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conduct recordings was very difficult indeed. Regarding contexts of work with women, though I made a couple of recordings from inside a kitchen, this was considered an extraordinary exception. In addition to this, though recordings of groups of men discussing village politics or conflict resolution were made, no such equivalent exists for a group of women. In order to somewhat mitigate this, a special ‘women’s focus group’ was brought together on February 20\textsuperscript{th} of 2016 for a day of recorded discussion, specifically of women’s issues, however, for obvious reasons, this context can only be seen as contrived.

The oldest speaker was estimated to be born in 1912 (100 years old at the date he was first recorded for the project), and the youngest was born in 2003 (12 years old at the date he was first recorded for the project). Mean age across all 126 participants was 51 years in 2015.

An effort was made to include speakers from all major areas of Gorwaaland, and records on where each participant grew up shows that most major towns and villages are represented. With that said, a bias remains in favour of the areas in and around Endabeg village, where the researcher lived and worked during most of the data collection. Least represented are the communities in the southeast of Gorwaaland, as well as those which lay between the foot of Mount Kwaraa and the Tarangire plain. This is largely due to these places being sparsely populated and difficult to get to by road, as well as their ethnically-mixed nature: some village quarters in these areas having no speakers of Gorwaa whatsoever.

7 participants were Gorwaa monolinguals: typically very old indeed, and having spent all or most of their lives in one or two rural villages. 98 further
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participants were bilingual in Gorwaa and Swahili. The 21 individuals who could speak three or more languages invariably spoke Swahili, as well as other nearby languages (Rangi (8), Iraqw (4), Alagwa (3), Datooga (1), Nyaturu (1)), the official language English (11), or languages associated with faith or business (Arabic (1), Somali (1), Mandarin Chinese (1)).

Further information on all participants, including name(s), date of birth, where they were born and where they grew up, sex, language(s) spoken, father’s language(s) and mother’s language(s), can be found in Appendix A.

1.3.2 Data collection

A basic workflow (based on that provided by Bowern 2008 (48)) describing how most of the data was processed during this project is provided in Figure 1.1 below.

The majority of the audio recordings were made using a Zoom H2 Handy Recorder, which produced files in .wav format. .mp4 video recordings were made using a JVC Everio GZ-HD40EK video camera, and the video function on a Nikon D7000 camera equipped with a 50mm Nikor lens. Typically, in all cases in which video was recorded, audio was also recorded using the audio recorder, and the two were later synchronized (see below). For situations in which the participant (or participants) is moving, the audio recorder was linked to an Audio-technica AT803b Lavalier (lapel) microphone, both of which were carried in a backpack by the participant while the researcher made video recordings with the video recorder while following along.
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As soon after recording as possible (usually the same night), audio and video files were transferred from the memory cards of the audio and video recorders and placed in a new folder (referred to as a *bundle*) on a MacBook Pro. All files in the bundle (audio, video, and the folder itself) were assigned a unique identifying number. The system is based on the date on which the recording was made: therefore, the first eight digits refer to the year, month, and day of recording. Recordings made on the same day are further differentiated by being assigned letters. If more than 26 recordings were made in a single day, the labeling would proceed za, zb, etc. As such, a bundle assigned the unique identifying number 20151128b was the second recording to be made on the 28th of November, 2015.

Further information (item title, place of recording, speaker(s), speech genre, brief description, etc.) was recorded in a Microsoft Excel for Mac (2007) sheet database. All new bundles and metadata recorded in the spreadsheet database was saved on an ADATA 1TB hard drive, and backed up on a second hard drive of the same model. Bundles were then processed and uploaded to the ELAR archive using the software Archive Builder (Arbil) (2013).
### Before Session

**PLAN SESSION**
- Check equipment (batteries full, memory cards empty)
- Compile goals (questions, prompts, etc.)

### During Session

**CONDUCT SESSION**
- Monitor recording
- Take notes (interesting items, questions for immediate or later follow up)
- Ask questions, listen to answers

### After Session

**FILE DATA**
- Transfer audio/video from equipment to a new folder (bundle)
- Assign all items of new bundle a unique identifying number
- Add bundle description to database

**SEND ALL NEW BUNDLES TO ARCHIVE**

**TRANSCRIBE/TRANSLATE DATA**
- Set up ELAN project for bundle
- Transcribe material in Gorwaa working orthography

**GLOSS DATA**
- Export ELAN project to FLEX
- Gloss line-by-line
- Add notes where necessary
- Re-export project from FLEX to ELAN

**SEND ALL GLOTTED ELAN FILES TO ARCHIVE**

**BEGIN AGAIN**
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Once bundled and backed up, data was then transcribed and translated. Audio and video files were synchronized in the ELAN Linguistic Annotator software programme (2011) and transcribed in the working Gorwaa orthography, then translated into Swahili and English. In the beginning, this was conducted largely by the researcher with help from speaker Ayí Raheli Lawi. This method proved extremely time consuming, and was later vastly improved by employing three local speakers: Stephano Edward, Paschal Bu’ú, and Festo Massani, who would take the prepared ELAN files onto an 8GB USB on a weekly basis and translate and transcribe them independently using HP Stream 11.6 inch HD laptop computers.

Following transcription and translation, the researcher would once again take the ELAN files, review the transcription and translations in order to make sure the orthography was consistent with the rest of the corpus, and then gloss the materials. Files were exported from ELAN to the Fieldworks Language Explorer programme (FLEx) (SIL, 2015) and glossed using the parsing tool. Glosses were checked, adjusted, and corrected, and material was then re-exported from FLEx back to ELAN. These new files were backed up, and then uploaded to the ELAR archive, once again using Archive Builder.

Data collection tools were not often employed, with much of the elicited material collected through translation exercises, and much of the naturalistic material simply being volunteered by participants. Sophie Salffner provided a set of wooden bricks for a speech activity in which one speaker had to build an unseen model with the verbal cues of a friend on the other side of a partition (see also the description of
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‘Block Worlds’ in Salffner 2015:254-255). I also used two identical sets of twenty cow photos, of which a subset was given to one speaker, who had to help a second speaker choose the identical image from their set by describing how it looked. The same activity was also conducted with a set of bird photos. The Comparative African Wordlist (SILCAWL) (Snider & Roberts 2006), as well as the SIL RapidWords (SIL International) questions were also used with a focus on eliciting new nouns. Old recordings of Gorwaa music from Radio Tanzania Dar es Salaam (Kirombo & Ndumbalo 1967) also served as useful stimuli for further discussion.

Time spent in the field totaled twenty-six months. This was divided into three individual periods: a thirteen-month period for research associated with Master’s degree between October 2012 and October 2013, and then two periods for Doctoral-level research: nine months between July 2015 and March 2016, and three months between September 2016 and November 2016. Figure (1.2) below shows approximately how many minutes of recordings were collected during each month of fieldwork, as well as what type of material this was. Natural speech refers to recordings made with the least amount of input or constraint imposed from the researcher: they range from traditional songs and stories, to procedural descriptions of how to complete an everyday task. Prompted speech refers to recordings made in which the participant (or participants) respond within a larger context contrived by the researcher: the picture-matching task described above is one example. Elicitation refers to recordings made in highly-controlled situations: generally in a question-answer format in which the researcher presents a phrase for
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translation or back-translation, or asks for a grammaticality judgment. Consent refers to the recordings of the scripted consent dialogue, as given in (1.1) above.
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Figure 1.4: RECORDINGS COLLECTED DURING EACH MONTH OF FIELDWORK

[Chart showing recordings collected during each month of fieldwork, with X-axis representing months from October 2012 to November 2016 and Y-axis representing minutes collected. The chart includes categories for Consent, Elicitation, Prompted Speech, and Natural Speech.]
1.3.3 Speech genres collected

During data collection, an attempt was made to include as diverse a range of speech genres as possible. As such, the corpus includes materials ranging from discussions of jural traditions (e.g. Justice 5 [20160219h]), to historical epics (e.g. History 1-A [20151125i]), to recordings of children playing games (e.g. Usuji [20151025]). However, only a subset of recordings from the entire corpus are referenced in the current work. Some of the most frequently used are described below, along with excerpted English translations.

The most uniform type of recording was those featuring elicitation, where the main contents were translation or back-translation of phrases (1.4), or grammaticality judgments (1.5). I hesitate to refer to these as ‘genres’, as they are most certainly not natural speech. They do, however, feature their own norms and different types of elicitation result in different language outputs.

(1.4) **Translation “Nominalizations 1” [20150724.34-37]**

*I travel at nighttime.*
*This person is a traveller.*
*This person missed the journey.*
*A long trip takes time.*

(1.5) **Grammaticality Judgments “Mass/Count Nouns” [20150810d.8-11]**

*’Water’ is uncountable.*
*We say ‘that water is in a vessel.’*
*We say: ‘water - three bottles, two bottles, one bottle, two bottles, three bottles, four bottles, five bottles’ of water.*
*Because ‘water’ is uncountable.*

Prompted speech typically featured uncontrived speech but within a situation which was contrived by the researcher, typically to collect a specific type of grammatical construction or vocabulary. The most commonly recorded instances of prompted
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speech included Salfner’s block worlds task (1.6), and the photo match task (1.7), both described above.

(1.6) Block Worlds Task “Building Blocks 5 [20150817d.487-491]
[S.J.] the other leg, build it in the place in front of you - build it in the place in front of you
build those legs there, leave this thing there alone
[H.J.] there on this side?
[S.J.] yes, build it on that side
[H.J.] why is this house so damn big?

(1.7) Photo Match Task “Bird Images 11-A [20151021c.292-296]
[B.S.] this other one
it has a long mouth I say! it has red eyes
[P.B] what is this bird called?
[B.S.] this, I don’t even know its name
[P.B.] its mouth is red?

Natural speech recordings produced the most diverse range of speech genres, including narratives (e.g. Honey Stories [20131108b_20150725j]), Christian prayers (e.g. Blessing the Meal 1 [20150725l]), and group conversations (e.g. The local football championship [20150726d]). Among this range of genres, two which are commonly cited in this work include personal biographies, and procedural descriptions.

(1.8) Personal Biography “Life Story 2” [20131027_20150725c.159-162]
If a man saw me
“You, a woman, will go in this way!
That husband of yours is a fool.”
I said “No, he’s not a fool [...]

(1.9) Procedural Description “Honey Hunting 2” [20150808a.50-53]
Hey - let me lie on my stomach so that I dig it out once more.
The beehive is full of liquid honey - look here, this is dried honey.
Ah! I was bitten hard, they bite hard!
Ouch! I was bitten!
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1.3.4 Accessing, finding, and using the data

All data has been archived with the Endangered Languages Archive at SOAS, University of London. This includes all audiovisual files (.wav, .mp4, .jpeg), as well as analysis files (i.e. ELAN files (.eaf)). Material is being continually updated as recordings are transcribed, translated, and glossed. It is expected that future Gorwaa recordings and analysis will also be deposited here. All data is openly accessible, requiring only that users register with ELAR and agree to its Terms and Conditions of use.

For every example of phrasal length or longer in this work, a citation has been provided which will allow the reader to identify the larger recording in the archive, as well as to resolve back to that particular phrase within the recording. Citations (bolded in (1.10)) occur in square brackets to the right of the first line of the numbered example.

(1.10) inós a Gormo  [20160119f.12]

inós  Ø  Gormó
Pro.3M  Aux  Gorwaa.person.♂.LMo
“He is a Gorwaa person.”

Each citation has two parts, divided by a full stop. The alphanumerical part to the left of the full stop corresponds to the unique identifying number of the recording (discussed above), and allows the reader to locate the recording within the archive. This can be done by visiting the deposit page (https://elar.soas.ac.uk/Collection/MPI1014224) and entering the unique identifying number into the box titled ‘Search this deposit’ in the upper left corner,
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as shown in Figure 1.3. This will lead to the contents of the specific bundle, which can be viewed and downloaded.

Figure 1.5: DEPOSIT PAGE WITH 'SEARCH THIS DEPOSIT' IN THE UPPER LEFT

Returning to the citation, the numerical part to the right of the full stop corresponds to the number of the phrase segment in the ELAN (.eaf) file. Once the reader has accessed the bundle from the deposit page, they may download its contents (.wav and/or .mp4, and .eaf), and simply search within the ELAN file to the exact number cited (as shown in Figure 1.4) in order to listen to and view the exact moment in the recording in which the utterance of choice was produced.
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Figure 1.6: ELAN file with ‘phrase segment number’ as the fourth tier from the bottom

1.4 Summary

This chapter introduced the reader to the aims of this dissertation, to the larger context in which the Gorwaa language exists, as well as the way in which the language data was collected. The next chapter provides a general discussion of the Gorwaa data in the form of a sketch grammar.
2.1 Introduction

Among other things, the previous chapter discussed some of the wider context (historical, cultural, sociolinguistic) in which the Gorwaa language exists (see §1.2), as well as the research methodology used during data collection (see §1.3). What follows is a preliminary sketch of Gorwaa, written with two central purposes in mind. First, the sketch provides descriptive material on the main points of Gorwaa grammar: both the most cross-linguistically common features, as well as those most peculiar to the language. As a language with no previous description, this is meant as an empirical contribution to understanding the language in general. Second, the sketch ought to ground the reader in a basic understanding of the noun phrase and associated phenomena such as agreement – the theoretical and analytical focus of the thesis.

The sketch begins with an overview of Gorwaa phonetics and phonology (§2.2). It is followed by a presentation of the lexical categories of the language (nouns, verbs, adjectives, adverbs), with an excursionary remark on ideophone (§2.3). Next, the functional categories (determiners, selectors, and pronouns) are examined (§2.4). Moving on to clausal constituents, comment is made on canonical word order, the verb phrase, the noun phrase, the adpositional phrase, as well as comparatives (§2.5). A section on pragmatically marked structures includes focus, contrast, topicalization, negation, and non-declarative speech acts (§2.6). The sketch ends with complex clauses: relatives and coordination (§2.7).
2. A grammatical sketch of Gorwaa

2.2 Phonetics and phonology

This section introduces the phonetics and phonology of Gorwaa. The first subsection introduces the consonant inventory. The second subsection introduces the vocalic inventory. Third, attention is given to pitch and intonation. The fourth subsection is on stress. The final subsection treats phonotactics.

2.2.1 Consonants

Gorwaa has 33 consonants, and is notable for its paucity of voiced fricatives and wealth of pharyngeal and glottal sounds. Several consonants are labialized. Four consonants are ejective. The most articulatorily complex consonant is the ejective lateral affricate, [tɬ'].

<table>
<thead>
<tr>
<th>Table 2.1: Phonemic Inventory of Gorwaa Consonants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bilabial</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>Nasal m</td>
</tr>
<tr>
<td>Stop p</td>
</tr>
<tr>
<td>Ejective Stop</td>
</tr>
<tr>
<td>Fricative f s (ʃ)</td>
</tr>
<tr>
<td>Approximant w</td>
</tr>
<tr>
<td>Trill r</td>
</tr>
<tr>
<td>Lateral Fricative</td>
</tr>
<tr>
<td>Lateral Approximant l</td>
</tr>
<tr>
<td>Affricate (tʃ)(dʒ)</td>
</tr>
<tr>
<td>Ejective Affricate ts'</td>
</tr>
<tr>
<td>Ejective Lateral Affricate tɬ'</td>
</tr>
</tbody>
</table>
2. A grammatical sketch of Gorwaa

Consonant phonemes in brackets represent non-native phonemes, present exclusively in loanwords.

(2.1) Non-native phonemes occur exclusively in loanwords

a. [tfupa] chupa 'bottle' from Sw. chupa 'bottle'

b. [nafa] nyanya 'tomato' from Sw. nyanya 'tomato'

c. [d3e:la] jeela 'private room' from Sw. jela 'prison'

d. [bijaʃara] biyashara 'commerce' from Sw. biashara 'commerce'

Orthographic representation of consonants, where different from the IPA, are given in Table 2.2 below.

Table 2.2: Consonants: IPA equivalents for orthographic representations

<table>
<thead>
<tr>
<th>Orthography</th>
<th>IPA Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>ny</td>
<td>[n]</td>
</tr>
<tr>
<td>ng</td>
<td>[ŋ]</td>
</tr>
<tr>
<td>'</td>
<td>[ʔ]</td>
</tr>
<tr>
<td>q</td>
<td>[q']</td>
</tr>
<tr>
<td>sh</td>
<td>[ʃ]</td>
</tr>
<tr>
<td>x</td>
<td>[χ]</td>
</tr>
<tr>
<td>hh</td>
<td>[h]</td>
</tr>
<tr>
<td>/</td>
<td>[ʕ]</td>
</tr>
<tr>
<td>y</td>
<td>[j]</td>
</tr>
<tr>
<td>sl</td>
<td>[ɬ]</td>
</tr>
<tr>
<td>ch</td>
<td>[tʃ]</td>
</tr>
<tr>
<td>j</td>
<td>[dʒ]</td>
</tr>
<tr>
<td>ts</td>
<td>[ts']</td>
</tr>
<tr>
<td>tl</td>
<td>[tɬ']</td>
</tr>
<tr>
<td>kw</td>
<td>[kw]</td>
</tr>
<tr>
<td>gw</td>
<td>[g'w]</td>
</tr>
<tr>
<td>ngw</td>
<td>[ŋ'w]</td>
</tr>
<tr>
<td>qw</td>
<td>[q'w]</td>
</tr>
<tr>
<td>xw</td>
<td>[χ'w]</td>
</tr>
</tbody>
</table>

2.2.2 Vowels

Gorwaa has 5 vowels: two front-back pairs at two heights, and a single low vowel.
Gorwaa distinguishes long vowels from short vowels. Each of the vowels above has a short version and a long version. Orthographically, short vowels are written with one character: a, e, i, o, u, and long vowels are written with two characters: aa, ee, ii, oo, uu. Length distinction can be lexical, though the cases are rare and, as in (2.2), stress may play more of a role in disambiguating the two forms than vowel quality itself. Grammatically, however, the functional load of vowel-length distinction is high (2.3).

(2.2) **Lexical vowel-length distinction**

<table>
<thead>
<tr>
<th>Short</th>
<th>Long</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ts’aχara:]</td>
<td>tsaxarąa</td>
</tr>
<tr>
<td>vs.</td>
<td></td>
</tr>
</tbody>
</table>

(2.3) **Grammatical vowel-length distinction**

a. [ʔa dóɭ] a dóɭsl ‘I farm’
   vs. [ʔa dóɭ] a dóɭsl ‘you farm’

b. [he: tǐákʰ] heé tlaákw ‘a bad person’
   vs. [mu:kú tǐákʰ] muukú tǐákw ‘bad people’

### 2.2.3 Pitch and intonation

Kießling (2004), establishes that across South Cushitic there are two predominant phonemic tone contours, which operate within phonological words including the subject noun, as well as the vP. He names these accent 1 “neutral tone” (herein level pitch accent), and accent 2 “marked tone” (herein rising pitch accent). However, there exist a further three intonational tone contours, used primarily for pragmatic purposes. This therefore requires a slight expansion to his description.
2. A grammatical sketch of Gorwaa

The two ‘grammatical’ contours described by Kießling (2004), and which bear the largest functional loads by far, are level pitch accent (LPA), in which default low tone is assigned to all syllables of a domain, and rising pitch accent (RPA), in which prominent high tone is manifested on the final syllable of the phonological word. Nouns may possess LPA or RPA lexically. In addition to this, these two tone contours play an important role in many morphosyntactic distinctions, including TAM, adjectival concord, and derivational operations.\(^1\)

\[(2.4) \quad \text{TWO ‘GRAMMATICAL’ CONTOURS} \]

a. LEVEL PITCH ACCENT (LPA)
   - i) [desì] \text{desì} ‘girl’
   - ii) [hára] \text{hára} ‘stick’
   - iii) [ʔí guʔí] \text{i guu’} ‘he sleeps’

b. RISING PITCH ACCENT (RPA)
   - i) [desírʔá:ko] \text{desír aako} ‘grandfather’s girl’
   - ii) [hártá tłe:r] \text{hártá tłeer} ‘a long stick’
   - iii) [ʔága gúʔí] \text{aga guú’} ‘he slept’

Additionally, there are three intonational tone contours which serve a largely pragmatic function. The first of these, vocative pitch accent (VPA), assigns high tone to the penultimate syllable, followed by low tone on the final syllable. Vocative is typically used when addressing someone.\(^2\) Falling pitch accent (FPA) assigns prominent low pitch to the final syllable of the phonological word. Falling pitch accent is used as an emphatic or contrastive device. Rising-falling pitch accent (RFPA), features what Mous (1993:287) describes as “an extra high tone and a subsequent fall”, and is situated on the penultimate syllable. Rising-falling pitch accent signals a polar question. These three ‘intonational tone

\(^1\) Accent marks are used in these examples to indicate tone assigned to the syllable. Lack of accent indicates low tone. An acute accent (’) indicates high tone. A grave accent (’́) indicates extra low tone. A circumflex accent (’̀) indicates rising-falling tone.

\(^2\) Gorwaa personal names are uniformly polysyllabic – in addition to contextual clues, the possibility of confusion between a hypothetical monosyllable in RPA versus one in VPA is very slim indeed.
2. A grammatical sketch of Gorwaa

contours’ will supersede any original ‘grammatical tone contour’ of the phonological word of interest.

(2.5) THREE ‘PRAGMATIC’ CONTOURS
a. VOCATIVE PITCH ACCENT (VPA)
   [dési] desi! ‘girl’

b. FALLING PITCH ACCENT (FPA)
   i) [hartá tlè:r] hhartá tleèr ‘a long stick’ (as opposed to a short one)
   ii) [ʔaga gù:?] aga guù’ ‘he slept’ (finally, or as opposed to ate)

c. RISING-FALLING PITCH ACCENT (RFPA)
   i) [gár bôːʔ] gár boô/ ‘a black thing?’
   ii) [aga gùːʔi] aga guuʔi ‘has he slept?’

Finally, it should be noted that Gorwaa features downdrift through the course of the intonational phrase. Tentatively, this type of downdrift resembles tone terracing – where both high and level tones trend downward in pitch, and differences in pitch become progressively narrow until pitch is reset at the beginning of the next intonational phrase.

Beyond the special notation made in these examples (see fn. 1), the orthography marks tone as follows. Level tone is left unmarked. Rising pitch accent is marked in the writing system by placing an acute accent on the final vowel of the phonological word. Vocative pitch accent is indicated with an exclamation mark directly following the word. Falling pitch accent is marked by placing a grave accent on the final vowel of the phonological word. Rising-falling pitch accent is marked by placing a circumflex accent (ˆ) on the final vowel of the phonological word.
2. A grammatical sketch of Gorwaa

2.2.4 Stress

Stress occurs by default on the first syllable. If the penult contains a long vowel, then it is stressed instead. If the penult contains a short vowel and the final syllable has a high tone, stress will be on the final syllable.

(2.6) Stress assignment

a. Stressed First Syllable

i) [ʔaːlusumo] /alusumo ‘heir’
ii) [kaliʔi] kali’i ‘colour’
iii) [lawalaː] lawala ‘spear’

b. Stressed Penultimate Syllable

i) [ʔareːma] /areema reduction
ii) [ʔafa′hɔːwa] afahhoowaa eloquence
iii) [q’antsareːma] qantsareema greenness

c. Stressed Final Syllable

i) [ʕorruʔumó] /orru’umó sp. of tree
ii) [karkari] karkari sp. of grub
iii) [neːarmó] nee/armó sp. of bird

2.2.5 Phonotactics

This section deals with the permissible combinations of phonemes in Gorwaa. Considerable similarities exist between Iraqw and Gorwaa with regard to phonotactics, and this section owes a considerable debt to Mous’ work in this area with Iraqw (1993: 24-39). First, syllable shape is examined. This is followed by root-level phonotactics, and then word-level phonotactics.

2.2.5.1 Syllables

Canonical syllables in Gorwaa are of the form CV, CVC, CVNC, CV:, CV:C, and CV:NC, where N is a homorganic nasal.
2. A grammatical sketch of Gorwaa

(2.7) CANONICAL SYLLABLES

a. CV
   i) [di] di  'place' (n)
   ii) [ga] ga  'thing' (n)
   iii) [ja] ya  'thus' (adv)

b. CVC
   i) [dáh] dáh  'come in' (v)
   ii) [dóʔ] dó'  'house' (n)
   iii) [tám] tám  'three' (n)

c. CVNC
   i) [ʔónd] /ónd  'dry.up.F' (v)
   ii) [tɬánqw] tlánqw  'spotted.F' (adj)
   iii) [húňsl] hhúnsl  'wash.F' (v)

d. CV:
   i) [matɬe:] matlee  'morning' (n)
   ii) [firo:] firoo  'prayer' (n)
   iii) [mu:] muu  'people' (n)

e. CV:C
   i) [q'ó:m] qoóm  'be.good.1Sg' (v)
   ii) [hó:t] hoót  'live.1Sg' (v)
   iii) [ba:q'] baaq  'house.partition' (n)

f. CV:NC
   i) [faːnqwʷ] faanqw  'seven' (n)

In some loanwords from Swahili, the initial syllabic nasal is tolerated (see Harvey & Mreta 2016: 4).

(2.8) INITIAL SYLLABIC NASAL TOLERATED IN LOANWORDS

a. [mtʃongoma] mchongoma  'shrub sp.' from Sw. mchongoma  
   'shrub sp.'

b. [ŋdowa] ndowa  'wedding' from Sw. ndoa 'wedding'

2.2.5.2 Stem-level phonotactics

Mous (1993: 29) notes that stems longer than three syllables usually contain a reduplicated syllable, or an r.

(2.9) STEMS LONGER THAN THREE SYLLABLES

a. [matʃar#á] matalhar-  'insect sp. (pl.)'
   b. [ʃar#ant#i] ʃarant-  'fire-ball lilies'
   c. [ʔindaʃax#áʔ] indaxax-  'plant sp.'

As noted in Mous (1993: 27), initial syllables of polysyllabic stems are usually of CV, NCV, CVC, or NCVC structure. CVV is sometimes possible, usually before an
NC cluster (see (2.10))\(^3\). A set of other cases are given in (2.11). CV:C, CVNC, and CV:NC are never acceptable structures for polysyllabic roots.

(2.10) **CVV SYLLABLE BEFORE AN NC CLUSTER**

<table>
<thead>
<tr>
<th>Example</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>[baːmbár]</td>
<td><em>baambár</em> 'finger millet'</td>
</tr>
<tr>
<td>[daŋɡaf#i]</td>
<td><em>daŋɡaf</em>-i 'millet-filled gourd'</td>
</tr>
</tbody>
</table>

(2.11) **OTHER CASES OF CVV SYLLABLES**

<table>
<thead>
<tr>
<th>Example</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>[neːʕár]</td>
<td><em>nee/ár</em> 'heavy clouds'</td>
</tr>
<tr>
<td>[seːsékʷ]</td>
<td><em>seesékw</em> 'bustard'</td>
</tr>
<tr>
<td>[ʔiːrimb#i]</td>
<td><em>iirimb</em>-i 'crested cuckoo'</td>
</tr>
</tbody>
</table>

In addition to restrictions on syllable structure for polysyllabic roots, Mous (1993: 28-29) also notes restrictions on their vowel sequences. These restrictions hold for Gorwaa as well, and are formulated as follows: i) the first vowel is [+high] or [+low] (not [+mid]), and the second vowel is either epenthetic, [+low], or [+mid] (not [+high]) (see (2.12)); or ii) all vowels are identical (see (2.13)).

(2.12) **FIRST V IS NOT [+MID], SECOND VOWEL IS EITHER EPENTHETIC OR NOT [+HIGH]**

<table>
<thead>
<tr>
<th>Example</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>[bariːr#i]</td>
<td><em>bariːr</em>-a 'k.o. disease' (underscored i is epenthetic)</td>
</tr>
<tr>
<td>[gases#mó]</td>
<td><em>gases</em>-mó 'reptile sp.'</td>
</tr>
<tr>
<td>[fuʔun#i]</td>
<td><em>fuʔun</em>-i 'meat (i.e. one piece)' (underscored u is epenthetic)</td>
</tr>
<tr>
<td>[kitangeːr#i]</td>
<td><em>kitangeer</em>-i 'drying rack'</td>
</tr>
<tr>
<td>[giseːr#i]</td>
<td><em>giseer</em>-i 'pot for special beer'</td>
</tr>
</tbody>
</table>

(2.13) **ALL VS ARE IDENTICAL**

<table>
<thead>
<tr>
<th>Example</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>[baʔaːr#i]</td>
<td><em>ba’aar</em>-i 'bees'</td>
</tr>
<tr>
<td>[pulul#ú]</td>
<td><em>pulul</em>-ú 'kingfisher (i.e. a group)'</td>
</tr>
<tr>
<td>[tøqør#i]</td>
<td><em>tøqør</em>-i 'crippled person'</td>
</tr>
<tr>
<td>[biʔin#i]</td>
<td><em>biʔin</em>-i 'silky blesmol'</td>
</tr>
<tr>
<td>[kweeː’en#i]</td>
<td><em>kweeː’en</em>-i 'black-necked rock hyrax'</td>
</tr>
</tbody>
</table>

---

\(^3\) Mous (1993: 27) does not include the group in (2.12), as they are not considered stems in his account (therein roots, see esp. (2) in 1993: 27-28). In this work, I consider many of these forms stems. See [CROSS REFERENCE] for further analysis.
2. A grammatical sketch of Gorwaa


An exception exists for polysyllabic roots with a long vowel in their initial syllable, in that this long vowel may be mid.

(2.14) Exception: polysyllabic roots with long V in initial syllable, this syllable V may be [+mid]

a. [neːˈár] nee-/ár 'heavy clouds'
b. [seːsékʷ] seesékʷ 'bustard'
c. [poːhám] poohám 'baboon'

2.2.5.3 Word-level phonotactics

Vowels

Vowels never occur word-initially, a glottal stop is always inserted. For economy, this is not usually represented in the orthography.

Mous (1993: 27) also notes a correlation between vowel length in the second syllable and stress. The vowel of the initial syllable receives stress if the vowel of the second syllable is epenthetic.

(2.15) If the second syllable is epenthetic, the initial vowel receives stress

a. [ˈal#umó] /al- (a)mó 'bird sp.'
b. [tsˈifir#i] tsifir -i 'language'
c. [q′aduweé] qaduweé 'consulting the traditional doctor'

If the second syllable contains a long vowel or a high tone, then the second syllable receives stress.

(2.16) If the second syllable contains a long V or a high tone, it is stressed

a. [tˈɑŋgás] tlangás 'quivers (for arrows)'
b. [meːmɛːh] meemeéh 'woven backpacks'
c. [siroːr#ɑː] sırqor- -aa 'canaries'

Hall (2006) describes epenthetic vowels as inserted vowels which (contrary to excrescent vowels) are phonologically visible, and participate in the phonology by repairing structures which would otherwise be marked in the language. Mous
2. A grammatical sketch of Gorwaa

(1993: 28) lays out rules for where epenthetic vowels may be expected, though notes that there is variation between speakers of Iraqw as to how acceptable different clusters are. Using Mous’ consonant groupings, the Gorwaa data suggests the following:

An epenthetic vowel almost always occurs between clusters composed of the following consonants: [q], [hh], [tl], [m], [n], [ŋ], [m].

(2.17) **Epenthetic vowel between certain consonant clusters**

a. [laq’amaje]  
   **slaqmaye**  ‘fatigue’

b. [ʔafurt’um#áy]  
   **afurtlum**  -áy  ‘simple knots’

c. [fe:him#i]  
   **feehhìm**  -i  ‘crevice’

An epenthetic vowel will almost always occur between [m]C clusters, where C is [t], [k], [g], or [ŋ].

(2.18) **Epenthetic vowel occurs between [m]C clusters, where C is [t], [k], [g], or [ŋ]**

   [damit#o]  
   **damit**  -o  ‘waiting’

An epenthetic vowel will almost always occur before a syllable with a high tone.

(2.19) **Epenthetic vowel before a syllable with a high tone**

a. [hurahúr]  
   **hhurghúr**  ‘bulbul, greenbul’

b. [χundurúf]  
   **xundurúf**  ‘insect sp.’

An epenthetic vowel may intervene between other CC clusters, but this seems both less common than in the above listed environments, but also than as seems to occur in Iraqw.

(2.20) **Other cases of epenthetic vowels between CC clusters, and exceptions**

<table>
<thead>
<tr>
<th>Case</th>
<th>Consonant Cluster</th>
<th>Vowel</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>[ts’ara?as#i]</td>
<td><strong>tsarga’as</strong>  -i</td>
<td>‘flame’</td>
</tr>
<tr>
<td>But:</td>
<td>b. [fur’a]</td>
<td><strong>fur’a</strong></td>
<td>‘wind’</td>
</tr>
<tr>
<td>c.</td>
<td>[ʔat#ete:]</td>
<td><strong>tlat</strong>  -etee</td>
<td>‘debts’</td>
</tr>
<tr>
<td>But:</td>
<td>d. [ʔat#te:]</td>
<td><strong>/at</strong>  -tee</td>
<td>‘curds’</td>
</tr>
<tr>
<td>e.</td>
<td>[mara?ants#i]</td>
<td><strong>mara/ants</strong>  -i</td>
<td>‘insect sp.’</td>
</tr>
<tr>
<td>But:</td>
<td>f. [ts’ir#i]</td>
<td><strong>tsir/</strong>  -i</td>
<td>‘bird’</td>
</tr>
</tbody>
</table>
2. A grammatical sketch of Gorwaa

In fact, within South Cushitic, one of the defining features of Gorwaa is its tendency to tolerate consonant clusters (Kießling 2002: 107). Geminate consonants are brought about by reduplicative suffixes, 3-consonant clusters, and glottal stops following consonants are all examples.

**Consonant Clusters in Gorwaa**

| a.  | [dan#ne:]     | dan  -nee | ‘honies’ |
| b.  | [ʕatl#tɬɬe:]  | /aatl  -tlee | ‘jaws’  |
| c.  | [sim#me:]     | sim  -mee | ‘phones’ (from Sw. simu ‘phone’) |
| d.  | [kun#nu]      | kun  -nu | ‘mortars’ |
| e.  | [gʷar#i]      | gwar/ -i | ‘wildebeest’ |
| f.  | [mar#af#i]    | mar’af -i | ‘unmarriageable clan’ |

Series of vowels are disallowed in Gorwaa. Illicit clusters are repaired either through vowel deletion, or glide formation. Both processes, as well as evidence for each, are well laid out in Mous (1993: 33-35), and a similar line of reasoning will be presented here.

Rules of vowel deletion may be seen in the effect that the masculine linker /-ó/ has on nouns stems ending in a vowel. (2.22)a) shows that the vowel [a], when followed by [o], is deleted, whereas (2.22)b) shows that the vowel [aj] followed by [o] results in the vowel [aj]. (2.22)c) shows that the vowel [o] followed by [o] results in no change. For more on linkers, see Chapter 7.

**V + Linker -ó**

| a.  | hhawata + -ó → [hawató] hhawató tleér | ‘a tall man’ |
| b.  | slaqankay + -ó → [slaq’ankáy] slaqankáy tleér | ‘a long chameleoo n’ |
| c.  | tsoyo + -ó → [tsoyó] tsoyó tleér | ‘a tall dikdik’ |
2. A grammatical sketch of Gorwaa

A second source of evidence for deletion patterns is the effect that the vowel-initial noun suffixes -í (Dem1) has on stems ending in a vowel. For more information on demonstrative suffixes, see §2.4.1.2.

(2.23) \(V + \text{Dem1} -í\)

\[\begin{align*}
a. &\quad \text{muukú} \ + \ -í \ \rightarrow \ [\text{mu:kí}] \quad \text{muukí} \quad \text{‘these people’} \\
b. &\quad \text{asltá} \ + \ -í \ \rightarrow \ [\text{aältí}] \quad \text{asltí} \quad \text{‘these fires’}
\end{align*}\]

Based on data gathered to present, the following table can be given. Blanks indicate a lack of examples.

<table>
<thead>
<tr>
<th>Preceding Vowel</th>
<th>i</th>
<th>e</th>
<th>a</th>
<th>o</th>
<th>u</th>
<th>ay</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>e</td>
<td>a</td>
<td></td>
<td></td>
<td></td>
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<td>u</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ay</td>
<td></td>
<td>e</td>
<td>ay</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In addition to vowel deletion, if a rounded vowel occurs following a velar consonant and before an unrounded vowel, this rounded vowel will be realized as a glide.

(2.24) \(V[+\text{ROUND}] \rightarrow [w]/C[\text{VELAR}]. \_\_\_V[-\text{ROUND}]\)

\[\begin{align*}
a. &\quad \text{ku} -\text{a tsawaár} \quad \rightarrow \quad \text{kwa tsawaár} \quad \text{‘he was chosen’} \\
&\quad \text{t-} \quad \text{ng-} \quad \text{u-} \quad \emptyset \quad -\text{(g)A} \quad \text{tsawaár} \\
&\quad \text{MP-} \quad \text{A.3-} \quad \text{P.M-} \quad \text{AUX} \quad -\text{PRF} \quad \text{choose.PST} \\

b. &\quad \text{ngu} -\text{a hhe’és} \quad \rightarrow \quad \text{ngwa hhe’és} \quad \text{‘she had finished it’} \\
&\quad \text{ng-} \quad \text{u-} \quad \emptyset \quad -\text{(g)A} \quad \text{hhe’és} \\
&\quad \text{A.3-} \quad \text{P.M-} \quad \text{AUX} \quad -\text{PRF} \quad \text{finish.F.PST}
\end{align*}\]

Epenthetic vowels undergo regressive assimilation across the glottal consonant [ʔ].
2. A grammatical sketch of Gorwaa

(2.25) \( V_1 \rightarrow V_2 / \_ \_ \_ \) WHERE \( V_1 \) IS AN EPENTHETIC VOWEL

\[ \text{af-'a'i} \rightarrow [\text{a-fi'-i}] \quad \text{af'i'} \quad \text{mouths'} \]

Epenthetic vowels undergo progressive assimilation if the preceding vowel is [a], [i], or [u] and if the intervening consonant is velar, uvular, pharyngeal, or glottal.

(2.26) \( V_1 \rightarrow V_2/V_2 C \_ \_ \_ \) WHERE: \( V_2 \) IS [-MID]

\( C \) IS VELAR, UVULAR, PHARYNGEAL, OR GLOTTAL

a. \( \text{duux-iim} \rightarrow [\text{duxú:m}] \quad \text{duxúm} \quad \text{‘take out; marry'} \)
b. \( \text{wah-iim} \rightarrow [\text{wahá:m}] \quad \text{wahaám} \quad \text{‘drink'} \)

**Consonants**

[r] never occurs word-initially. Two exceptions exist: the place name Riroó ‘Riroda’, and the personal name Ri/o. The series of consonant cluster simplification rules listed in Mous (1993: 35-36) apply less strictly to Gorwaa than they do to Iraqw. Each applicable rule is presented and exemplified below:

In a cluster of two oral alveolar consonants, the first is deleted.

(2.27) \( C_1 C_2 \rightarrow C_2 \) WHERE: \( C \) [+ORAL]

\( \text{ALVEOLAR} \)

a. \( \text{gar} \rightarrow -\text{dá'} \rightarrow [\text{ga#dá'}] \quad \text{gadá'} \quad \text{‘that thing'} \)
b. \( \text{bombót} \rightarrow -\text{du} \rightarrow [\text{bombo#dú}] \quad \text{bombodú} \quad \text{‘old beers'} \)
c. \( \text{qwar} \rightarrow -\text{t} \rightarrow [\text{qwo#át}] \quad \text{qwát} \quad \text{‘get lost-2Sg'} \)

Glottal consonants are deleted if directly followed by an oral consonant.

(2.28) \( C_1 C_2 \rightarrow C_2 \) WHERE: \( C_1 \) [GLOTTAL]

\( C_2 \) [ORAL]

a. \( \text{bara}/' \rightarrow -\text{i} \rightarrow [\text{bara/wi}] \quad \text{bara/wí} \quad \text{‘this dance'} \)
b. \( \text{oh} \rightarrow -\text{t} \rightarrow [\text{ót}] \quad \text{ót} \quad \text{‘catch.2Sg'} \)

Labialized consonants lose their labiality if they are followed by a rounded vowel [u] or [o]. Alternatively, the perceptibility of the labiality may simply be decreased to the point of zero.
2. A grammatical sketch of Gorwa

(2.29) C[+LABIAL] \(\rightarrow\) C[+LABIAL] /___V[+ROUND]\(^4\)

\(\begin{array}{ll}
a. \text{deeqw} & -u(!) \rightarrow [\text{deq'}\#u] \text{dequ} \quad \text{‘razors’} \\
b. \text{kwa/aangw} & -oô \rightarrow [k^\text{a}\#\text{a}ng\#ô] \text{kwa/aangoô} \quad \text{‘a hare?’}
\end{array}\)

Word-final consonant reduction operations are optional.

(2.30) [nd] \(\rightarrow\) [n] /__#

\(\begin{array}{ll}
a. \text{siigand} & \rightarrow [\text{si:gan}] \text{siigan} \quad \text{‘grasshopper’} \\
\quad \text{or} [\text{si:gand}] \text{siigand} \quad \text{‘grasshopper’} \\
\quad \text{But:} [\text{si:dand#ê:}] \text{siigandeê} \quad \text{‘a grasshopper?’}
\end{array}\)

\(\begin{array}{ll}
b. \text{Hoshand} & \rightarrow [\text{hoʃan}] \text{Hoshan} \quad \text{‘Hoshan (place name)’} \\
\quad [\text{hoʃand}] \text{Hoshand} \quad \text{‘Hoshan (place name)’} \\
\quad \text{But:} [\text{hoʃand#ê:}] \text{Hoshandeê} \quad \text{‘Hoshan?’}
\end{array}\)

Voiced stops are optionally devoiced word-finally. Impressionistically, this seems to be most common in fast or informal speech.

(2.31) C[-CONTINUANT] \(\rightarrow\) C[-CONTINUANT] /__#

\(\begin{array}{ll}
[+\text{VOICED}] & [-\text{VOICED}] \\
\text{qaáb} & \rightarrow [q'áb:b] \text{qaáb} \quad \text{or} \quad [q'á:p] \text{qaáp} \quad \text{‘to stanch’}
\end{array}\)

2.3 Lexical Categories

The lexical categories – those semantically-endowed parts of speech that name entities, actions, or qualities – are outlined below. The subsection will cover nouns, verbs, adjectives and quantifiers, and adverbs. It will finish with a brief excursus on ideophones.

2.3.1 Nouns

As the controller of most agreement operations, it is with the noun that the examination of lexical categories will begin. First, a brief exposition is provided on the syntactic distribution of the noun. Next, nominal gender and number are introduced. Subcategories of nouns are next presented, followed by noun-

\(^4\) Note that the ! symbol which follows the suffix -u in this example is used to represent an accompanying phonological operation (shortening of a long vowel, eliminating a glide, and fortition effects ([w] \(\rightarrow\) [b], [r] \(\rightarrow\) [d])).
2. A grammatical sketch of Gorwaa

forming derivational operations. Finally, a model is provided of the structure of the noun word.

2.3.1.1 Syntactic distribution

Below is a list, with examples, of the syntactic configurations in which a noun may occur.

**Subject**
In pragmatically unmarked phrases, subject nouns occur clause-initially.

**Subject of Transitive Verb**

(2.32) **SUBJECT GARMA IS AGENT OF A TRANSITIVE VERB**

<table>
<thead>
<tr>
<th>gor</th>
<th>baahaa ngina taáhh</th>
<th>[20160921i.1]</th>
</tr>
</thead>
<tbody>
<tr>
<td>garma</td>
<td>baahaár ng- a- Ø -na taáhh</td>
<td></td>
</tr>
<tr>
<td>boy.LMo</td>
<td>hyaena.LFr A.3- P.F- AUX -IMPRF hit.M.PST</td>
<td></td>
</tr>
</tbody>
</table>

“The boy hit they hyaena.”

**Subject of Intransitive Verb**

(2.33) **SUBJECT GARMA IS AGENT OF INTRANSITIVE VERB**

<table>
<thead>
<tr>
<th>gor</th>
<th>ina /akuút</th>
<th>[20160921i.23]</th>
</tr>
</thead>
<tbody>
<tr>
<td>garma</td>
<td>i- Ø -na /akuút</td>
<td></td>
</tr>
<tr>
<td>boy.LMo</td>
<td>S.3- AUX -IMPRF jump.M.PST</td>
<td></td>
</tr>
</tbody>
</table>

“The boy jumped.”

**Subject of Copular Construction**

**Nominal Predicate**

(2.34) **GARMA IS SUBJECT OF COPULAR CONSTRUCTION**

<table>
<thead>
<tr>
<th>gor</th>
<th>a Gormo</th>
<th>[20160119f.1]</th>
</tr>
</thead>
<tbody>
<tr>
<td>garma</td>
<td>Ø Gormó</td>
<td></td>
</tr>
<tr>
<td>boy.LMo</td>
<td>AUX Gorwaa.person.♂.LMo</td>
<td></td>
</tr>
</tbody>
</table>

“The boy is a Gorwaa person.”

**Locative Predicate**

(2.35) **GARMA IS SUBJECT OF A LOCATIVE PREDICATE**

<table>
<thead>
<tr>
<th>gor</th>
<th>i bará qaymoo</th>
<th>[20160119f.14]</th>
</tr>
</thead>
<tbody>
<tr>
<td>garma</td>
<td>i- Ø bará qaymoo'r</td>
<td></td>
</tr>
<tr>
<td>boy.LMo</td>
<td>S.3- AUX in field.LFr</td>
<td></td>
</tr>
</tbody>
</table>

“The boy is in the field.”
2. A grammatical sketch of Gorwaa

Adjectival Predicate

(2.36) GARMA IS SUBJECT OF AN ADJECTIVAL PREDICATE

```
garma ku tleér       [20160119f.25]
garmá  t- ng- u- Ø  tleér
boy.LMo  MP- A.3- P.M- AUX tall.M
```

"The boy is tall."

Object

Direct Object

The position of the direct object nouns is best analyzed in relation to the selector -- a cluster of clitics which consistently occurs to the left of the lexical verb (see §2.4.2). The direct object may occur: i) immediately before the selector (2.37); ii) immediately after the selector, in which case the linker is pronounced (2.38); and iii) immediately before (or as part of) the verb, in which case the linker is never present (2.39). In the second case, the direct object is no longer indexed as agreement on the selector (see §2.4.2.1). In the third case, the noun is probably incorporated into the verb, and is never an argument (see §7.4.1.1).

(2.37) DIRECT OBJECT SLEE OCCURS IMMEDIATELY BEFORE THE SELECTOR AGA

```
slee aqa gaás       [20161102b.51]
sleér   Ø- a- Ø -(g)a gaás
cow.LFr  A.P- P.F AUX -PRF kill.1SG.PST
```

"I killed the cow."

(2.38) DIRECT OBJECT SLEE OCCURS IMMEDIATELY AFTER THE SELECTOR A

```
aní a sleér diif     [20160927l222-228.26]
aní  Ø- sleér  diif
Pro1SG S.P- AUX cow.LFr hit.1SG
```

"I hit the cow."

(2.39) (NOTIONAL) DIRECT OBJECT SLEE OCCURS IMMEDIATELY BEFORE THE VERB GÁS

```
uga slee-gás       [20161119f.34]
Ø- u- Ø -(g)a slee- gás
A.P- P.M- AUX -PRF cow- kill.2SG.PST
```

"You(M) killed a cow on him."
2. A grammatical sketch of Gorwaa

Predicate of Copular Construction

Nominal Predicate

(2.40) **DAAWAA IS PREDICATE OF COPULAR CONSTRUCTION**

- xaa’í sla/a *daawaa*[20131108b_20150725j.7]
  - xaa’í sla/atâ i- ø -(g)a daawaár
  - trees.LNØ forest.LFT S.3 AUX -PRF medicine.LFr

  “The trees of the forest are medicine.”

Temporal Predicate

(2.41) **ASKOFÚ MKOWÁR ARUSHA IS PREDICATE OF TEMPORAL COPULAR CONSTRUCTION**

- inós tawa *askofú mkowár Arushá*[20131027.27]
  - inós ta- ø -wa askofú mkowár Arushá
  - PRO.3SG TEMP- AUX -BACK bishop.LMo region.LFr Arusha.LFr

  “When he was bishop of Arusha region.”

Indirect Object

Indirect object nouns may occur in one of two positions: i) as an adjunct following the locational noun *dír* (2.42); or ii) immediately before the selector (2.43). If the indirect object noun occurs in this position, the direct object noun must be marked with the lative suffix *-i*.

(2.42) **INDIRECT OBJECT DESI IS AN ADJUNCT FOLLOWING DÍR**

- mwalimu kitaabu *ngwa hariís dír desi*[20160928c.44]
  - mwalimu kitaabú ng- u- ø -(g)a hariís
  - dír desi
  - to girl.LFr

  “The teacher brought the book to the girl.”

(2.43) **INDIRECT OBJECT DESI IS IMMEDIATELY BEFORE THE SELECTOR NGINA**

- mwalimu *desí ngina kitaabuwí hariís*[20160927123-29.3]
  - mwalimú desí ng- a- ø -na kitaabú -i
  - teacher.LMo girl.LFr A.3- P.F- AUX -IMPRF book.LMo -
  - LAT

  hariís
  - bring.M.Pst

  “The teacher brought the girl the book.”

Object of Comparison

The object of comparison occurs following the *ta* of comparison, and must occur with topic morphology.

A grammatical sketch of Gorwaa

(2.44) **GARMA is object of comparison**

inós ka tleer ta **garmawoo** [20160927m.1]

inós t- ng- a- ∅ tleer ta **garmá** =oo

Pro3sg MP- A.3- P.F- Aux tall.F Comp boy.LMo =top

“She is tall compared to the boy.”

**Agent in Pseudopassive Construction**

Agents of pseudopassive (i.e. impersonal) constructions occur as adjuncts following the agentive preposition *nee*.

(2.45) **Agent of pseudopassive construction ** **GARMA is an adjunct following NEE**

**baahaa kana taáhh nee** **garma** [20160927m.31]

baahaaár t- ng- a- ∅ -na taáhh nee **garmá**

hyaena.LFr MP- A.3- P.F- Aux -lprf hit.Pst by boy.LMo

“The hyaena was hit by the boy.”

**Sole Argument of Impersonal**

By their very nature, impersonal constructions need not have an explicit agent.

(2.46) **BAHAA is sole argument of impersonal construction**

**baahaa kana taáhh** [20160927m.46]

baahaaár t- ng- a- ∅ -na taáhh

hyaena.LFr MP- A.3- P.F- Aux -lprf hit.Pst

“(Somebody) hit the hyaena.”

**Possessor**

Possessors either directly follow their possessum (2.47) or are preceded by an anaphoric pronoun which refers to their possessum (as in (2.48), where the possessum daawa 'medicine' is separated from its possessor seehha 'tsetse fly' by a verb phrase *ngin amosi leehh*).

(2.47) **Possessor GURA directly follows its possessum DAAWA**

**a daawáar gura’** [20150808a.92]

∅ daawaár **gurá’**

AUX medicine.LFr stomach.LMo

“It is stomach medicine.”
2. A grammatical sketch of Gorwaa

(2.48) **Possessor seehhaa is preceded by anaphoric pronoun ar**

daaawaa nga amosi leehh ar seehhaa [...]

```
daawār ng- a- Ø -n amór =sí
diagnosis.LFr A.3- P.F- AUX -EXPECT place.LFr =DEM2
leehh ar seehhār
look.for.3.SBJ ANA.F tsetse.flight.LFr
```

“He will look for tsetse fly medicine.”

**Possessum**

If directly preceding the possessor, the linker of the possessum is pronounced ((2.49)).

(2.49) **Possessum daawaa directly precedes possessor gura’**

```
a daawār gura’
i- Ø -(g) a daawār
gurά
S.3- AUX -PRF medicine.LFr stomach.LMo
```

“It is stomach medicine.”

2.3.1.2 Gender and number

Gender and number in South Cushitic is intertwined in a complex manner. The first subsection will treat biological/semantic sex, and the second will treat semantic number. The third subsection will treat syntactic gender, and the fourth will treat syntactic number (both defined strictly in terms of the agreement that they trigger). Finally, the concept of ‘gender polarity’ will be briefly introduced in subsection five.

**Semantic Sex**

Working on South Cushitic as a whole, Kießling (2000: 7-9) identified some correspondence between syntactic gender and semantic sex. Many female beings are feminine in gender, and many male beings are masculine in gender.

(2.50) ♀ BEINGS ARE (F) GENDER, ♂ BEINGS ARE (M) GENDER

a. (F) feminine: /ameeni ‘woman’; hhó’oo ‘sister’; koonki ‘hen’
b. (M) masculine: hhawata ‘man’; hhiya ‘brother’; gurtu ‘male goat’

Some “remarkable deviations” (2000: 8) also exist: male organs tend to be F in gender and female organs tend to be M in gender.
2. A grammatical sketch of Gorwaa

(2.51) ‘Remarkable deviations’ to correspondence between syntactic gender and semantic sex
   a. (F)eminine: na/ani ‘penis’; gudo ‘testicle’; poo/i ‘Adam’s apple’
   b. (M)asculine: gwalay ‘vagina’; isamó ‘breast’

A second pattern appears in botanical vocabulary: masculine forms referring to a plant, and feminine forms referring to the fruit (2000: 8).

(2.52) (M) forms refer to plant, (F) forms refer to fruit
   a. maangware’umó (M) | maangware’ito'o (F)
      ‘sorghum sp. (one plant)’ ‘sorghum sp. (one head)’
   b. baranqumó (M) | barangeto’o (F)
      ‘tree sp. (one tree)’ ‘tree sp. (one fruit)’
   c. xoowáy (M) | xoowí (F)
      ‘vine sp. (one plant)’ ‘vine sp. (one fruit)’

Beyond humans, salient animals (livestock and pets), and plants, other semantic groupings do not produce any sort of obvious patterns.

**Semantic Number**
Both Mous, working on Iraqw, (1993: 44-46) and Kießling, working on South Cushitic, (2000: 11) establish that number systems like that of Gorwaa are complex semantically. Much of this complexity has to do with nouns being arranged in a manner that does not always fit well with traditional notions of “singular = one” and “plural = many”. Several patterns are examined below:

A noun may exist in a “singular” form, referring to one entity, versus a “plural” form, referring to many (2 or more) of such entities. This is an arrangement which would be most familiar to English speakers.

---

5 Use of the pipe | is intended to suggest that two forms shown side-by-side are in some way related, but does not propose any derivational or inflectional direction (i.e. from a root to a stem, or a “base form” to a “derived form”).
2. A grammatical sketch of Gorwaa

(2.53) **Singular vs. Plural**

- a. *tsukurumó* ‘a ladle’ | *tsukurma* ‘ladles’
- b. *tlapteemó* ‘a falcon’ | *tlapteema* ‘falcons’
- c. *ga/atini* ‘a high fever’ | *ga/atanáy* ‘high fevers’

Nouns may also exist in a “collective” form, referring to an undifferentiated group of an entity, or an entity in general, versus either a singular or plural form.

(2.54) **Singular vs. Collective**

- *bami’to’o* ‘okra’ (one fruit or flower) | *bamiya* ‘okra’ (as food or as a crop)

(2.55) **Collective vs. Plural**

- *sandaa* ‘cloth pouch’ (a kind of | *sandadu* ‘cloth pouch or group of pouches’

Three-way distinctions also exist.

(2.56) **Singular vs. Collective vs. Plural**

- *fuqumó* ‘an acacia’ | *fuqa* ‘acacia’ | *fuqi* ‘acacias’ (as a kind or species)

Mass nouns, refer to uncountable entities of undifferentiated consistency. Some mass nouns may be pluralized (2.57), and others may not (2.58).

(2.57) **Mass Noun Tsunqaa May Be Pluralized**

- *tsunqaa* ‘saliva’ | *tsunqu’u* ‘saliva’ (scattered in different places)

(2.58) **Mass Noun Maa’ay May Not Be Pluralized**

- *maa’ay* ‘water’

**Syntactic Gender**

Syntactic gender is gender as manifested in the agreement patterns triggered on forms beyond the noun (see Corbett 1991). In Gorwaa, there are three: (M)asculine, (F)eminine, and (N)euter. Forms which show gender agreement are: tonic pronouns (possessive, demonstrative, and anaphoric), non-tonic pronouns (i.e. the P argument marker), adjective copulas, adjectives, verbs, 1st degree demonstrative enclitics, indefinite enclitics, and linkers. These forms, and examples, are provided in Table 2.4 below.
2. A grammatical sketch of Gorwaa

Table 2.4: The Targets of Gender Agreement in Gorwaa

<table>
<thead>
<tr>
<th>Agreement Type</th>
<th>Category^A</th>
<th>M^B</th>
<th>Example</th>
<th>F</th>
<th>Example</th>
<th>N</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anaphor</td>
<td>ProPoss</td>
<td>ko- + Poss</td>
<td><em>awu a kw‘eé’</em></td>
<td>to- + Poss</td>
<td><em>slee a te‘é’</em></td>
<td>ko- + Poss</td>
<td><em>hhayso a kw‘eé’</em></td>
</tr>
<tr>
<td></td>
<td>ProDem</td>
<td>ko- + Dem</td>
<td><em>awu a koqá’</em></td>
<td>to- + Dem</td>
<td><em>slee a toqá’</em></td>
<td>ko- + Dem</td>
<td><em>hhayso a koqá’</em></td>
</tr>
<tr>
<td></td>
<td>Ana</td>
<td>oo</td>
<td><em>awuwí oo tleér</em></td>
<td>ar</td>
<td><em>sleerí ar tleer</em></td>
<td>oo</td>
<td><em>hhaysowi oo tleer</em></td>
</tr>
<tr>
<td>Subject</td>
<td>V (1)</td>
<td>-V:C</td>
<td><em>garma ni tliq</em></td>
<td>-VC <del>RPA</del></td>
<td><em>desi ni tliq</em></td>
<td>-V:C ~iyá’</td>
<td><em>tlataa ni tlii tyranny</em></td>
</tr>
<tr>
<td></td>
<td>V (2)</td>
<td>-V:n <del>RPA</del></td>
<td><em>garma i qóón</em></td>
<td>-Vnd <del>RPA</del></td>
<td><em>desi i qónd</em></td>
<td>-V:n ~iyá’</td>
<td><em>tlataa i qooniyí</em></td>
</tr>
<tr>
<td></td>
<td>V (3)</td>
<td>-ay <del>RPA</del></td>
<td><em>garma ni xáy</em></td>
<td>-eer <del>RPA</del></td>
<td><em>desi ni xeér</em></td>
<td>-ay ~iyá’</td>
<td><em>tlataa ni xayiyá</em></td>
</tr>
<tr>
<td></td>
<td>V (4)</td>
<td>-ar <del>RPA</del></td>
<td><em>naamú ni hamár</em></td>
<td>-an <del>RPA</del></td>
<td><em>fa/a ni hamát</em></td>
<td>-ar ~iyá’</td>
<td><em>tlataa ni hamariyí</em></td>
</tr>
<tr>
<td></td>
<td>V (5)</td>
<td>-Vh</td>
<td><em>garma ni áh</em></td>
<td>-Vt <del>RPA</del></td>
<td><em>desi ni dát</em></td>
<td>-Vh ~iyá’</td>
<td><em>tlataa ni dahiyá</em></td>
</tr>
<tr>
<td></td>
<td>V (6)</td>
<td>-Vw <del>RPA</del></td>
<td><em>garma ngi húw</em></td>
<td>-Vp <del>RPA</del></td>
<td><em>desi ngi húp</em></td>
<td>-Vw ~iyá’</td>
<td><em>tlataa ngi huwiyí</em></td>
</tr>
<tr>
<td>Object</td>
<td>P</td>
<td>u</td>
<td><em>garma avu nga táníh</em></td>
<td>a</td>
<td><em>garma slee nga táíh</em></td>
<td>i</td>
<td><em>garma hhayso ngi táíh</em></td>
</tr>
</tbody>
</table>
### 2. A grammatical sketch of Gorwaa

<table>
<thead>
<tr>
<th>Agreement Type</th>
<th>Category</th>
<th>M</th>
<th>Example</th>
<th>F</th>
<th>Example</th>
<th>N</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Head</strong></td>
<td>Adj (1)</td>
<td><del>RPA</del></td>
<td><em>awú Ûr</em></td>
<td>'a big bull'</td>
<td><del>LPA</del></td>
<td><em>sleër ur</em></td>
<td>'a big cow'</td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
<td>Adj (2)</td>
<td><del>RPA</del></td>
<td><em>awú tlaákwa</em></td>
<td>'a bad bull'</td>
<td><del>LPA</del></td>
<td><em>sleër tlaákwa</em></td>
<td>'a bad cow'</td>
</tr>
<tr>
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<tr>
<td></td>
<td>Adj (3)</td>
<td><del>RPA</del></td>
<td><em>awú buúx</em></td>
<td>'a grey bull'</td>
<td><del>LPA</del></td>
<td><em>sleër buúx</em></td>
<td>'a grey cow'</td>
</tr>
<tr>
<td>=Dem1</td>
<td>=í</td>
<td>~í</td>
<td><em>awuwí</em></td>
<td>'this bull'</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>=Indef</td>
<td>=ko</td>
<td>~ko</td>
<td><em>awuko</em></td>
<td>'some such bull'</td>
<td>=ka</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linkers</td>
<td>-o</td>
<td>-r</td>
<td><em>awú baábá</em></td>
<td>'father's bull'</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-ku</td>
<td>-ta</td>
<td><em>dakó baábá</em></td>
<td>'father's hand'</td>
<td>-a</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-ko</td>
<td>-∅</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*A.N.B. bracketed numbers refer to pattern-type (e.g. V (1) refers to a Pattern 1 Verb).*

*B.N.B. morphemes which appear one on top of the other in the columns M, F, and N, represent alternative forms. Some (such as –iyá’ vs. –iyí’) are in free variation. Some (such as –r vs. –ta) are lexically conditioned.*
As may be seen in the table, "linkers" exhibit two different morphemes for each gender. Within this three-gender system, each gender exhibits subgender – that is, a second agreement pattern within the larger pattern that functions with a subset of nouns, and in a subset of environments (c.f. Corbett 1991: 163). In Gorwaa, subgender is only distinguished in linker morphology, obligatory suffixes which appear on nouns when a) modified within the noun phrase or b) encapsulated within the verb phrase. For more information on these environments, see §7.3.1. All linker morphology is realized with rising pitch accent. Mo-type subgender is instantiated by the morpheme –o (2.59). Mk-type subgender is instantiated by the morpheme –ko or –ku (2.60). Fr-type subgender is instantiated by the morpheme –r (2.61). Ft-type subgender is instantiated by the morpheme –ta (2.62). Na-type subgender is instantiated by the morpheme –a (2.63). N∅-type subgender is instantiated by the morpheme -∅ (2.64). The only noun of the Na-type subgender identified thus far is /ew/ ‘west’.

(2.59) **Mo linker -ó**

<table>
<thead>
<tr>
<th>hhawata</th>
<th>-ó</th>
<th>baabá</th>
<th>→</th>
<th>hhawató baabá</th>
</tr>
</thead>
<tbody>
<tr>
<td>man</td>
<td>-LMo</td>
<td>father</td>
<td>“father’s man”</td>
<td></td>
</tr>
<tr>
<td>“father’s man”</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(2.60) **Mk linker -kú**

| kuru | -kú | -í | → | kurkí |
| year | -LMk | -DEM1 | “this year” |

(2.61) **Fr linker -r~’~**

| desí | -r~’~ | ‘eé’ | → | desir’eé’ |
| girl | -LFr | -POSS1SG | “my girl” |

(2.62) **Ft linker -tá**

| asla | -tá | -ka | → | asltaka |
| fire | -LFr | -ÍNDEF.F | “some such fire” |
2. A grammatical sketch of Gorwaa

(2.63) **NA LINKER -á**

/ew -á saaw → /éwá saaw  
west -LNA far.N “the far west”

(2.64) **Ø LINKER ~′~**

/ayla -~′~ -dá’ → /ayladá’  
wedding.song -LNØ -DEM4 “that wedding song”

**Syntactic Number**

*Semantically,* several groupings for number have been established directly above. However, *syntactically* (i.e. as instantiated through agreement), number has two values in Gorwaa: singular (Sg) and plural (Pl). The only category to show number agreement is the adjective. Full paradigms for each of the three inflectional patterns for adjectives can be found in Table 2.10 in §2.3.3.1.

(2.65) **SINGULAR (Sg) NUMBER AGREEMENT**

[...] hhaysodá’ *ur* [20161109b.51]

hhaysó -dá’ *ur*  
tail.LNØ -DEM4 big.N  
“[...] that big tail”

(2.66) **PLURAL (Pl) NUMBER AGREEMENT**

[...] hhaysusudá’ *uren* [20161109b.52]

hhaysusú -dá’ *uren*  
tails.LNØ -DEM4 big.N.Pl  
“[...] those big tails”

**Gender “polarity”**

A final pattern of which to take note is that, *when changed for number, the syntactic gender of a noun may also change.* This phenomenon, dubbed “gender polarity” by Meinhof (1912: 18-20) has since been identified as a salient characteristic of many Cushitic languages (see e.g. Hetzron 1967). For example, a singular noun which triggers (F) agreement on target adjectives, verbs, etc. can pluralize to a noun which triggers (M) agreement on those same target adjectives, verbs, etc. Compare the verbal agreement of *desu* ‘girls’ with that of *garma* ‘boy’ in (2.67) below:
2. A grammatical sketch of Gorwaa

(2.67) Gender Polarity: desí(F) ‘girl’ and desu(M) ‘girls’

a. desí tleér i qwala/amíś
   desí  tleér  i-  ∅  qwala/amíś
   girl.LFr  tall.F  S.3-  Aux  make.happy.F.PRES
   ‘a tall girl makes one happy’

b. desú tlét i qwala/amiís
   desú  tlét  i-  ∅  qwala/amiís
   girls.LMo  tall.M.PL  S.3-  Aux  make.happy.M.PRES
   ‘tall girls make one happy’

c. garmá tleér i qwala/amiís
   garmá  tleér  i-  ∅  qwala/amiís
   boy.LMo  tall.M  S.3-  Aux  make.happy.M.PRES
   ‘a tall boy makes one happy’

Indeed, this process is widespread, and results in forms of any gender resulting in forms of almost any other gender.

(2.68) More examples of gender polarity

a. siyó(M) ‘fish’ | siyumó(M) ‘one fish’

b. gufú(M) ‘smouldering stick’ | guffee(F) ‘smouldering sticks’

c. dakw(M) ‘procedure’ | dakwi’ï(N) ‘procedures’

d. /urfi(F) ‘skink’ | /urfaa(F) ‘skinks’

e. desi(F) ‘girl’ | desu(M) ‘girls’

f. tlafi(F) ‘cloud’ | tlafoo(N) ‘clouds’

g. hhaysoo(N) ‘tail’ | hhaysusu(N) ‘tails’

e. /aatloo(N) ‘jaw’ | /aatltlee(F) ‘jaws’

This phenomenon demonstrates a complex intertwining of gender and number, a phenomenon which will be further examined in the next chapter. For this, as well as information on the mechanics of changing nouns for number in Gorwaa, see §6.3.5, and §6.5.5.
2. A grammatical sketch of Gorwaa

2.3.1.3 Subcategories of nouns

The major formally distinct subcategories of nouns include the tonic pronouns, proper nouns, mass nouns, singulaaria and pluralia tantum, locational nouns, and numerals.

**Tonic pronouns**

The tonic pronouns include personal pronouns (e.g. *ání* ‘I, me’), possessive pronouns (e.g. *korén* ‘ours (MorN)’), demonstrative pronouns (e.g. *tí* ‘this here (F)’), interrogative pronouns (e.g. *ma’á* ‘who’), and modified form pronouns (e.g. *ar téer* ‘the tall one (F)’). Described in more detail in §2.4.3.1, tonic pronouns share many of the characteristics of nouns. They have stress and tone, and they may serve as full arguments in any position occupied by a noun (see (2.69)-(2.72)). The primary difference is that, as a subcategory, tonic pronouns are a functional category. As their role is deictic, they do not have full semantic content. Additionally, the subgroup is closed (i.e. does not admit new members, such as loans or neologisms).

(2.69) *ání* asla a ga/áw [20150724.71]

```
ání asltá ∅- a- ∅ ga/áw
Pro.1SG fire.LFr A.P- P.F- Aux look.at.1.PSt
```

“I look at the fire.”

(2.70) *te’eé’ a faák ee* [DSC_5354_20150705b.34]

```
té’eé’ ∅- a- ∅ faák ee
PROP.OSS.F.1SG A.P P.F- AUX finish.1.PSt yes
```

“I finish mine, yes.”
2. A grammatical sketch of Gorwaa

(2.71) moró’ó na axamamiús dír baaborén a kwí [...]  [DSC_5354_20150725b.73]

moro’ó  ni-  Ø  -(g)a
things.LMo  MP.A.1-  AUX  -PRF
~Red~  axaás  -iǐm  -iis  dír baabó  =rén
~PLUR~  hear.1  -DUR.1  -CAUS.1.SUBJ  at  fathers.LMo  =POSS.1Pl
i-  Ø  -(g)a  kwí
S.3  AUX  -PRF  PRODEM1.M

"The things I heard from the ancestors are this:"

(2.72) hareerí a ma’â [20160111h.22]

hareér  -i  i-  Ø  -(g)a  ma’â
woman.LFR  -DEM1  S.3  AUX  -PRF  who

"Who is this woman?” (lit. This woman is who?)

Proper nouns
Proper nouns typically refer to a unique entity (versus common nouns which typically refer to a class of entities), as such, they cannot be modified by possessives, nor can they be pluralized. Proper nouns may be subdivided into personal names and place names. Each will be examined below.

Personal names
The majority of Gorwaa personal names are derived from common nouns via three principal strategies: zero derivation (2.73), high tone insertion (2.74), and simplification6 (2.75). Many other personal nouns are loans from other languages, especially Datooga. As may be seen, most Gorwaa names are unisex: applicable to both men and women.7

(2.73) PERSONAL NAMES: ZERO DERIVATION

a. yamee ‘lands’          →          Yamee ♂
b. na/aa ‘children’         →          Na/aa ♂
c. mabiwá ‘sorghum sp.’   →          Mabiwá ♂/♀
d. heelo ‘kind of song’    →          Heelo ♂
e. bee/i ‘ewe’             →          Bee/i ♂

6 Coates (2016) mentions simplification as a particularly common change undergone diachronically by proper names.

7 ♂ indicates that a name is reserved for a male, ♀ that a name is reserved for a female, and ♂/♀ that a name may be used for either a male or a female.
2. A grammatical sketch of Gorwaa

(2.74) PERSONAL NAMES: DERIVATION BY INSERTION OF A HIGH TONE

a. ba/ata ‘fatigue’  →  Ba/atá ♂

b. dahayee ‘visitors’ → Dahayée ♂/♀

c. mani/i ‘unripe corn’ → Mani/i ♂

d. oona ‘kind of gourd’ → Ooná ♂/♀

e. siigan ‘grasshopper’ → Siigán ♂/♀

(2.75) PERSONAL NAMES: DERIVATION BY SIMPLIFICATION

a. galaxandí ‘small thing’ → Galaxoo ♂

b. hhayuma ‘travelling’ → Hhayma ♂/♀

c. matlatlee ‘morning’ → Matlee ♂/♀

d. tahhahhaní ‘biting ants’ → Tahhaní ♂/♀

e. xeerangw ‘scorpion’ → Xeera ♂/♀

Gorwaa people are also given a patronymic surname, thus a personal name may be modified by the noun phrase dó’ X, where X is the first name of the person’s father.

As such, Yahhí oo dó’ Tluwáy refers to ‘Yahhí ♂ of the house of Tluway’. Yahhí ar dó’ Tluwáy refers to ‘Yahhí ♂ of the house of Tluway’. These formulae may also be expressed by attaching the linker to the end of the name: Yahhí Tluwáy and Yahhír Tluwáy, respectively.

Place names

Gorwaa place names fall into three broad groups: place names derived from common nouns (2.76), place names based on a personal name (2.77), and loans (2.78).

(2.76) PLACE NAMES DERIVED FROM COMMON NOUNS

a. Daka’umó (from daka’umó ‘baobab sp.’)

b. Hhaala (from hhaala ‘well’)

c. Tsamasi (from tsamasi ‘giraffe’)

(2.77) PLACE NAMES BASED ON A PERSONAL NAME

a. Ayaxoxo (from aya ‘land’ and Xoxo, a personal name)

b. Ayasanda (from aya ‘land’, and Sanda, a personal name)

c. Ayamaango (from aya ‘land’, and Maango, a personal name)
2. A grammatical sketch of Gorwaa

(2.78) Place names from other languages

a. Endabeg  (supposedly from Datooga ‘river of water’?)
b. Majengo  (from Swahili majengo ‘buildings’)  
c. Oysterbay  (from English ‘Oyster Bay’)

Several place names may be either masculine or feminine, with the variation sometimes occurring in the same speaker.

Figure 2.2: Place names showing (M) and (F) agreement

<table>
<thead>
<tr>
<th>Ayá Tla/aa</th>
<th>Daanda/áy</th>
<th>Maisák</th>
<th>Qásh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baambáy</td>
<td>Dawár</td>
<td>Manaxa</td>
<td>Qatadiyángw</td>
</tr>
<tr>
<td>Bubu</td>
<td>Kaandák</td>
<td>Muumbalá</td>
<td>Sigín</td>
</tr>
<tr>
<td>Chemchem</td>
<td>Komotó</td>
<td>Negamsí</td>
<td>Tururú</td>
</tr>
</tbody>
</table>

Mass nouns
Mass nouns refer to uncountable entities of undifferentiated consistency. They differ from count nouns in that they cannot be modified by numerals. Gorwaa masses include mud (ba/i), water (maa’ay), and knowledge (qeeru) as well as entities less commonly construed as mass, including ideas (hasloo), footprints (kala/a), and flames (duru’i).

Some, but not all, mass nouns may be pluralized. The result is a new mass noun with a distributive meaning (i.e. the substance of the mass in different places, or at different instances of time).

(2.79) Some mass nouns may have plural forms

<table>
<thead>
<tr>
<th>a. danú ‘honey’</th>
<th>dannée ‘honies’ (i.e. different types of honey, or the same honey in different containers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. tlamfé ‘beeswax’</td>
<td>tlamfá ‘beeswaxes’ (i.e. wax in different places)</td>
</tr>
<tr>
<td>c. tseerée ‘blood’</td>
<td>tseerdu ‘blood’ (i.e. different spots or pools of blood in different places)</td>
</tr>
</tbody>
</table>
2. *A grammatical sketch of Gorwaa*

**Singularia/Pluralia Tantum**
Several singular nouns in Gorwaa do not have a plural form, including *dawri* ‘sky’, *hoomoo* ‘full moon’, and *serkaari* ‘central government’. Several plural nouns do not have a singular form, including *moro’ó* ‘menses’, and *gwa/ateema* ‘light’.

**Locational nouns**
Locational nouns serve a prepositional function. Typically derived from common nouns (and very often body parts), they may occur postverbally as verb phrase adjuncts, and, when used with the prepositions *ay* (lative) and *wa* (ablative), serve to add locational precision. Some locational nouns are highly selective, and must follow other specific locational nouns. Others may occur in any order. Table 2.5 provides the locational nouns, the orders in which they may occur, and their approximate meaning.
2. A grammatical sketch of Gorwaa

Table 2.5: LOCATIONAL NOUNS AND THEIR COMBINATIONS

<table>
<thead>
<tr>
<th>Noun 1 (source noun)</th>
<th>Noun 2 (source noun)</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>amór ‘at’</em> (amo ‘place’)</td>
<td><em>guro’ó ‘inside’</em> (gura’‘stomach’)</td>
<td><em>amór guro’ó mar’i</em> ‘inside the cave’</td>
</tr>
<tr>
<td><em>bihhi’beside’</em> (bihhi’‘side’)</td>
<td><em>amór bihi sokodá’</em> ‘beside that market’</td>
<td></td>
</tr>
<tr>
<td><em>bartá ‘side’</em> (bara’ ‘side’)</td>
<td><em>amór bartá muukuqá’</em> ‘on the side of those people’</td>
<td></td>
</tr>
<tr>
<td><em>geerá ‘in front’</em> (geera’ ‘front’)</td>
<td><em>amór geerá tsir/i</em> ‘in front of the bird’</td>
<td></td>
</tr>
<tr>
<td><em>dir ‘at’</em> (di ‘place’)</td>
<td><em>geerá ‘in front’</em> (geera’ ‘front’)</td>
<td><em>dir geerá do’</em> ‘in front of the house’</td>
</tr>
<tr>
<td><em>afee ‘to the side’</em> (afeetloo’ ‘waist’)</td>
<td><em>dir afee uruwa</em> ‘at side of the road’</td>
<td></td>
</tr>
<tr>
<td><em>bihhi’ at the side’</em> (bihhi’ ‘side’)</td>
<td><em>dir bihi ya’awoo</em> ‘beside its legs’</td>
<td></td>
</tr>
<tr>
<td><em>bará ‘in’</em> (bara’ ‘side’)</td>
<td><em>tla/aangw ‘among’</em> (tla/aangw’ ‘middle’)</td>
<td><em>bará tla/aángw yiikwa’ín</em> ‘among their cattle’</td>
</tr>
<tr>
<td><em>daandó ‘on’</em> (daanda’ ‘back’)</td>
<td><em>bará daandó yaamu</em> ‘on the earth’</td>
<td></td>
</tr>
<tr>
<td><em>guro’ó ‘underneath’</em> (gura’‘stomach’)</td>
<td><em>bará guro’ó meesa</em> ‘underneath the table’</td>
<td></td>
</tr>
<tr>
<td><em>gawá ‘on’</em> (gawa’ ‘top’)</td>
<td>*daandó ‘on top’ (fig. ‘about’) (daanda’ ‘back’)</td>
<td><em>gawá daandó xa’ano</em> ‘on top of the tree’</td>
</tr>
<tr>
<td><em>alú ‘behind’</em> (alu’ ‘rear’)</td>
<td><em>alú do’</em> ‘behind the house’</td>
<td></td>
</tr>
<tr>
<td><em>afkó ‘edge’</em> (afa’ ‘mouth’)</td>
<td><em>afkó wa/aanw</em> ‘the edge of the arroyo’</td>
<td></td>
</tr>
</tbody>
</table>

**Numerals**

Numerals are typically singulare tantum, except for *miibaangw ‘ten’, tsiru ‘hundred’, and kumá ‘thousand’, which all have plural forms (*mibeeri*, *tsiree*, and *kumee*, respectively). Cardinal numbers occur as modifiers to their head noun (2.80). Ordinal numbers take the same form, but must be preceded by the anaphoric pronoun (2.81).
2. A grammatical sketch of Gorwaa

(2.80) **Cardinal number wák ‘one’**

\[ \text{fuqunó wák ku tleér wa ló} \] [20151021c.327]

\[ \text{fuqunó wák t-ng-u-Ø tleér wa ló} \]

claw.LMo one MP- A.3- P.M- AUX long.M very

“one claw is very long”

(2.81) **Ordinal oo wák ‘first’**

\[ \text{kana gaás nee tahhatá oo wák} \] [20150724.6]

\[ \text{t-ng-a-Ø-na gaás nee tahhatá oo} \]

MP- A.3- P.F- AUX -IMPRF kill.PST by hitting.LFT ANA.M

wák one

“it (i.e. the hyaena) was killed by the first blow”

The Gorwaa numeral system is decimal, and vocabulary up to the thousands means that the language may, theoretically, accommodate a maximum figure as low as 9,999 and as high as 999,999. With that said, the highest numeral recorded in the database is 1,947 (2.82), and it is highly common for Swahili numerals to be used instead of Gorwaa numerals (2.83).
2. A grammatical sketch of Gorwaa

**Figure 2.3: Numerals in Gorwaa**

<table>
<thead>
<tr>
<th>Gorwaa</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>wák</td>
<td>one</td>
</tr>
<tr>
<td>tsár</td>
<td>two</td>
</tr>
<tr>
<td>tám</td>
<td>three</td>
</tr>
<tr>
<td>tsiyéhh</td>
<td>four</td>
</tr>
<tr>
<td>ko’án</td>
<td>five</td>
</tr>
<tr>
<td>lehhó</td>
<td>six</td>
</tr>
<tr>
<td>faanqw</td>
<td>seven</td>
</tr>
<tr>
<td>dakaát</td>
<td>eight</td>
</tr>
<tr>
<td>gwaleél</td>
<td>nine</td>
</tr>
<tr>
<td>miibaangw</td>
<td>ten</td>
</tr>
<tr>
<td>miibá nee wák</td>
<td>eleven</td>
</tr>
<tr>
<td>miibá nee tsár</td>
<td>twelve</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>miibá nee gwaleél</td>
<td>nineteen</td>
</tr>
<tr>
<td>mibeerí tsár</td>
<td>twenty</td>
</tr>
<tr>
<td>mibeerí tsár nee wák</td>
<td>twenty one</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>mibeerí tám</td>
<td>thirty</td>
</tr>
<tr>
<td>mibeerí tám nee wák</td>
<td>thirty one</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>mibeerí gwaleél nee gwaleél</td>
<td>ninety nine</td>
</tr>
<tr>
<td>tsiru</td>
<td>a hundred</td>
</tr>
<tr>
<td>(tsirú wák)</td>
<td>(one hundred)</td>
</tr>
<tr>
<td>tsiru nee wák</td>
<td>one hundred and one</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>tsiru nee miibá nee wák</td>
<td>one hundred and eleven</td>
</tr>
<tr>
<td>tsiru nee miibá nee tsár</td>
<td>one hundred and twelve</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>tsiru nee gwaleél nee gwaleél</td>
<td>one hundred and ninety nine</td>
</tr>
<tr>
<td>tsireé tsár</td>
<td>two hundred</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>tsireé gwaleél nee mibeerí gwaleél nee gwaleél</td>
<td>nine hundred and ninety nine</td>
</tr>
<tr>
<td>kumá</td>
<td>a thousand</td>
</tr>
<tr>
<td>(kumó wák)</td>
<td>(one thousand)</td>
</tr>
<tr>
<td>kumó wák nee wák</td>
<td>one thousand and one</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>kumó wák nee tsirú wák nee miibá nee wák</td>
<td>one thousand, one hundred and eleven</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>kumó wák nee tsireé gwaleél nee mibeerí gwaleél</td>
<td>one thousand, nine hundred and ninety nine</td>
</tr>
<tr>
<td>kumó wák nee tsireé gwaleél</td>
<td>one thousand, nine hundred and ninety nine</td>
</tr>
<tr>
<td>kumeé tsár</td>
<td>two thousand</td>
</tr>
<tr>
<td>kumeé tsár nee wák</td>
<td>two thousand and one</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>kumeé tsár nee miibá nee faanqw</td>
<td>two thousand and seventeen</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>kumeé gwaleél nee tsireé gwaleél nee mibeerí gwaleél</td>
<td>nine thousand, nine hundred and ninety nine</td>
</tr>
</tbody>
</table>
2. A grammatical sketch of Gorwaa

(2.82) **Highest number recorded in the Gorwaa corpus: 1,947**

*aní tə laqwaál kurkú kumó wák tsireér nee mibeérí tsiyéhh nee faanqw bará kijjír Rirod wa alé*  

[20131027_20150725c.2]

<table>
<thead>
<tr>
<th>Pro.1SG</th>
<th>MP-</th>
<th>A.1-</th>
<th>P.1SG</th>
<th>AUX</th>
<th>-PRF</th>
<th>give.birth.Pst</th>
</tr>
</thead>
<tbody>
<tr>
<td>aní</td>
<td>t-</td>
<td>Ø</td>
<td>i-</td>
<td>Ø</td>
<td>-(g)a</td>
<td>laqwaál</td>
</tr>
<tr>
<td>kurkú</td>
<td>kumó</td>
<td>wák</td>
<td>tsireér</td>
<td>gwaleél nee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>year.LMk</td>
<td>thousand.LMo</td>
<td>one hundreds.LFr</td>
<td>nine and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mibeérí</td>
<td>tsiyéhh</td>
<td>nee</td>
<td>faanqw</td>
<td>bará</td>
<td>kijjír</td>
<td>Rirod</td>
</tr>
<tr>
<td>tens.LNØ</td>
<td>four</td>
<td>and</td>
<td>seven</td>
<td>in</td>
<td>village.LFr</td>
<td>Riroda</td>
</tr>
<tr>
<td>wa.alé</td>
<td>ProRes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

“I was born the year one thousand nine hundred and forty seven in the village of Riroda.”

(2.83) **Swahili numerals being used instead of Gorwaa**

*xoroór boo/, xooro bar a muukú [...] mia, bar a tsireé ko’án*  

[20151202d.104]

<table>
<thead>
<tr>
<th>crowd.LFr</th>
<th>black.F</th>
<th>crowd</th>
<th>if</th>
<th>S.3</th>
<th>AUX</th>
<th>-PRF</th>
</tr>
</thead>
<tbody>
<tr>
<td>xoroór</td>
<td>boo/</td>
<td>xoroór</td>
<td>bar</td>
<td>i-</td>
<td>Ø</td>
<td>-(g)a</td>
</tr>
<tr>
<td>muukú</td>
<td>mia</td>
<td>bar</td>
<td>i-</td>
<td>Ø</td>
<td>-(g)a</td>
<td>tsireé</td>
</tr>
<tr>
<td>people</td>
<td>one.hundred</td>
<td>if</td>
<td>S.3-</td>
<td>AUX</td>
<td>-PRF</td>
<td>hundreds.LNØ</td>
</tr>
</tbody>
</table>
| ko’án      | five    | “a huge crowd, maybe one hundred people – maybe five hundred”

2.3.1.4 Derivational operations

**Noun-to-noun**

Noun-noun compounds are uncommon in Gorwaa. The only uncontroversial form attested thus far is *hareekuráy* ‘hammerkop’ from *haree* ‘wife’ and *kuráy* ‘any sp. of wedge-tailed raptor’.

More common, but less clearly an instance of compounding, is the prefixation of *ama* to a noun in oder to derive a new noun (2.84). It has been suggested by Maarten Mous (p.c.) that *ama* may be related to the noun *aamá* ‘grandmother’. 
2. A grammatical sketch of Gorwaa

(2.84) Possible compounds in ama-
- fa/a ‘ugali’ → amafa/a ‘sp. of fruit-bearing tree’
- fuqunó ‘claw’ → amafuqunó ‘sp. of thorny tree’
- maa’o ‘cat’ → amamaa’o ‘fork-tailed drongo Dicrurus adsimilis’
- geenda ‘plant sp.’ → amageenda ‘sp. of tree’
- /anta ‘termite mound’ → ama/anta ‘sp. of tree’

Verb-to-noun
Gentilic nouns
Verbs with the ending –uus (see Causitive and Factitive in §2.3.2.4) serve as stems upon which the suffixes –(a)mo, –(a)so’o or –(a)to’o and –ee can form gentilic nouns: nouns referring to people associated with the action of the verb. –(a)mo derives a male, –(a)so’o and –(a)to’o derives a female, and –ee derives their plural form.

(2.85) Gentilic nouns
a. fiís ‘steal’ → fiisusumo ‘thief ♂’
   fiisuso’o ‘thief ♂’
   fiisusee ‘thieves’
b. aál ‘inherit’ → aalutumo ‘heir ♂’
   aaluto’o ‘heir ♀’
   aalutee ‘heirs’
c. wák ‘hate’ → wakusumo ‘enemy ♂’
   wakuso’o ‘enemy ♀’
   wakusee ‘enemies’

Deverbal nouns
In addition to gentilic nouns, a noun may be derived from a verb through the addition of a nominalizing suffix (2.86). These forms are nouns because they have gender, and may fill many of the syntactic positions of nouns (e.g. qato ‘sleeping’, derived from qaát ‘to sleep’ fills the subject position in the adjectival copular construction in (2.87).
2. A grammatical sketch of Gorwaa

(2.86) Deverbal nouns

a. doósł ‘to farm’ → doosla ‘farming’
b. ga/áw ‘to look’ → ga/awngw ‘looking’
c. slakaát ‘to hunt’ → slakat ‘hunting’

(2.87) Deverbal noun as subject of copula with adjectival predicate

qatowós koqá’ ku tleér wa ló [20161102b.19]
qató =ós koqá’ t- ng- u- ∅
tleér wa.ló long.M very
“His sleeping is very long.”

2.3.2 Verbs

This subsection begins by describing the distribution of verbs. Next is an overview of verbal inflection, followed by an examination of adnominals. Verbalizing derivations are then given. Finally, the structure of the verb phrase is given.

2.3.2.1 Syntactic distribution

In pragmatically unmarked sentences, the verb is typically clause-final (2.88). Verbs may be followed by an adverbial clause (2.89).

(2.88) Verb is clause-final

a. aní a sleér diíf [20150724.4]
aní PRO1SG S.P- AUX cow.LFr hit.1.Pst
tleér- ∅- sleér- diíf
“I hit the cow.”

b. slee a gwá’ [20160120q.66]
sleér i- ∅ -(g)a gwá’
cow.LFr S.3- AUX -PRF die.F.Pst
“The cow died.”

(2.89) Verb is followed by an adverbial phrase

a. a ga hi’imamíit ay bará Duwanqee [20131027_20150725c.126]
Ø- Ø -(g)a ~Red~ hi’imiít ay bará
S.P- AUX -PRF ~Plur~ travel.1.Pst to in
Duwanqeeër
Maasai.people.LFr
“I have travelled among the Maasai.”
2. A grammatical sketch of Gorwaa

b. Burá i sihhimiit wa gawá daandó meesa [20150815.n.3]
Burá i- Ø sihhimiit wa gawá daandó
Burá.LMo S.3- AUX stand.M.PRES from on top
meesaár
table.LFr
“Burá is standing on top of the table.”

2.3.2.2 Verbal inflection

The Gorwaa verb may inflect for person, gender, and number, tense, and mood, which will be examined below.

**Person, gender, and number**

It is important to distinguish pronominal subjects (for which verbs agree for person and number) from nominal subjects (i.e. for which verbs agree for gender). We will first examine verbal inflection for pronominal subjects, and then examine nominal subjects.

**Pronominal subjects**

There are at least 6 verbal paradigms, which each inflect differently for person.

<table>
<thead>
<tr>
<th>Pattern</th>
<th>1st Person Subject Examples</th>
<th>2nd Person Subject Examples</th>
<th>3rd Person Subject Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-V:C <del>RPA</del> xuú’ (know.1Sg)</td>
<td>-VC <del>RPA</del> xú’ (know.2Sg)</td>
<td>-V:C xuu’ (know.3Sg)</td>
</tr>
<tr>
<td>2</td>
<td>-V:m <del>RPA</del> ya/aám (agree.1Sg)</td>
<td>-Vnd <del>RPA</del> ya/ánd (agree.2Sg)</td>
<td>-Vn <del>RPA</del> ya/án (agree.3Sg)</td>
</tr>
<tr>
<td>3</td>
<td>-aw <del>RPA</del> xáw (come.1Sg)</td>
<td>-eer <del>RPA</del> xeér (come.2Sg)</td>
<td>-ay <del>RPA</del> xáy (come.3Sg)</td>
</tr>
<tr>
<td>4</td>
<td>-ar <del>RPA</del> qwár (get.lost.1Sg)</td>
<td>-an or -at <del>RPA</del> qwát (get.lost.2Sg)</td>
<td>-ar <del>RPA</del> qwár (get.lost.3Sg)</td>
</tr>
<tr>
<td>5</td>
<td>-Vh <del>RPA</del> dáh (enter.1Sg)</td>
<td>-Vt <del>RPA</del> dát (enter.2Sg)</td>
<td>-Vh dah (enter.3Sg)</td>
</tr>
<tr>
<td>6</td>
<td>-Vw <del>RPA</del> húw (bring.1Sg)</td>
<td>-Vp <del>RPA</del> húp (bring.2Sg)</td>
<td>-Vw <del>RPA</del> húw (bring.3Sg)</td>
</tr>
</tbody>
</table>

Plural forms are built from their respective singular bases, plus a plural suffix. First person plurals are of the form: [1Sg Base] + -aán (1Pl). Second person plurals are of
2. A grammatical sketch of Gorwaa

the form: [2Sg Base] + -á’ (2Pl). Third person plurals are of the form: [3Sg Base] + either -iyá’ (3Pl) or -iyí’ (3Pl). Both 3rd person plural suffixes are used interchangeably, with no difference in meaning.

Table 2.7: PLURAL INFLECTIONAL PARADIGM

<table>
<thead>
<tr>
<th>Verb</th>
<th>1st Person Plural Subject [1Sg Base] + -aán</th>
<th>2nd Person Plural Subject [2Sg Base] + -á’</th>
<th>3rd Person Plural Subject [3Sg Base] + -iyá’ -iyí’</th>
</tr>
</thead>
<tbody>
<tr>
<td>xuu’ ‘know’</td>
<td>xuu’ + -aán (know.1Pl)</td>
<td>xú’ + -á’ (know.2Pl)</td>
<td>xuu’ + -iyá’ + -iyí’ or xuu’iyá’ or xuu’iyí’ (know.3Pl)</td>
</tr>
<tr>
<td>ya/án ‘agree’</td>
<td>ya/aám + -aán (agree.1Pl)</td>
<td>ya/ánd + -á’ (agree.2Pl)</td>
<td>ya/án + -iyá’ + -iyí’ or ya/aniyá’ or ya/aniyí’ (agree.3Pl)</td>
</tr>
<tr>
<td>sláy ‘get’</td>
<td>sláw + -aán (get.1Pl)</td>
<td>sleér + -á’ (agree.2Pl)</td>
<td>sláy + -iyá’ + -iyí’ or slayiyá’ or slayiyí’ (get.3Pl)</td>
</tr>
</tbody>
</table>

From a morphological perspective, then, it must be said that verbs in the plural are double-marked for person: once in the base of the verb, and again on the plural person suffix.

(2.90) VERBS IN THE PLURAL ARE DOUBLE-MARKED FOR PERSON

[...] atén na waatílaán [20151202e.89]

atén ni -(g)á waátl -aán
PRO1Pl VENT -PRF return.1 -1PL.PST
“[...] we have returned”

Nominal subjects
When the subject is a common noun, agreement is not for person/number, but for gender. Masculine nouns trigger the same agreement on a verb as 3rd person singular pronouns (2.91). Feminine nouns trigger the same agreement on a verb as
2. A grammatical sketch of Gorwaa

2nd person singular pronouns (2.92). Neuter nouns trigger the same agreement on a verb as 3rd person plural pronouns (2.93).

Table 2.8: INFLECTIONAL PARADIGM FOR NOMINAL SUBJECTS: PRESENT INDICATIVE

<table>
<thead>
<tr>
<th>Verb</th>
<th>Masculine Subject</th>
<th>Feminine Subject</th>
<th>Neuter Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>xuu’</em> ‘know’</td>
<td><em>xuu’</em> (know.M)</td>
<td><em>xú’</em> (know.F)</td>
<td><em>xuu’iyá</em> or <em>xuu’iyí</em> (know.N)</td>
</tr>
<tr>
<td><em>sláy’</em> ‘get’</td>
<td><em>sláy</em> (get.M)</td>
<td><em>sleér</em> (get.F)</td>
<td><em>sláyiýá</em> or <em>slayiyí</em> (get.N)</td>
</tr>
</tbody>
</table>

(2.91) M NOUNS AND 3rd PERSON SINGULAR PRONOUNS TRIGGER THE SAME AGREEMENT

a. *ino’s baahaa ngina taáhh* [20160921i.10]

ino’s baahaa ng- a- Ø -na taáhh
PRO3SG hyaena.LFR A.3- P.F AUX -IMPRF hit.3.PST
“He hit the hyaena.”

b. *garma baahaa ngina taáhh* [20160921i.1]

garmá baahaa ng- a- Ø -na taáhh
boy.LMO hyaena.LFR A.3- P.F AUX -IMPRF hit.M.PST
“The boy hit the hyaena.”

(2.92) F NOUNS AND 2nd PERSON SINGULAR PRONOUNS TRIGGER THE SAME AGREEMENT

a. *kuúng a gogóp* [20160119f.28]

kuúng a- Ø ~Red~ góp
PRO2SG.M A.P- AUX ~PLUR~ flee.2.PRES
“You(M) flee.”

b. *haree i gogóp* [20160119f.30]

hareéer i- Ø ~Red~ góp
woman.LFR A.3 AUX ~RED~ flee.F.PRES
“The woman flees.”

(2.93) N NOUNS AND 3rd PERSON PLURAL PRONOUNS TRIGGER THE SAME AGREEMENT

a. *ino’ín [...] baahaa ngina diifiyyí’* [20160927i110-124.9]

ino’ín baaháár ng- a- Ø -na diif -iyí’
PRO3PL hyaena.LFR A.3- P.F AUX -IMPRF hit.3 -3PL.PST
“They [...] hit the hyaena.”

b. *na/i’i [...] bahaa ngina diifiyyí’* [20160927i110-124.3]

na/i’i baaháár ng- a- Ø -na diif -iyí
children.LNØ hyaena.LFR A.3- P.F AUX -IMPRF hit -N.PST
“The [...] children hit the hyaena.”
Tense
Verbs inflect for tense, namely past and present. Past tense is realized by rising pitch accent (see Table 2.9). Present tense is zero-marked (see Table 2.6 above). Because of extensive syncretism, the only time present and past tense may be distinguished on the verb is when inflected for a 3rd person singular pronoun, or a masculine noun, where there is level pitch accent for present and rising pitch accent for past (2.94). All other present forms feature rising pitch accent as part of their person/number agreement and are therefore identical to their past forms.

Table 2.9: Inflectional Paradigm for Past Indicative

<table>
<thead>
<tr>
<th>Verb</th>
<th>Masculine Subject</th>
<th>Feminine Subject</th>
<th>Neuter Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>xuu’ ‘know’</td>
<td>xuú’</td>
<td>xú’</td>
<td>xuu’iyá’ or xuu’iyí’</td>
</tr>
<tr>
<td>ya/án ‘agree’</td>
<td>ya/án</td>
<td>ya/ánd</td>
<td>ya/aniyá’ or ya/aniyí’</td>
</tr>
<tr>
<td>sláy ‘get’</td>
<td>sláy</td>
<td>sleér</td>
<td>sláiyá’ or slayiyí’</td>
</tr>
</tbody>
</table>

(2.94) Present and past tense are distinguished only for a masculine noun or a 3rd person singular pronoun

Mood
Mood includes indicative, subjunctive, and interrogative. All three are indicated primarily by pitch-accent on the verb. Indicative is zero-marked (2.95). Subjunctive is marked by level pitch accent (2.96), and by the suffix -i for pattern 1 verbs (see Table) with a 3rd person singular or masculine subject (2.97). Interrogative is

8 Technically, this dichotomy should be worded 'past' and 'non-past' in that it is the present tense which is used for all non-past tenses. Given that this is not the central focus of the dissertation, the terms 'past' and 'present' will be retained.
marked by rising-falling pitch accent on an extension suffix: -a in the present, and -i in the past (2.98).

(2.95) **INDICATIVE MOOD (NO MARKING)**

\[ \text{[...]} /\text{oonaa na hardát} \]  
\[ /\text{oonáár} \text{ ni-} \text{Ø} -(g)a \text{ hardát} \]  
\[ \text{new.moon.LFr} \text{ VENT- AUX} \text{ -PRF} \text{ arrive.F.Pst} \]  
“\text{The new moon has arrived.}”

(2.96) **SUBJUNCTIVE MOOD (LEVEL PITCH ACCENT)**

\[ \text{[...]} \text{ni hardah, i haslit} \]  
\[ \text{ni-} \text{Ø} \text{ hardah} \text{ i-} \text{Ø} \text{ haslit} \]  
\[ \text{MP.S.1 AUX} \text{ arrive.1.SUBJ} \text{ S.3- AUX} \text{ think.F.Pres.Emph} \]  
“\[...\] when I arrive, she is thinking.”

(2.97) **SUBJUNCTIVE MOOD (SUFFIX -i FOR PATTERN 1 VERBS WITH 3rd PERSON SG PRONOMINAL OR M NOMINAL SUBJECT)**

\[ \text{[...]} \text{Muungú ngu tsuunqi} \]  
\[ \text{Muungú ng- u-} \text{Ø} \text{ tsuunqi} \]  
\[ \text{God.LMo A.3- P.2ScM AUX} \text{ bless.M.SUBJ} \]  
“\text{May God bless you(M).}”

(2.98) **INTERROGATIVE MOOD (RISING-FALLING PITCH ACCENT ON EXTENSION SUFFIX -i)**

\[ \text{aama na hardatí} \]  
\[ \text{aamár ni-} \text{Ø} -(g)a \text{ hardat } -i \]  
\[ \text{grandmother.LFr} \text{ VENT- AUX} \text{ -PRF} \text{ arrive.F } -Q.Pst \]  
“\text{Has grandmother arrived?”}

2.3.2.3 **Adnominals**

Adnominals in Gorwaa are deverbal constituents which modify a head noun. Like adjectives, they follow their head noun, which is in long-form. Adnominals agreeing with a singular pronominal, or masculine nominal head show rising pitch accent (2.99); adnominals agreeing with a feminine nominal head show level pitch accent (2.100); adnominals agreeing with a plural pronominal, or neuter nominal head show the suffix -a’ and rising pitch accent (2.101). However, adnominals cannot be used predicatively, nor do they agree for nominal number (see (2.102), in which muu (M.Pl) triggers the same agreement pattern as garma (M.Sg)), meaning that
their function is not exactly that of an adjective (c.f. Haspelmath 1995). As such, they cannot be called participles.

(2.99) Adnominals agreeing with a singular pronominal or M nominal subject show rising pitch accent

a. aníwí doósí baahaa ana taáhh [20160927l110-124.4]  
aní -í doósí baahaár  
PRO1SG -DEM1 farm.ADN.1SG hyaena.LFr  
Ø - a- Ø -na taáhh  
A.P- P.F- AUX -IMPRF hit.1.PST  
“I, farming, hit the hyaena.”

d. garmá doósí baahaa ngina taáhh [20160927l110-124.1]  
garmá doósí baahaár ng- a- Ø -na  
boy.LMo farm.ADN.M hyaena.LFr A.3- P.F- AUX -IMPRF  
taáhh  
hit.M.PST  
“The farming boy hit the hyaena.”

(2.100) Adnominals agreeing with a F nominal subject show level pitch accent

desír doosí baahaa ngina tááhh [20160927l110-124.2]  
desír doosí baahaár ng- a- Ø -na  
girl.LFr farm.ADN.F hyaena.LFr A.3- P.F- AUX -IMPRF  
tááhh  
hit.F.PST  
“The farming girl hit the hyaena.”
2. A grammatical sketch of Gorwaa

(2.101) Adnominals agreeing with a plural pronominal or nominal subject show the suffix -'á’:

a. ateká dooslá’ baahaa ana diifaán [20160927l110-124.7]
atén -ká doosl -’á’ baahaaá
PRO1PL -DEM1 farm -ADN.PRO1PL hyaena.LFr
∅ - a- ∅ -na diif -’án
A.P.- P.F.- AUX -IMPRF hit.1 -1PL.PST
“We, farming, hit the hyaena.”

b. kuungá’ koká’ dooslá’ baahaa ana difi’ [20160927l110-124.8]
kuungá’ koká’ doosl -’á’ baahaaá
PRO2PL PRODEM1.M farm -ADN.PRO2PL hyaena.LFr
∅ - a- ∅ -na diif -’é’
A.P.- P.F.- AUX -IMPRF hit.2 -2PL.PST
“You(pl.), farming, hit the hyaena.”

c. ino’ín koká’ dooslá’ baahaa ngina diifiyí’ [20160927l110-9]
ino’ín koká’ doosl -’á’ baahaaá
PRO3PL PRODEM1.M farm -ADN.PRO3PL hyaena.LFr
ng- a- ∅ -na diif -’iyí’
A.3- P.F.- AUX -IMPRF hit.3 -3PL.PST
“They, farming, hit the hyaena.”

d. na/i’i dooslá’ baahaa ngina diifiyí’ [20160927l110-124.3]
a/i’i doosl -’á’ baahaaá
children.LN∅ farm -ADN.N hyaena.LFr
ng- a- ∅ -na diif -’iyí’
A.3- P.F.- AUX -IMPRF hit -N.PST
“The farming children hit the hyaena.”

(2.102) Adnominals are not adjectival (and are therefore not participles): Predicates do not show number agreement (PL MIUU and SG GARMA trigger the same agreement pattern):

a. muukú doósł baahaa ngina diif [20160927l110-124.10]
muukú doósł baahaaá ng- a- ∅ -na
people.LMK farm.ADN.M hyaena.LFr A.3- P.F.- AUX -IMPRF
diff hit.M.PST
“The farming people hit the hyaena.”

b. garmá doósł baahaa ngina taáhh [20160927l110-124.1]
garmá doósł baahaaá ng- a- ∅ -na
boy.LMo farm.ADN.M hyaena.LFr A.3- P.F.- AUX -IMPRF
taáhh hit.M.PST
“The farming boy hit the hyaena.”
2. A grammatical sketch of Gorwaa

2.3.2.4 Derivational operations

A series of morphemes are used to derive new verbs, either from existing verbs or from nouns or adjectives. These operations are considered derivational because they are restricted in their application (i.e. verb-to-verb derivational morphemes cannot apply to all verbs, and the same with noun-to-verb and adjective-to-verb morphemes). This section will examine each, first treating verb-to-verb derivation, then noun-to-verb derivation, followed by adjective-to-verb derivation.

Verb to Verb

Several morphemes are used to derive a verb from another verb. The causative suffix -iís, the durative suffix -iim and infix <ar>, the middle voice suffix -iit, and pluractional reduplication ~Red~ will be examined below.

Phonologically, a long vowel [i:], [a:], and [u:] of verb stems is shortened if a derivational suffix follows (c.f. Mous 1993: 173).

(2.103) A long vowel [i:], [a:], and [u:] of V stems is shortened if a derivational suffix follows.

a. qaás- -iís → qasiís ‘cause to put’
b. qwaár -iim → qwaadiim ‘be losing’
c. xaás- -iit → xasliit ‘be quiet’

Progressive assimilation may occur from the consonant of the verb root, across the final consonant, and to the vowel of the derivational suffix.

(2.104) Progressive vowel assimilation from the V stem to the V of the derivational suffix.

a. dáh- -iís → daahas ‘cause to go in’
b. sluúk- -iím → slukuúm ‘be bribing’
c. duúx- -iít → duxúút ‘be married’
2. A grammatical sketch of Gorwaa

Causative
The causative suffix –VVs (Mous 1993:174) adds an extra argument to the verb, whose role is the causer or instigator of the action of the verb.

\[(2.105)\] Ohiís, causative form of óh
óh ‘ignite’ (i.e. fire) → ohiís ‘light’ (i.e. fire)

\[(2.106)\] Ohiís is transitive
asloó tsár oo dirèn ngina ohiís [20150729b.17]
asloó tsár oo diren ~
fires.LNØ two ANA.N big.N ~EMPH~
ng- i- ø -na ohiís
A.3- P.N- AUX -IMPRF light.M.Pst
“He lit two great fires.”

Durative
The durative contributes a continuous reading to the verb. This operation is realized by two alternate morphemes: the suffix -VVm (Mous 1993:178) (2.107) and (2.108), and the infix <ar> (Mous 1993: 185-186) ((2.109) and (2.110)).

\[(2.107)\] Hubíím, durative form of húw
húw ‘bring’ → hubíím ‘brining’

\[(2.108)\] Hubíím: continuous bringing
kan hubin bará pakani [20151202e.6]
t- ng- a- ø -n hubin bará
MP- A.3- P.F- AUX -EXPECT bringing.SUBJ to
pakani
borderland.LFr
“They were being brought to the borderland.”

\[(2.109)\] Daráh, durative form of dáh
dáh ‘enter’ → daráh ‘entering’

\[(2.110)\] Daráh: continuous entering
aní a daráh bará do’ [20150727.45]
aní ø- ø daráh bará dó’
PÅ1SG S.P- AUX entering.1.PRES in house.LMo
“I am going into the house.”
2. A grammatical sketch of Gorwaa

Middle voice
Middle voice indicates that the subject of the verb bears both agentlike and
patientlike qualities. The suffix is –VVt.

(2.111) \textit{Xasliít, middle form of xaásl}
\textit{xaál} ‘be quiet’ → \textit{xasliít} ‘keep quiet’

(2.112) \textit{Xasliít: subject is both agent- and patientlike}
\textit{ina xasliít […] [20131108b_20150725j.74]}
i- ∅ -na \textit{xasliít}
S.3- AUX -IMPRF \textit{keep.quiet.Pst}
“He kept quiet […]”

Pluractionality
Verbs may also express pluractionality. This is typically accomplished through
reduplication of part of the verb root.

(2.113) \textit{Tlatláw, pluractional form of tláw}
tláw ‘go’ → \textit{tlatláw} ‘go repeatedly’

(2.114) \textit{Tlatláw: action is repeated}
garmaqá’ a \textit{tlatláy} [20161102b.28]
garmá -qá’ i- ∅ -(g)a \textit{~Red~ tláy}
boy.LMo -DEM3 S.3- AUX -PRF \textit{~PLUR~ go.M.Pst}
“The boy was leaving.”

Semantically, pluractionality is not always uniform and the meaning of any
pluractional form depends on the semantics of the root verb, as well as the larger
context of the phrase. As such, it cannot be reduced to simply an aspectual
inflection.

(2.115) \textit{Dedeér: pluractional is attenuating}
boó/ ar nakw i \textit{dedeér} [20150818a.19]
boó/ ar nakw i- ∅ \textit{~Red~ deer}
black ANA.F a.bit S.3- AUX \textit{~PLUR~ be.present.F.PRES}
“A bit of black is kind of there.”
2. A grammatical sketch of Gorwaa

(2.116) **XAXÁY**: PLURAL ACTIONAL CONTRIBUTES A CONTINUOUS MEANING
muukuqá’ a xaxáy, koqá’ bili ina hardahiyí’, koqá’ motloo, koqá’
boaloqá’ [..] [20151202d.19]
muukú -qá’ i- Ø -(g)a ~Red~ xáy
people.LMK -DEM3 S.3- AUX -PRF ~PLUR~ come.M.PST
koqá’ bili i- Ø -na hardah -iyí’
PRODEM3.M today S.3- AUX -IMPRF arrive -N.PST
koqá’ motloo koqá’ boloqá’
PRODEM3.M tomorrow PRODEM3.M day.after.tomorrow
“Those people were coming, some arrived today, some tomorrow, some the day after tomorrow.”

**Noun to verb**
The two denominal suffixes identified in Mous (1993) for Iraqw have also been identified for Gorwaa. The factitive –uus and the middle –uut are each presented below.

**Factive**
Though this morpheme -uus appears related in form to the causative morpheme, Mous (1993: 189) makes the point of not referring to this form as causative 'because the derived verb need not have the causative meaning and can be intransitive'. As such, it is therein referred to as factitive. The evidence is the same in Gorwaa, and the terminology will therefore be adopted.

The factitive suffix is added to a nominal stem to form a new verb.

(2.117) **FACTITIVE SUFFIX -UUS**

a. tlatu ‘debt’ → tlatuús ‘be indebted’
b. ilatleeri ‘greed’ → ilatleeruús ‘to covet, to want badly’
2. A grammatical sketch of Gorwaa

(2.118) *Ilatleeruús* 'want badly'

*a ilatleeruús* mwalimu garma ngwa kitaabuwi hariisi

[20160927102-107.25]

∅ - a- ∅ - a ilatleeruús mwalimú garma
A.P - P.F - AUX - PRF want.badly.1.PST teacher.LMo boy.LMo
ng- u- ∅ -wa kitaabú - i hariisi

“I really wanted the teacher to bring the boy the book.”

This suffix also serves as a common way of nativizing loan nouns from Swahili (see Harvey & Mreta 2017).

(2.119) Factitive -uús used to nativize loans from Swahili

a. *fyeka* Sw. ‘clear ground’ → *fekúús* ‘clear ground’

b. *tafsiri* Sw. ‘translate’ → *tafsiruús* ‘translate’

Middle

The suffix –uut (Mous 1993: 190), clearly related in form to the middle morpheme –iit, is added to a nominal stem to form a new verb in the middle voice.

(2.120) Middle suffix -uut

a. *da’aye* ‘fear’ → *da’ayuút* ‘fear’

b. *kwasleema* ‘bring forth a complaint’ → *kwasleemuuút* ‘hold counsel’

Adjective-to-verb

The de-adjectival suffixes –uw and –ees are examined here.

Inchoative

The suffix –úw (Mous 1993: 186-188), is added to an adjectival stem to form a new verb with the meaning ‘to become X’, where X is the quality of the verb.

(2.121) Inchoative suffix -úw

a. */awaákw* ‘white’ → */awakúw* ‘become white’

b. *boá/‘black’ → bo/áw ‘become black, become dark’
2. A grammatical sketch of Gorwaa

Factitive
The suffix –ees (Mous 1993: 188-189) – clearly related to the factitive and causative forms described above – is added to an adjectival stem to form a new verb with the meaning ‘to make X’, where X is the quality of the verb.

(2.122)

FACTITIVE SUFFIX -EES
a. /awaákw ‘white’ \(\rightarrow\) /awaakeés ‘whiten’
b. niinaw ‘small’ \(\rightarrow\) niinaweés ‘lessen’

2.3.3 Adjectives and quantifiers

This section treats adjectives, and the single quantifier umó.

2.3.3.1 Adjectives

Adjectives form a distinct word class in Gorwaa. Adjectives are not nouns in that they may not be modified by nominal modifiers (prepositions, quantifiers, demonstratives, and other nouns), and cannot fill any of the syntactic functions of nouns (see §2.3.1.1). Adjectives are not verbs in that they do not show the same kinds of morphosyntactic agreement as verbs. Verbs agree with nouns in gender, adjectives agree with nouns in gender and number. Agreement patterns also separate adjectives from other nominal modifiers. While some modifiers (e.g. possessive) show agreement for person and number, and other modifiers (e.g. indefinite) show agreement for gender, no other nominal modifier agrees with the head noun in both number and gender.

Following discussion of the distribution of adjectives, agreement patterns, as well as expression of amplification or attenuation are examined. The section concludes
2. *A grammatical sketch of Gorwaa*

with a review in which all basic forms are presented, and other methods of adjective-formation are mentioned.

**Distribution**

Adjectives occur to the right of the noun they modify, and may occur in both attributive (2.123) constructions and predicative (2.124) constructions (in which the adjective occurs following a mediopassive form of the selector). Given that they also agree with their head noun in number and gender, this makes Gorwaa consistent with Greenberg’s Universal 40, which states that ‘when the adjective follows the noun, the adjective expresses all the inflectional categories of the noun. In such cases, the noun may lack overt expression of one or all of these categories.’ (Greenberg, 1963).

(2.123) **Attributive Adjectival Construction**

\[
\text{[...] garmá tleér} \quad \text{[20160927m.35]}
garmá tleér
\text{boy.LMo tall.M}
\]

“The tall boy.”

(2.124) **Predicative Adjectival Construction**

\[
garma ku tleér \quad \text{[20160119f.25]}
garmá t- ng- u- Ø tleér
\text{boy.LMo MP- A.3- P.M- AUX tall.M}
\]

“The boy is tall.”

Nominal modifiers may intervene between the head noun and the adjective, in which case an anaphoric particle (see §2.4.3.1) will occur immediately before the adjective.

(2.125) **Numerical wák intervenes between noun /aymu and adjective tleér**

\[
/\text{aymú wák oo tleér} \quad \text{[20160111h.13]}
/\text{aymú wák oo tleér}
\text{word.LMo one A.n.A long.M}
\]

“One long word.”
2. A grammatical sketch of Gorwaa

(2.126) **POSSITIVE PRONOUN ‘É’ INTERVENES BETWEEN NOUN FIITSI AND ADJECTIVE**

\[ \text{fiitsiré’ ar } \text{hhohhoo’ [...] [20150729b.48]} \]

broom.LFr -Poss1SG ANA.F ~Plur~ good.F

“my nice broom [...]”

**Gender and number**

As stated above, adjectives show agreement for both the gender *and* number of the noun they modify. Gorwaa adjectives show three major patterns of inflection, given in 2.10 below.

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><del>RPA</del></td>
<td>~en!<del>RPA</del></td>
<td><del>LPA</del></td>
<td><del>LPA</del></td>
<td>~en!<del>LPA</del></td>
<td><del>LPA</del></td>
</tr>
<tr>
<td>E.g. úr ‘big’</td>
<td>-úr</td>
<td>-úren</td>
<td>-ur</td>
<td>-uren</td>
<td>-en!<del>LPA</del></td>
<td>-uren</td>
</tr>
<tr>
<td>2</td>
<td><del>RPA</del></td>
<td><del>RPA</del></td>
<td><del>LPA</del></td>
<td><del>LPA</del></td>
<td><del>LPA</del></td>
<td><del>LPA</del></td>
</tr>
<tr>
<td>E.g. tlaákw ‘bad’</td>
<td>tlaákw</td>
<td>tlaákw</td>
<td>tlaakw</td>
<td>tlaakw</td>
<td>tlaakw</td>
<td>tlakw</td>
</tr>
<tr>
<td>3</td>
<td><del>RPA</del></td>
<td><del>RPA</del></td>
<td><del>LPA</del></td>
<td><del>LPA</del></td>
<td><del>LPA</del></td>
<td><del>LPA</del></td>
</tr>
<tr>
<td>E.g. buúx ‘grey’</td>
<td>buúx</td>
<td>buúx</td>
<td>buux</td>
<td>buux</td>
<td>buux</td>
<td>buux</td>
</tr>
</tbody>
</table>

N.B.A The symbol ! indicates a shortening of the final vowel of the root, if the vowel is long.

A handful of adjectives show slightly irregular patterns, each of which is discussed below.

The adjective /aben ‘new’ is a subset of pattern 1, defective in that it is not zero-marked for singular (thus: /abén ‘new.M.Sg.’; /abén ‘new.M.Pl.’; /aben ‘new.F.Sg.’; /aben ‘new.F.Pl.’; /aben ‘new.N.Sg.’; /aben ‘new.N.Pl.’)

The adjective naá/ ‘fresh’ is a subset of pattern 2, defective in that it does not undergo shortening of its root vowel when agreeing for plural (thus: naá ‘fresh.M.Sg.’; naá/ ‘fresh.M.Pl.; naa/ ‘fresh.F.Sg.; naa/ ‘fresh.F.Pl.; naa/ ‘fresh.N.Sg.; and naa/ ‘fresh.N.Pl.’).
The adjective *diimbáy* ‘different’ is a member of pattern 3, but irregular in that it seems to possess a number suffix -áy, blocking any tonal agreement with the gender of the noun (thus: *diimbáy* ‘different.M.Sg.’; *diimbabáy* ‘different.M.Pl.’; *diimbáy* ‘different.F.Sg.’; *diimbabáy* ‘different.F.Pl.’; *diimbáy* ‘different.N.Sg.’; *diimbabáy* ‘different.N.Pl.’).

The adjective */aankwéts* ‘naked’ is invariable (thus: */aankwéts* ‘naked.M.Sg.’; */aankwéts* ‘naked.M.Pl.’; */aankwéts* ‘naked.F.Sg.’; */aankwéts* ‘naked.F.Pl.’; */aankwéts* ‘naked.N.Sg.’; */aankwéts* ‘naked.N.Pl.’).

The adjective *niiná* ‘small’ is irregular (thus: *niiná* ‘small.M.Sg.; *niinákw* ‘small.M.Pl.; *niina* ‘small.F.Sg.; *niinakw* ‘small.F.Pl.; *niina* ‘small.N.Sg.; *niinakw* ‘small.N.Pl.’).

### Amplification and attenuation

Adjectives may undergo reduplication, the resulting adjective either intensified in meaning, or, conversely, attenuated. That is, every reduplicated form either reads as a stronger form of its base adjective, or as a weaker form – it cannot read as both. Whether a given adjective’s reduplicated form results in amplified meaning or attenuated meaning is a property peculiar to the individual adjective, and must be learned.

<table>
<thead>
<tr>
<th>Amplification versus attenuation in adjectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
</tr>
<tr>
<td>b.</td>
</tr>
<tr>
<td>c.</td>
</tr>
<tr>
<td>d.</td>
</tr>
</tbody>
</table>
As may be gathered from the examples above, even the type of reduplication is inconsistent. Many forms show reduplication of the form (CVC)_a-, where (CVC)_a_ is the first sequence of the stem, and V may be long or short (hence forms such as ura'er 'bighish' above or /aw/awaakw 'whitish' from /awaakw 'white'). However, other forms do not follow this pattern (e.g. sirir/aat 'tawny-ish' from sira/aat 'tawny'), nor look strictly reduplicative (e.g. darra/aat 'reddish' from da/aat 'red').

Adjectives: review
A list of basic (i.e. non-compound and underived) adjectives is presented below.

Figure 2.4: Basic Adjectives in Gorwaa

| /aankwéts 'naked, bare' | meéhh 'spotted' (of livestock) |
| /abén 'new' | moqaay 'red and white' (of livestock) |
| /awaakw 'white' | muur 'black and red' (of livestock) |
| básl 'insignificant' | naá/ 'fresh, wet' |
| biif 'with small spots' (of livestock) | niiná 'small' |
| boó/ 'black' | ni/i/i'il (or niqíqíl) 'tiny' |
| buúx 'grey' | niináw 'few' |
| da/aat 'red' | qomár 'short' |
| da/aaw 'tough' | quunts 'important' |
| díhh 'sharp, harsh, potent' | saáw 'far' |
| dikii 'straightforward' | sira/aat 'tawny' (of livestock) |
| diimbáy 'different' | tlaák 'bad' |
| duúq 'red and black striped' (of livestock) | tlaánqw 'with large spots' (of livestock) |
| gawit 'difficult, hard' | tleéér 'long, tall' |
| hhoó 'good' | tsá 'cold, calm' |
| hibíl 'lacking a necklace, unadorned' | úr 'big' |
| iínslááxw 'vast' | yaariír 'many' |
| kahaar 'dry, empty' | |

In addition to this, there exists a large series of noun-adjective compounds (2.128), which expand the total list of adjectives in Gorwaa significantly.
2. A grammatical sketch of Gorwaa

(2.128) **Noun-adjective compounds**

a. *slaqwa‘body’ + tlaákw‘bad’* → *slaqwatláákw‘thin, sickly’*

b. *ila‘eye’ + kahaár‘dry’* → *ilakahaár‘watchful, brave’*

c. *gura‘stomach’ + hhoó‘good’* → *gur’hhoó‘benevolent’*

2.3.3.2 The quantifier *umó*

The quantifier *umó‘every’* is the only nominal modifier which precedes the noun. The modified noun is obligatorily marked with ‘topic’ morphology (see §2.6.1.2).

(2.129) **Quantifier umó**

a. *umó‘every’ + di‘place’* → *umó diroo‘everywhere’*

b. *umó‘every’+ /awtû‘monkey’* → *umó /awtuhee‘every monkey’*

2.3.4 Adverbs

Adverbs in Gorwaa form a heterogeneous group, united by three main characteristics: i) adverbs are optional, and their presence or absence does not affect the grammaticality of the utterance; ii) adverbs are invariable; and iii) adverbs modify any head or larger constituent which is not a noun. An exhaustive list of adverbs identified in Gorwaa follows. Adverbs are categorized into semantically-based categories.
2. A grammatical sketch of Gorwaa

Figure 2.5: Adverbs in Gorwaa

<table>
<thead>
<tr>
<th>Manner</th>
<th>hhoo’</th>
<th>‘well, good’</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Temporal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Absolute Time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>hindí</td>
<td>‘now’</td>
<td></td>
</tr>
<tr>
<td>hamí</td>
<td>‘now’</td>
<td></td>
</tr>
<tr>
<td>alkwí</td>
<td>‘now’</td>
<td></td>
</tr>
<tr>
<td>bilí</td>
<td>‘today’</td>
<td></td>
</tr>
<tr>
<td>isá’</td>
<td>‘yesterday’</td>
<td></td>
</tr>
<tr>
<td>motloo</td>
<td>‘tomorrow’</td>
<td></td>
</tr>
<tr>
<td>Relative Time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>daqane</td>
<td>‘then’</td>
<td></td>
</tr>
<tr>
<td>daxta</td>
<td>‘then’</td>
<td></td>
</tr>
<tr>
<td>aluwo</td>
<td>‘then’</td>
<td></td>
</tr>
<tr>
<td>motloo</td>
<td>‘in the morning’</td>
<td></td>
</tr>
<tr>
<td>tseewa</td>
<td>‘early’</td>
<td></td>
</tr>
<tr>
<td>aâng</td>
<td>‘in the past’</td>
<td></td>
</tr>
<tr>
<td>geera</td>
<td>‘after’</td>
<td></td>
</tr>
<tr>
<td>Aspectual</td>
<td></td>
<td></td>
</tr>
<tr>
<td>qaro</td>
<td>‘already’</td>
<td></td>
</tr>
<tr>
<td><strong>Temporal/Spatial</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>imir</td>
<td>‘from’</td>
<td></td>
</tr>
<tr>
<td>tangu</td>
<td>‘from’</td>
<td></td>
</tr>
<tr>
<td>Degree</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amplifying</td>
<td></td>
<td></td>
</tr>
<tr>
<td>tlami</td>
<td>‘moreover’</td>
<td></td>
</tr>
<tr>
<td>tsíl</td>
<td>‘pure, deep’ (only used for the adjective da/aát ‘red’)</td>
<td></td>
</tr>
<tr>
<td>tíng</td>
<td>‘pure, deep’ (only used for the adjective boó/‘black’)</td>
<td></td>
</tr>
<tr>
<td>shángw</td>
<td>‘pure, bright’ (only used for the adjective /awaákw ‘white’)</td>
<td></td>
</tr>
<tr>
<td>Attenuating</td>
<td></td>
<td></td>
</tr>
<tr>
<td>alo</td>
<td>‘somewhat’</td>
<td></td>
</tr>
<tr>
<td>alge</td>
<td>‘somewhat’</td>
<td></td>
</tr>
<tr>
<td>mak</td>
<td>‘somewhat’</td>
<td></td>
</tr>
</tbody>
</table>

(2.130) **MANNER ADVERB HHOO’**

amór bartaqeehee i hhoo’ káhh úú, gwéh  [20150817d.215]
amór bartá -qá’ =hee i- Ø hhoo
place.LFR side.LFT -DEM3 =TOP S.3- AUX well
káhh úú gwéh
be.absent.F PRO.2Sg.M go.IMP
“Hey you! That side doesn’t concern us! Let’s go!” (lit. “That side is well absent.”)
2. A grammatical sketch of Gorwaa

(2.131) **Absolute Time Adverb Hindí**

*Nada hindí a slaqaát simú diftaroo* [20151021c.137]

Nadá hindí i- ⌀ -(g)a slaqaát simú
Nada.LMo now S.3- AUX -PRF tire.M.PST phone.LMo
diftár =oo
hitting.LFr =Top
“Nada’s tired of phoning.”

(2.132) **Aspectual Adverb Qaro**

[...] *idosí aga qaro hhe’eesaán* [20150817d.213]

idór -si ⌀ -gā qaro
manner.LFr -DEM2 S.P- AUX -PRF already
hhe’eés -aán
finish.1 -1Pl.PST
“This way we have already finished.”

(2.133) **Amplifying Adverb Shángw**

*giitsee/’a’ki /awakw shángw* [20150818a.51]

giitsee/á’ t- ng- i- ⌀ /awakw shángw
face.LNております MP- A.3- P.N- AUX white.N pure
“The face is pure white.”

(2.134) **Attenuating Adverb Mak**

*gári a mak sakweeli, aní bar ga/áw ee* [20151021c.461]

gár -í i- ⌀ -(g)a mak sakweelír
thing.LFr -DEM1 S.3- AUX -PRF somewhat ostrich.LFr
aní bar= ⌀ - ⌀ ga/áw ee
PR01SG if= S.P- AUX look.1 yes
“This thing is like an ostrich, if I look, yes.”

2.3.5 An excursus on ideophones

It must be noted that ideophones in Gorwaa do not form a lexical class per se. Instead, they are distributed throughout the lexical categories of the language. As such, they will be briefly be examined here as a conclusion to the subsection on lexical categories.

Gorwaa makes extensive use of ideophones – that is, words which *depict* their referent, rather than *denote* it. As an English example, the verb ‘call’ in the phrase ‘the birds are calling’ denotes the action undertaken by the birds, but the verb
‘tweet’ in the phrase ‘the birds are tweeting’ depicts the action undertaken by the
birds, in that it mimics the sound produced. Idiophones are, therefore, *iconic* in
nature, and give rise to different subtypes of ideophone according to the subtype of
iconicity: direct, Gestalt, and relative (Dingemanse 2018). Each is examined, with
examples, below.

### 2.3.5.1 Direct iconicity (onomatopoeia)

Gorwaa has a long list of onomatopoeias – words imitating the sound of the event or
item named. This is common across several categories, including: animals (*maa’o*
‘cat’, *bee’i* ‘sheep’, *wahhahhamó* ‘rock hyrax’, *qoonqál* ‘crowned crane’), domestic
activities (*xaáf* ‘grind millet for making food’, *tsaát* ‘cut with a knife’, *tláq* ‘chop’,
taáhh ‘beat’), and body actions (*iíf* ‘sneeze’, *guú/’swallow’, /aáy/ ‘eat’, *waáh* ‘drink’,
/aá/ ‘cry’, ááhh ‘be fed up’, soóx ‘urinate’, *waá/ ‘vomit’, *o/oós* ‘defecate’). An
onomatopoeia also exists to depict being silent: *xaásl*.

### 2.3.5.2 Gestalt iconicity

In addition to depicting a word by its sound, words may depict their referents
through their shape or structure. That is, a word representing a long entity may
itself be long; short, punctual events may be depicted by short, punctual words.
These types of ideophones are called Gestalt Ideophones (German for ‘shape’), and
Gorwaa exhibits several patterns of Gestalt iconicity.

One productive example of Gestalt iconicity in Gorwaa is the reduplication of verb
forms. This results in what has been referred to as *pluractional* (*taáhh* ‘hit’ →
2. A grammatical sketch of Gorwaa

tataáhh 'hit repeatedly'; guuí ‘sleep’ → guguí ‘fall asleep repeatedly’; qaseé ‘laugh’ → qaseeseé ‘laugh repeatedly’).

A further (albeit less regular) form of reduplication operates on many adjectives and results in an attenuative reading (i.e. that the property is somehow more discontinuous or vague than the non-reduplicated form). The internal consistency of the adjective has been somehow ‘muddled up’ to reflect the muddled meaning of the derived adjective: (buúx ‘grey’ -> buuxabuúx ‘greyish’; qantsaár ‘blue, green’ -> qatsqantsaár ‘greenish, bluish’; /aben ‘new’ -> /ab/aben ‘newish’; sira/aát ‘tawny’ -> sirira/aát ‘tawny-ish’).

2.3.5.3 Relative iconicity

The final, perhaps most abstract form of iconicity is known as relative iconicity, is a relational form of depiction where related words map related meanings, some possible examples from Gorwaa include: words beginning in [ts], which seem to evoke entities that are wet, cold, or far away (tseere ‘blood’, tsiinqa ‘stream’, tsá ‘cold’, tsee/a ‘faraway place’, tsetse/ ‘stars’, BUT: tsee/amá ‘sunshine’); words beginning in [hh] evoke entities related to the windpipe or respiration: (hhartsi ‘air’, hheehha ‘gullet’, hhumpu ‘lungs’); words containing the vowel [i] + [hh] evoke sharp entities or events involving sharp entities: (sihhina ‘tooth’, kiíhh ‘bite’, diíhh ‘sharp’).

It must be noted that this last type of iconicity is very hard to nail down indeed – and all classes here must be posited as provisional.
2. A grammatical sketch of Gorwaa

2.3.5.4 The morphosyntax of ideophones

Notably in Gorwaa, most ideophones fit seamlessly into the larger syntax of the language. Ideophones depicting entities pluralize like regular nouns (the ideophone *maa’oo* ‘cat’ pluralizes as the non-ideophone *kooloo* ‘heel’ in (2.135)); ideophones depicting events conjugate like regular verbs (the ideophone *guguú* inflects for gender like the non ideophone */akuút* in (2.136)); and ideophones depicting qualities agree with their head nouns like regular adjectives (the ideophone *qatsqantsaár* ‘bluish’ inflects for gender like the non-ideophone *qantsaár* ‘blue’ in (2.137)).

(2.135) **Ideophone *maa’oo* pluralizes as the non-ideophone *kooloo***
   a. *maa’oo* ‘cat’ | *ma’u* ‘cats’
   b. *kooloo* ‘heel’ | *kolu* ‘heels’

(2.136) **Ideophone reduplicated *guguú* inflects for past tense as non-ideophone */akuút***
   a. *i guguú* ‘he slept repeatedly’ | *i gugú* ‘she slept repeatedly’
   b. *i */akuút* ‘he jumped’ | *i */akút* ‘she jumped’

(2.137) **Ideophone reduplicated *qatsqantsaár* agrees with its head noun *garma* as non-ideophone *qantsaár***
   a. *garmá qatsqantsaár* ‘a bluish boy’ | *desír qatsqantsaar* ‘a bluish girl’
   b. *garmá qantsaár* ‘a blue boy’ | *desír qantsaar* ‘a blue girl’

2.4. Functional Categories

The major functional categories (i.e. those forms lacking semantic content and playing primarily a syntactic role) are examined below. The subsection covers the major classes of determiners, selectors, and pronouns. Further functional categories are often highly syntactically restricted to a small number of grammatical constructions. These will be introduced along with their grammatical construction, in the following subsections 2.5, 2.6, and 2.7.
2. A grammatical sketch of Gorwaa

2.4.1 Determiners

The determiners – possessive, demonstrative, and indefinite – will be examined in turn below.

2.4.1.1 Possessive determiners

Possessive determiners occur as suffixes to their head noun, and, and agree in person and number with the possessor. The head noun occurs with a linker (see §2.3.1.2). Possessive determiners are glossed Poss, along with the person and number value of the possessor.

(2.138)  

```
THE POSSESSIVE DETERMINER ‘-éé’
heeqá’ a mulqumo’éé’ [...] [20131108b_20150725j.37]
heé -qá’  Ø mulqumó ‘-éé’
person.LM0 -DEM3 AUX friend.LM0 -Poss1SG
```

“That person is my friend [...]”

Table 2.11: Possessive Determiners

<table>
<thead>
<tr>
<th></th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1st Person</strong></td>
<td>-éé’</td>
<td>-rén</td>
</tr>
<tr>
<td></td>
<td>balaangw’éé’ ‘my millet’</td>
<td>balaangwén ‘our millet’</td>
</tr>
<tr>
<td><strong>2nd Person</strong></td>
<td>-ók</td>
<td>-hung</td>
</tr>
<tr>
<td></td>
<td>balaangók ‘your millet’</td>
<td>balaangwhúng ‘your(pl.) millet’</td>
</tr>
<tr>
<td><strong>3rd Person</strong></td>
<td>-ós</td>
<td>-‘ín</td>
</tr>
<tr>
<td></td>
<td>balaangós ‘his/her millet’</td>
<td>balaangw’in ‘their millet’</td>
</tr>
</tbody>
</table>

2.4.1.2 Demonstrative determiners

Demonstrative determiners in Gorwaa occur as suffixes to their head noun, and encode four different levels of deixis: 1 -í (-ká for nouns of neuter gender), near to speaker; 2 -síng (often reduced to -sí), near to the addressee; 3 -qá’, distant from both but within view, and 4 -dá’, distant and out of view. The head occurs in long-form. Demonstrative determiners are glossed Dem, along with the level of deixis expressed.
2. A grammatical sketch of Gorwaa

(2.139) The demonstrative determiners

a. tsir/irí umówós [...] a il/arimo [20151021c.241]
   tsir/irí -í umó -ós ∅ il/arimo
   bird.LFR -DEM1 name POSS3SG AUX sp.of.bird
   “This bird, its name [...] is il/arimo.” (uttered while holding a picture of the bird)

b. amór bartók amosí ta iwit [20150817d.186]
   amór bartá -ók
   place.LFR side.LFT POSS2SG
   amór -si t- ∅- ∅ iwit
   place.LFR -DEM2 MP S.P AUX sit.2.SUBJ
   “On your side, there where you are sitting.” (uttered while sitting next to the addressee)

c. nina qaatiyí’ gawá tlomi’iqá’ [20150813.75]
   ni -na qaat -iyí’ gawá
   VENT -IMPRF sleep.3-3PL.PRES on
   tlomi’í -qá’
   hills.LN∅ -DEM3
   “They are sleeping in those hills.” (uttered when the mountains in question are visible from the house)

d. [...] didá’ ka báy Itebula [20131027_20150725c.146]
   dir -dá’ t- ng- a- ∅ báy
   place.LFR -DEM4 MP A.3 P.F AUX say
   Itebulár
   Itebula.LFR
   “That place called Itebula” (uttered when in Manyara, referring to a district in faraway Kigoma)

In addition to spatial reference, all demonstrative forms are metaphorically extended to also mark for proximity or distance in terms of time. Forms used for spatial closeness are also used for temporal closeness. Forms used for spatial distance are used for more remote time.
2. A grammatical sketch of Gorwaa

(2.140) DEMONSTRATIVE DETERMINERS METAPHORICALLY EXTENDED FOR TEMPORAL REFERENCE

a. [...] bara/owí i galáy [...] [20131108b_20150725j.55]
   bara/ó -í i- ∅ galáy
dance.LMo -DEM1.S.3- AUX where
   “Where is this dance?” (uttered when the dance was (obviously) not present, but taking place that night)

b. [...] gadiyeesíng ana imu/uúm [20131027_20150725c.105]
   gadiyeér -sing ∅- a- ∅ -na imu/uúm
work.LFR -DEM2.A.P- P.F AUX -IMPRF begin.1.PST
   “[...] I began this work.” (uttered when the work was began in the past, but continues to this day)

c. [...] boolooqá’nin hardahiya’[20151202d.19]
   booloór -qá’ ni -n hardáh -iya’
day.LFR -DEM3.VENT -EXPECT arrive.3 -3Pl.SBJ
   “They would arrive the next day.” (referring not to tomorrow, but the day after)

d. [...] moro’odá’ oo Gorwaa [20151202e.170]
   moro’ó -dá’ oo Gorwaá
   things.LMo -DEM4.ANA.M Gorwaa.people LN∅
   “[...] those Gorwaa things.” (lit. things that the Gorwaa did in the distant past)

2.4.1.3 Indefinite determiners

Indefinite determiners occur as suffixes to their head noun, and inflect for its gender. The form for the masculine and neuter is -ko, and the form for the feminine is -ka. The head noun occurs in long-form. Indefinite determiners are glossed Indef, along with the gender of their head. Indefinites cannot occur with pronominal heads, as pronouns in Gorwaa are inherently definite.

(2.141) THE INDEFINITE DETERMINERS

a. daaqyko tsár, boolóó geera a mulqee [20131108b_20150725j.16-17]
daaqáy -ko tsár boolóó.geera ∅ mulqeeér
   boys.LMo -INDEFM two long ago AUX friends.LFR
   “Two boys, once were friends.”
2. A grammatical sketch of Gorwaa

b.  

\[
\text{aamár} -\text{ka} \quad \text{i-} \quad \emptyset \quad \text{deer} \quad \text{nee} \\
\text{grandmother.LFr} \quad -\text{INDEF}\text{S.3-} \quad \text{AUX} \quad \text{be.present.F.PRES} \quad \text{and} \\
\text{aakó} \quad -\text{ós} \quad \text{grandfather.LMo} \quad -\text{Poss3SG} \\
\text{“(There once was) a certain grandmother and her grandfather (i.e. her husband).”}
\]

c.  

\[
\text{i-} \quad \emptyset \quad -(g)a \quad \text{hardáh} \quad \text{dír} \quad \text{na/i’í} \quad -\text{ko} \\
\text{S.3-} \quad \text{AUX} \quad -\text{PRF} \quad \text{arrive.M.Pst} \quad \text{at} \quad \text{children.LNØ} \quad -\text{INDEFN} \\
\text{uren} \quad \text{big.N.Pl} \\
\text{“He arrived at some big children.”}
\]

As can be seen from the above examples, the indefinite marker is commonly used to introduce an entity into a story (\textit{daaqay} ‘boys’ in (a.), and \textit{aama} ‘grandmother’ in (b.)).

2.4.2 Selectors

Virtually every clause in Gorwaa contains what is known in the literature as a preverbal clitic cluster (e.g. Kießling 2000) or, more commonly, the selector (e.g. Mous 2005). The most straightforward definition of the selector is “[...] an additional inflectional element that is separate from the verb” (Mous 2005: 305).

Phonologically, selectors bear no stress and are assigned no tone. Syntactically, however, they are independent: constituents including nouns (2.142), determiner phrases (2.143), and adverbs (2.144) may intervene between it and the lexical verb.

---

9 In South Cushitic, the term typically used is ‘selector’. For Somali, the term is ‘indicator particle’. For Oromo, the term is ‘focus marker’. 
2. A grammatical sketch of Gorwaa

(2.142) **Noun intervenes between selector and V**

<table>
<thead>
<tr>
<th>Noun</th>
<th>Selector</th>
<th>Verb</th>
<th>Time</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>aní</td>
<td>a</td>
<td>sleér</td>
<td>diíf</td>
<td>[20150724.4]</td>
</tr>
</tbody>
</table>

```
aní    0-    0    -(g)a    sleér    diíf
PRO.1SG S.P- AUX -PRF cow.LFr hit.1.PST
```

“I hit the cow.”

(2.143) **Determiner phrase intervenes between selector and V**

<table>
<thead>
<tr>
<th>Determiner</th>
<th>Noun</th>
<th>Selector</th>
<th>Verb</th>
<th>Time</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>aní</td>
<td>a</td>
<td>sleér</td>
<td>wák</td>
<td>diíf</td>
<td>[201609271222.228.28]</td>
</tr>
</tbody>
</table>

```
aní    0-    0    -(g)a    sleér    wák    diíf
PRO.1SG S.P- AUX -PRF cow.LFr one    hit.1.PST
```

“I hit one cow.”

(2.144) **Adverb intervenes between selector and V**

<table>
<thead>
<tr>
<th>Adverb</th>
<th>Noun</th>
<th>Selector</th>
<th>Verb</th>
<th>Time</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>[... a mak</td>
<td>sakweeli</td>
<td>[...]</td>
<td>sakweeli</td>
<td>[20151021c.462]</td>
<td></td>
</tr>
</tbody>
</table>

```
∅    mak    sakweeli
AUX    somewhat    ostrich.LFr
```

“it is like an ostrich’

These intervening (elsewhere, *encapsulated*) forms are not incorporated, as there is a separate construction for incorporated forms.

(2.145) **Incorporation construction**

<table>
<thead>
<tr>
<th>Incorporation</th>
<th>Noun</th>
<th>Verb</th>
<th>Time</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>uga sleér-gás</td>
<td></td>
<td></td>
<td></td>
<td>[20161119f.34]</td>
</tr>
</tbody>
</table>

```
∅    u-    0    -(g)a    sleér-    gás
A.2-    P.M-    AUX -PRF cow-    kill.2SG.PST
```

“You(M) killed a cow on him.” (lit. ‘You cow-killed him.’)

In Gorwaa, selectors can formally mark: clause type (independent vs. dependent), voice (active vs. mediopassive), deixis (movement toward vs. movement away from the *origo*), argument structure (maximally, sole argument vs agent vs patient), person, gender, and number of arguments, aspect (perfect vs. imperfective vs. expectational vs. consecutive vs. background), mood (indicative vs. conditional vs. prohibitive vs. questioning), and adverbial case (reason vs. lative vs. ablative vs. instrumental). Combinations of these formal markers are used to express further meanings. Each of these dimensions of marking will be further examined below.
Structurally, the selector is composed of a null auxiliary verb surrounded by a series of clitics. When the auxiliary has no phonologically-realised argument markers, it is realized as a. Schematically, the selector may be illustrated as follows (where elements within the same column are mutually exclusive of each other).

Figure 2.6: Schematic of the selector

<table>
<thead>
<tr>
<th>MOOD</th>
<th>Voice</th>
<th>Arguments</th>
<th>AUX</th>
<th>ASPECT</th>
<th>Adverbial Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicative</td>
<td>Active</td>
<td>S</td>
<td></td>
<td>Perfect</td>
<td>Reason</td>
</tr>
<tr>
<td>Conditional</td>
<td>Mediopassive</td>
<td>A</td>
<td>P</td>
<td>Imperfective</td>
<td>Lative</td>
</tr>
<tr>
<td>Prohibitive</td>
<td></td>
<td></td>
<td>Ø</td>
<td>Expectational</td>
<td>Ablative</td>
</tr>
<tr>
<td>Questioning</td>
<td></td>
<td></td>
<td></td>
<td>Consecutive</td>
<td>Instrumental</td>
</tr>
</tbody>
</table>

2.4.2.1 Arguments

Gorwaa indexes all core arguments as proclitics to the auxiliary. That is, arguments are mandatorily marked on the head. Morphosyntactic alignment is split, depending on whether the argument is third person, or a speech act participant (i.e. 1\textsuperscript{st} or 2\textsuperscript{nd} person). For third person arguments, alignment is tripartite: the (S)ole argument of an intransitive clause, the (A)gent of a transitive clause, and the (P)atient of a transitive clause are all realized differently. This can be seen in the examples in (2.146), where the noun *garma* is realized in three different ways, depending on whether it is S (a), A (b), or P (c).

(2.146) **Tripartite alignment for 3\textsuperscript{rd} person arguments**

a. *Garma as (S) argument: realized as* 
   *garma ina maama\={a}/ [20160921i.33]*
   
   *garmá i- Ø -na maama\={a}/ boy.LM0 S.3- AUX -IMPRF be.i1ll.M.PST*
   
   “The boy was ill.”
2. A grammatical sketch of Gorwaa

b. **GARMA AS (A) ARGUMENT: REALIZED AS NG-**
   *garma baahaa ngina taáhh* [20160921i.1]
   
   `garmá baahaár ng- a- ∅ -na`  
   `boy.LM0 hyaena.LFR A.3- P.F- AUX -IMPRF`  
   `hit.M.PST`  
   “The boy hit the hyaena.”

c. **GARMA AS (P) ARGUMENT: REALIZED AS U-**
   *hhawata garma nguna taáhh* [20160119f.39]
   
   `hhawató garmá ng- u- ∅ -na`  
   `man.LM0 boy.LM0 A.3- P.M- AUX -IMPRF`  
   `hit.M.PST`  
   “The man hit the boy.”

For arguments which are speech act participants (i.e. 1st or 2nd person), alignment is accusative: the (S)ole argument of an intransitive clause and the (A)gent of a transitive clause are marked in one way, and the (P)atient of a transitive clause are is realized differently. This can be seen in the examples in (2.147), where the 1st person pronoun *ani* is realized in three different ways, depending on whether it is S (a), A (b), or P (c).

(2.147) **ACCUSATIVE ALIGNMENT FOR ARGUMENTS WHICH ARE SPEECH ACT PARTICIPANTS (I.E. 1ST OR 2ND PERSON)**

a. **Ani as (S) argument: Realized as ∅-**
   *ani ana mamaá/* [20160921i.38]
   
   `ani ∅- ∅ -na mamaá/`  
   `PRO1SG S.P- AUX -IMPRF be.ill.1SG.PST`  
   “I was ill.”

b. **Ani as (A) argument: Realised as ∅-**
   *ani baahaa ana taáhh*
   
   `ani baahaár ∅- a- ∅ -na`  
   `PRO1SG hyaena.LFR A.P- P.F- AUX -IMPRF`  
   `hit.1SG.PST`  
   “I hit the hyaena.”
2. A grammatical sketch of Gorwaa

c. Aní as (P) argument: Realised as ti-hhawata aní na taáhh

\[
\text{man.LMO PRO1Sg P.1Sg- AUX IMPRF hit.M.PST}
\]

“The man hit me.”

The argument markers inflect differently, and each will be examined below, followed by a brief note on copular constructions.

**The (S)ole argument of an intransitive clause**

The paradigm for (S)ole argument of an intransitive clause is shown in Table 2.12 below. As mentioned above, the distinction is between speech act participant (1\textsuperscript{st} and 2\textsuperscript{nd} person) (2.148)a) versus non-speech act participant (3\textsuperscript{rd} person) (2.148)b).

<table>
<thead>
<tr>
<th>(S) PERSON</th>
<th>FORM</th>
</tr>
</thead>
<tbody>
<tr>
<td>1\textsuperscript{st} or 2\textsuperscript{nd}</td>
<td>Ø-</td>
</tr>
<tr>
<td>3\textsuperscript{rd}</td>
<td>i-</td>
</tr>
</tbody>
</table>

(2.148) **MARKING OF SPEECH ACT PARTICIPANT (P) VERSUS NON-SPEECH ACT PARTICIPANT (3)**

a. \textit{aní ana maamaá/} [20160921i.38]

\[
\text{aní PRO1Sg S.P- AUX IMPRF be.ill.1.PST}
\]

“I was ill.”

b. \textit{garma ina maamaá/} [20160921i.33]

\[
\text{garmá boy.LMO S.3- AUX IMPRF be.ill.M.PST}
\]

“The boy was ill.”

**The (A)gent of a transitive clause argument**

The paradigm for (A)gent arguments makes the same two-way distinction as above: speech act participant (1\textsuperscript{st} and 2\textsuperscript{nd} person) on the one hand (2.149)a), and non-
2. A grammatical sketch of Gorwaa

speech act participants (3rd person) on the other (2.149)b. The paradigm is shown in Table 2.13 below.

Table 2.13: (A) argument

<table>
<thead>
<tr>
<th>(A) person</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st or 2nd</td>
<td>Ø-</td>
</tr>
<tr>
<td>3rd</td>
<td>ng-</td>
</tr>
</tbody>
</table>

Marking of speech act participant (P) versus non-speech act participant (A)

(2.149) (3)

a. aní baahaa ana taáhh [20160921li.6]
   aní             baahaár  Ø-  a-  Ø  -na
   PRO1SG    hyaena.LFR A.P  P.F-  AUX  -IMPRF
   taáhh        hit.1.PST
   “I hit the hyaena.”

b. garma baahaa ngina taáhh [20160921i.1]
   garmá          baahaár  ng-  a-  Ø  -na
   boy.LMo        hyaena.LFR A.3- P.F- AUX  -IMPRF
   taáhh         hit.M.PST
   “The boy hit the hyaena.”

The (P)atient of a transitive clause argument

The paradigm for (P)atient is different. If the anaphor of the patient is a pronoun, the P form inflects for either gender, number, or both (see Table 2.14). In addition to this, the A argument, no matter the person, is not marked. If the anaphor of the patient is a noun, the P form inflects for gender only (see Table 2.15), and the A argument is marked. Examples follow in (2.150).
2. A grammatical sketch of Gorwaa

Table 2.14: (P) argument, pronominal paradigm

<table>
<thead>
<tr>
<th>Person</th>
<th>Number</th>
<th>Gender</th>
<th>Pronoun</th>
<th>Base Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Singular</td>
<td>aní</td>
<td>i</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plural</td>
<td>atén</td>
<td>tindi</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Singular</td>
<td>M</td>
<td>kuúng</td>
<td>u</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>kiíng</td>
<td>i</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plural</td>
<td>kuungá’</td>
<td>tundu or nu</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Singular</td>
<td>M</td>
<td>inós</td>
<td>u</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>inós</td>
<td>a</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plural</td>
<td>inó’ín</td>
<td>i</td>
<td></td>
</tr>
</tbody>
</table>

Table 2.15: (P) argument, nominal paradigm

<table>
<thead>
<tr>
<th>Object</th>
<th>Gender</th>
<th>M</th>
<th>F</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>u</td>
<td>a</td>
<td>i</td>
<td></td>
</tr>
</tbody>
</table>

(2.150) Examples of patient (P) argument marking

a. *garma aní ina taáhh* [201609271168-171.1]
   
garmá aní i- Ø -na taáhh
   boy.LMo Pro.1Sg P.1Sg-Aux -IMPRF hit.M.PST
   “The boy hit me.”

b. *garma atén tindina diif* [201609271168-171.12]
   
garmá atén tindi- Ø -na diif
   boy.LMo Pro.1Pl P.1Pl-Aux -IMPRF hit.M.PST
   “The boy hit us.”

c. *garma baahaa ngina taáhh* [20160921i.1]
   
garmá baahaár ng- a- Ø -na
   boy.LMo hyaena.LFr A.3- P.F- Aux -IMPRF taáhh
   hit.M.PST
   “The boy hit the hyaena.”

d. *garma hhawata nguna taáhh* [201609271168-171.6]
   
garmá hhawató ng- u- Ø -na
   boy.LMo man.LMo A.3 P.M- Aux -IMPRF taáhh
   hit.M.PST
   “The boy hit the hyaena.”

It must be noted that the 1<sup>st</sup> person plural form *tindi*, and the 2<sup>nd</sup> person plural form *tundu* are irregular. It appears as if these forms have been adopted from their use as mediopassive constructions (see §2.4.2.2), which were themselves formed from the
2. A grammatical sketch of Gorwaa

original forms *ti* and *nu*, respectively. In Iraqw, the forms *ti* and *nu* are still used as the forms for the P argument for 1st and 2nd person plural, respectively (Mous 1993: 127).

**Copular constructions**

It has been long established that there are, broadly speaking, two types of copular construction (e.g. Halliday 1967, Higgins 1979). Mikkelson (2006) labels these as specificational and predicational copular constructions, examples of which are given below.

(2.151) **SPECIFICATIONAL COPULAR CONSTRUCTIONS**

a. The boy is a Gorwaa person.

b. I am a nurturer.

(2.152) **PREDICATIONAL COPULAR CONSTRUCTIONS**

a. The boy is in the field.

b. I am tall.

One of the main semantic differences between these two types of constructions, Mikkelson establishes, is that predicational copular constructions tell us something about the referent of their subject, whereas specificational copular constructions tell us who the subject is. For a language like Gorwaa, which must mark all core arguments on the selector, this is an essential division, as predicational copular constructions assign theta roles (i.e. have argument structure), whereas specificational copular constructions do not (i.e. do not have argument structure). This is manifest in the difference between adjectival and locational (i.e. predicational) copular constructions, in which the subject noun is encoded as an argument, and nominal (i.e. specificational) copular constructions, in which no argument is encoded at all, and the (normally null) auxiliary is realized as *a*. 

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(2.153) **Predicational copular constructions (Adjectival)**

a. *aní ti tleér* [20160119f.31]
   aní t- i- ∅ tleér
   Pro.1Sg MP- P.1Sg AUX tall.1Sg
   “I am tall.”

b. *garma ku tleér* [20160119f.25]
   garmá t- ng- u- ∅ tleér
   boy.LMo MP- A.3- P.M- AUX tall.M
   “The boy is tall.”

(2.154) **Predicational copular constructions (Locational)**

a. *garma i bará qaymoor* [20160119f.14]
   garmá i- ∅ bará qaymoór
   boy.LMo S.3- AUX in field
   “The boy is in the field.”

b. *aní a bará qaymoor* [20160119f.19]
   aní ∅- ∅ bará qaymoór
   Pro.1Sg S.P- AUX in field
   “I am in the field.”

(2.155) **Specificational copular constructions (Nominal)**

a. *garma a Gormo* [20160119f.1]
   garmá ∅ Gormó
   boy.LMo AUX Gorwaa.person.♂.LMo
   “The boy is a Gorwaa person.”

b. *aní a Gormo* [20160119f.6]
   aní ∅ Gormó
   Pro.1Sg AUX Gorwaa.person.♂.LMo
   “I am a Gorwaa person.”

**Encapsulation and change in valency**

Note also that when the object argument is located between the selector and the verb (a configuration known as ‘encapsulation’ (e.g. Whiteley 1958, Kießling 2007)), it is *not marked* on the selector. That is to say, a selector which otherwise would have marked an A and a P for a transitive verb (2.156a), will now only mark one argument. This argument will be marked as if it were S, and therefore as if the
2. A grammatical sketch of Gorwaa

clause were intransitive (2.156)b). Note that, in this work, encapsulation constructions are differentiated from incorporation constructions (see e.g. §7.3.1).

(2.156) **ENCAPSULATION OF DIRECT OBJECT BALAANGW REDUCES V VALENCY**

<table>
<thead>
<tr>
<th>Example</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a.</strong></td>
<td><em>garma balaangw ngu doosl</em> [20161109c.29]</td>
</tr>
<tr>
<td><em>garmá balaángw ng- u- ∅ doosl</em></td>
<td>boy.LM0 millet.LM0 A.3- P.M- AUX farm.M.PRES</td>
</tr>
<tr>
<td>“The boy is farming millet.”</td>
<td></td>
</tr>
<tr>
<td><strong>b.</strong></td>
<td><em>garma i balaángw doosl</em> [20160927l222-228.1]</td>
</tr>
<tr>
<td><em>garmá i- ∅ balaángw doosl</em></td>
<td>boy.LM0 S.3 AUX millet.LM0 farm.M.PRES</td>
</tr>
<tr>
<td>“The boy is farming millet.”</td>
<td></td>
</tr>
</tbody>
</table>

### 2.4.2.2 Voice

The voice alternation formally marked in the selector is between active voice (zero, or unmarked) and mediopassive voice (marked by the morpheme t-)\(^{10}\). Active voice indicates that the grammatical subject of the verb behaves as an agent, and is the most common voice to be employed. All examples in this subsection have, insofar, been in active voice (2.157).

(2.157) **ACTIVE VOICE**

<table>
<thead>
<tr>
<th>Example</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a.</strong></td>
<td><em>garma baahaa ngina taáhh</em> [20160921i.1]</td>
</tr>
<tr>
<td><em>garmá baahaár ng- a- ∅ -na</em></td>
<td>boy.LM0 hyaena.LFR A.3- P.F- AUX -IMPRF</td>
</tr>
<tr>
<td>“The boy hit the hyaena.”</td>
<td></td>
</tr>
<tr>
<td><strong>b.</strong></td>
<td><em>garma a Gormo</em> [20160119f.1]</td>
</tr>
<tr>
<td><em>garmá a- ∅ -(g)a Gormó</em></td>
<td>boy.LM0 S.3- AUX -PRF Gorwaa.person.♂.LM0</td>
</tr>
<tr>
<td>“The boy is a Gorwaa person.”</td>
<td></td>
</tr>
</tbody>
</table>

Mediopassive voice subsumes the meanings of both the passive voice (in which the grammatical subject of the verb has characteristics of the patient), and the middle

\(^{10}\) Note that, elsewhere, the form t is also recognizable in the suffix -VVt, which marks the middle on the lexical verb (see §2.3.2.4).
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voice (in which the grammatical subject of the verb has characteristics of both the agent and the patient) and is used in combination with other affixal configurations within the selector to fulfill many different functions, each of which is discussed below.

Commonly, the mediopassive is used to form an impersonal passive. Along with having the mediopassive prefix *t*, the subject of this construction is marked as the (P)atient argument and, in cases in which the (A)gent argument may be marked (i.e. when the (P) argument is 3rd person such as (2.158)d), the subject is marked as the (A)gent argument as well. The verb takes default 3rd person singular agreement for an impersonal subject.11

(2.158) IMPERSONAL PASSIVE CONSTRUCTION

a. \( \text{an\textit{i} } \text{ti} / \text{aay} \) \[20160119f.38\]
   \( \text{ani } \text{t- } \text{i- } \emptyset / \text{aay} \)
   \( \text{PRO.1Sg } \text{MP- } \text{P.1Sg-Aux } \text{eat.3Sg.PRES} \)
   “I am being eaten.”

b. \( \text{ku\text{\textit{u}ng } t\text{u} / \text{aay} \) \[20160119f.39\]
   \( \text{kuung } \text{t- } \text{u- } \emptyset / \text{aay} \)
   \( \text{PRO.2MSG } \text{MP- } \text{P.2MSG-Aux } \text{eat.3Sg.PRES} \)
   “You are being eaten.”

c. \( \text{kuung\text{"a} } \text{tundu} / \text{aay} \) \[20160119f.43\]
   \( \text{kuung\text{"a} } \text{t- } \text{nu- } \emptyset / \text{aay} \)
   \( \text{PRO.2PL } \text{MP- } \text{P.2PL-Aux } \text{eat.3SG.PRES} \)
   “You (Pl.) are being eaten.”

d. \( \text{hhawata } \text{ku} / \text{aay} \) \[20160119f.41\]
   \( \text{hhawat\text{"o} } \text{t- } \text{ng- } \text{u- } \emptyset / \text{aay} \)
   \( \text{man.LM0 } \text{MP- } \text{A.3- } \text{P.M- } \text{Aux } \text{eat.3Sg.PRES} \)
   “The man is being eaten.”

---

11 The 2nd person plural (P)atient marker *nu-* is realized as [nu] word-initially, and as *ndu-* elsewhere (Mous 1993: 128). The mediopassive *t-* and the 3rd person (A)gent marker *ng-* are realized together as [k].
The same selector configuration is used with adjectival predicates.

(2.159) **ADJECTIVAL PREDICATE CONSTRUCTIONS**

a. *aní ti tleér* [20160119f.31]
   
   aní  t-  i-  ∅  tleér  
   PRO.1SG  MP-  P.1-  Aux  tall.1SG
   “I am tall.”

b. *kuúng tu tleér* [20160927l128-137.2]
   
   kuúng  t-  u-  ∅  tleér  
   PRO.2MSG  MP-  P.2-  Aux  tall.2SGM
   “You (M) are tall.”

c. *kuungá’ tundu tlét* [20160119f.33]
   
   kuungá’  t-  nu-  ∅  tlét  
   PRO.2PL  MP-  P.2PL-Aux  tall.2PL
   “You (Pl.) are tall.”

d. *hhawata ku hhoő’* [20160118d.59]
   
   hhawató  t-  ng-  u-  ∅  hhoő’  
   MAN.LM0  MP-  A.3-  P.M-  Aux  nice.M
   “The man is nice.”

Mediopassive is also employed with no argument marking whatsoever in order to indicate that the arguments are either unimportant or have already been established. The (normally null) auxiliary takes the form *a*. Person, number, and gender is unmarked on the lexical verb.

(2.160) **ARBITRARY ARGUMENT MARKER TA**

[...] *matlatleeroo ya ta /a/amiín* [20131108b_20150725j.105]

matlatleér  =oo  ya  t-  ∅  ~Red~  /amiín  
morning.LFr  =TOP  thus  MP-  Aux  ~PLUR~  cry.PST

“In the morning it was thus: they cried.” (where ‘they’ has been established from context)

One can also distinguish the mediopassive marker on the invariable markers *ta* (temporal), and *ti* (reciprocal). This seems consistent with the semantics of mediopassive being employed with states, as well as situations (as above) in which the subject is both agentlike and patientlike.
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(2.161) TEMPORAL MARKER TA

inós tawa askofú mkoár Arusha [20131027.27]
inós ta Ø -wa askofú mkoár
PRO.3SG TEMP AUX -BACK bishop.LMo region.LFr
Arushá Arusha.Fr
“When he was bishop of Arusha region.”

(2.162) RECIPROCAL MARKER TI

na/i’í ti diifiyá’ [20161109a.36]
na/i’í ti diif -iyá’
children.LNØ REC hit.3 -3PL.PRES
“The children fight.” (lit. hit each other)

2.4.2.3 Clause type

Dependent clauses (bracketed in the examples below) are marked differently from independent clauses. Broadly, there are two categories of dependent clauses: those in which there is no internal A(gent) argument (2.163)b), and those in which there is no internal (P)atient argument (2.163)c).

(2.163) DEPENDENT (B, C) VERSUS INDEPENDENT (A) CLAUSES

a. kuúng kitaabu una harís dír garma [20161003.9]
kuúng kitaabú Ø- u- Ø -na
PRO.2SGM book.LMo A.P- P.M- AUX -IMPRF
harís dír garmá
bring.2.PST to boy.LMo
“You(M) brought a book to the boy.”

b. kuúng oo [kitaabu ngwa harís dír garma] [20161003.8]
kuúng oo kitaabú
PRO.2SGM ANA.2SG book.LMo
ng- u- Ø -(g)a harís dír garmá
A.3- P.M- AUX -PRF bring.2.PST to boy.LMo
“You(M) who brought the book to the boy.”

c. kitaabú [kuúng ta harís dír garma] [20161003.61]
kitaabú kuúng t- Ø- Ø -(g)a
book.LMo PRO.2SGM M.P- S.P- AUX -PRF
harís dír garmá
bring.2.PST to boy.LMo
“The book that you(M) brought to the boy.”
Dependent clauses lacking an internal A(gent) argument

Clauses which lack an internal (A)gent argument take the 3rd person form ng- as a default. As such, even though the notional agent of (2.164)b) is kuúng, it is external to the dependent clause, and cannot trigger the form ∅-. Because of this, default agreement is made, hence the form ng-.

(2.164) DEPENDENT CLAUSE LACKING AN INTERNAL AGENT (B) VERSUS INDEPENDENT CLAUSE (A)

a. kuúng kitaabu una harís dír garma [20161003.9]
kuúng kitaabú ∅- u- ∅- na
PRO.2SGM book.LM0 A.P- P.M- AUX -IMPRF
harís dír garmá
bring.2.PST to boy.LM0
“You(M) brought a book to the boy.”

b. kuúng oo [kitaabu ngwa harís dír garma] [20161003.8]
kuúng oo kitaabú
PRO.2SGM ANA.2SGM book.LM0
ng- u- ∅ -(g)a harís dír garmá
A.3- P.M- AUX -PRF bring.2.PST to boy.LM0
“You(M) who brought the book to the boy.”

As with independent clauses, when the P argument of the dependent clause is 1st or 2nd person, the A argument is not marked. As may be seen in (2.165) below, the argument marking on the selector is the same in both the dependent (2.165)b) and independent (2.165)a) clause.

(2.165) DEPENDENT CLAUSE LACKING AN INTERNAL AGENT (A) VERSUS INDEPENDENT CLAUSE (B)

a. mwalimu hhara ngina húw [garma iwa taahhi] [20160927150-158.16]
mwalimú hhartá ng- a- ∅- na
teacher.LM0 stick.LFT A.3- P.F- AUX -IMPRF
húw garmá i- ∅- wa taahhi
bring.PST boy.LM0 P.1SG- AUX -BACK hit.M.SUBJ
“The teacher brought a stick such that the boy hit me.”
2. A grammatical sketch of Gorwaa

b. *garmá i-na taáhh*
   [201609271150-158.1]
   boy.LM0 P.1SG- AUX -IMPRF hit.M.PST
   “The boy hit me.”

**Dependent clauses lacking an internal (P)atient argument**

Clauses which lack an internal (P)atient argument treat the (A)gent argument as the (S)ole argument of an intransitive clause, prefixed with mediopassive morphology (hence the form *ta* in (2.166)b)).

(2.166) **DEPENDENT CLAUSE LACKING AN INTERNAL PATIENT (B) VERSUS INDEPENDENT CLAUSE (A)**

a. *kuúng kitaabu una harís dír garma*
   [20161003.9]
   PRO.2SG.M book.LM0 A.P- P.M- AUX -IMPRF
   harís dír garmá
   bring.2.PST to boy.LM0
   “You(M) brought a book to the boy.”

b. *kitaabú [kuúng ta harís dír garma]*
   [20161003.61]
   book.LM0 PRO.2SG.M M.P- S.P- AUX -PRF
   harís dír garmá
   bring.2.PST to boy.LM0
   “The book that you(M) brought to the boy.”

The form *ta* above in (2.166)b) is the most morphologically transparent of the forms. The rest are given in the table below, and must be treated as irregular portmanteaux of both a mediopassive morpheme and a S argument marker.

**Table 2.16: Mediopassive morpheme + S argument marker for dependent clauses lacking an internal (P)atient argument**

<table>
<thead>
<tr>
<th>Person</th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>ni</td>
<td>ta</td>
</tr>
<tr>
<td>2nd</td>
<td>ta</td>
<td>ta</td>
</tr>
<tr>
<td>3rd</td>
<td>i</td>
<td>i</td>
</tr>
</tbody>
</table>
Clauses expressing simultaneous action (employing the background suffix, such as in (2.167)), and consecutive action (employing the consecutive suffix, such as in (2.168)) also employ these forms. Both are common in narrative genres.

(2.167) **Simultaneous**

\[
\text{iinslawewók } aa \text{ lawe'esiyí'} \text{ niwa } \text{ waraáhh} \quad \text{[20150729b.70]}
\]

\[
\begin{array}{llll}
\text{ni} & \text{=} & \text{ok} & \text{i-} \\
\text{neighbours} & \text{LFR} & \text{=Poss.2SG} & \text{S.3-}
\end{array}
\]

\[
\begin{array}{llll}
\text{lawe'es} & \text{ -a} & \text{-iyí'} & \text{ }
\end{array}
\]

\[
\begin{array}{llll}
\text{M.P.S.1-} & \text{AUX} & \text{-Back} & \text{pass.1.PST}
\end{array}
\]

“Your neighbours said hello as I passed.”

(2.168) **Consecutive**

\[
\begin{array}{llll}
\text{kuúng } & \text{a-} & \text{n} & \text{amór} \quad \text{=qá'}
\end{array}
\]

\[
\begin{array}{llll}
\text{PRO.2MSG} & \text{S.2-} & \text{AUX} & \text{-EXPECT}
\end{array}
\]

\[
\begin{array}{llll}
\text{place.LFR} & \text{=DEM3} & \text{sit2.SBJ}
\end{array}
\]

\[
\begin{array}{llll}
\text{t-} & \text{a-} & \text{-re} & \text{dir} \quad \text{=í}
\end{array}
\]

\[
\begin{array}{llll}
\text{MP-} & \text{S.2-} & \text{AUX} & \text{-Consec}
\end{array}
\]

\[
\begin{array}{llll}
\text{place.LFR} & \text{=DEM1} & \text{Speak.2.SBJ}
\end{array}
\]

“[..] you will sit there [..] and (you) talk there [..]”

2.4.2.4 Deixis

For actions in which movement is toward the origo (usually the speaker), the ventive ("hither" in Mous 2007: 18-19) form ni is used. The form is invariable, and glossed Vent.

(2.169) Ventive Form (motion to)

\[
\begin{array}{llll}
\text{uchagusi } & \text{ni} & \text{ hi'it sleheéngw miibangoo} \quad \text{[20150724.76]}
\end{array}
\]

\[
\begin{array}{llll}
\text{uchagusír} & \text{ni} & \text{ hi'it} & \text{sleheéngw miibaángw} \quad \text{=oo}
\end{array}
\]

\[
\begin{array}{llll}
\text{election.LFR} & \text{Vent} & \text{come.F.PRES} & \text{month.LMO} \quad \text{ten.LMO} \quad \text{=Top}
\end{array}
\]

“The election comes in October.” (lit. ‘month ten’)

(2.170) Ventive Form (motion to)

\[
\begin{array}{llll}
\text{giyee } & \text{na} & \text{ tleér} \quad \text{[20151202e.113]}
\end{array}
\]

\[
\begin{array}{llll}
\text{giyeér} & \text{ni} & \text{ a} & \text{ tleér}
\end{array}
\]

\[
\begin{array}{llll}
\text{famine.LFR} & \text{Vent} & \text{-PRF} & \text{go.F.PST}
\end{array}
\]

“The famine came [..]”
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2.4.2.5 Aspect

Aspect refers to the “internal temporal consistuency of a situation” (Comrie 1976: 3): rather than situating the action of the verb in time (as tense), it functions to express how that action is carried out over time. Aspect is expressed in the selector through a series of suffixes on the base, which will each be examined below.

Perfective Suffix -(g)a

The perfective suffix (“perfect” in Mous 1993: 141-144) is realized as -ga for stems of the form V, and as -a elsewhere. Irregularly, if the stem vowel is the 3rd person sole argument form i-, -(g)a is realized as -a (for the historical roots of this irregularity, see Mous 1993: 142, 39).

(2.171) Perfective suffix realized as -ga if stem is V, and as -a elsewhere

a. ∅- ∅ -(g)a → aga (E.g. aga faák ‘I have finished it.’)
   S.P.- Aux -PRF

b. ng- a- ∅ -(g)a → nga (E.g. baha nga gaás ‘He killed the hyena.’)
   A.3- P.F. Aux -PRF

(2.172) Irregularly, prefective suffix -ga realized as -a if stem is S.3 i-

i- ∅ -(g)a → a (E.g. afkú see a gweeriít ‘The cow’s mouth opened.’)
   S.3- Aux -PRF

Because of vowel assimilation, final vowels of the stem assimilate to the [a] of the suffix.

(2.173) Assimilation of [i] to [a]

ni -(g)a → na (E.g. na amodá’tlayiyé’ ‘They left there. (to come to me).’)
   VENT -PRF

Optionally, the consonant [g] of the stem is labialized if its preceding vowel is [u].

(2.174) Optional labialization of [g] to [gw]

∅- u- ∅ -(g)a → uga (E.g. uga sláw or ugwa sláw ‘I got it.’)
   A.P.- P.M. AUX -PRF

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The perfective suffix describes the action as a unitary whole, lacking internal structure (e.g. English perfective ‘he has hit’ vs. imperfective ‘he is hitting’).

(2.175)  **Perfective Aspect: Action is a Unitary Whole**

a.  *anoga buúhh* [20150810d.43]

\[\text{PRO.1SG} \quad \text{S.P} \quad \text{AUX} \quad -\text{PRF} \quad \text{get.angry.1.PRES} \]

“*I am angry.*"

b.  *fooxarí, gár nga tlehh* [20150808a.150]

\[\text{hole.LFR} \quad -\text{DEM1} \quad \text{thing.LFR} \quad \text{A.3} \quad \text{P.F} \quad \text{AUX} \quad -\text{PRF} \]

“*This hole – what made it?*”

**Imperfective Suffix –na**

The imperfective suffix (“imperfective past” in Mous 1993: 145-146) is realized as -na.

When -na is suffixed to the form nga, the [a] of the stem is raised to become [i].

(2.176)  **Raising of [a] to [i] preceding -na**

\[\text{ng}- \quad \text{a}- \quad \text{∅} \quad -\text{na} \rightarrow \text{ngina} \quad (\text{E.g. hhinhiní ngina húp. ‘She brought pumpkins.’}) \]

Generally, the imperfective suffix describes an action with internal structure, specifically duration (2.177). However, this is not always the case, with many examples recorded of this suffix occurring with verbs of punctual, very short-term action (2.178).

(2.177)  **Imperfective Aspect: Action with Internal Structure (i.e. Duration)**

*ina eét neer gaanslay* [20131108b_20150725j.66]

\[\text{i-} \quad \text{∅} \quad -\text{na} \quad \text{eét} \quad \text{neer gaanslay} \quad \text{S.3} \quad \text{AUX} \quad -\text{IMPRF} \quad \text{descend.M.PST} \quad \text{with speed} \]

“*He was descending with haste.*"
2. A grammatical sketch of Gorwaa

(2.178) **Imperfective Aspect: Action Seems to Be Punctual**

\[\text{desirqá’aní aná gaás} \quad [20131108b_20150725j.83]\]

desîr \-qá’ \- aní \- \ø \- a \- \ø \- na
girl.LFR \- DEM3 \- PRO1Sg \- A.P- \- P.F- \- AUX \- IMPRF
gaás
giI.1.Pst

“That girl – I killed her.”

**Expectational Suffix -n**
The expectational suffix (Mous 1993: 144) is realized as -\(\text{n}\).

When -\(\text{n}\) is suffixed to the form \textit{nga}, the \(\text{[a]}\) of the stem is raised to become \(\text{[i]}\).

(2.179) **Raising of \([a]\) to \([i]\) preceding \(-n\)**

\[\text{ng- } \text{a- } \ø \- \text{n} \rightarrow \text{ngin} \quad (\text{E.g. } \text{ba’aari umoqo /ayitoo ngin nuunu’ Bees suck every flower.})\]

The expectational suffix generally describes an action whose outcome is expected, automatic, or otherwise certain.

(2.180) **Expectational Aspect: Action Whose Outcome is Automatic**

\[\text{danú kun tleehhiit nee ba’aari} \quad [20131108b_20150725j.4]\]

danú \- t- \- ng- \- u- \- \ø \- \text{n} \- tleehhiit nee honey.LMo \- MP- \- A.3- \- P.M- \- AUX \- EXPECT \- make \- by \- ba’aarír \- bees.LFR

“Honey is made by bees.”

(2.181) **Expectational Aspect: Action Whose Outcome is Certain**

\[\text{[..] Bee’o daawaa ngin leéhh} \quad [20151202d.170]\]

Bee’ó \- daawaár \- ng- \- a- \- \ø \- \text{n}
Bee’ó.LMo \- medicine.LFR \- A.3- \- P.F- \- AUX \- EXPECT \- leéhh \- look.for.M.Pst

“Bee’o would look for medicine.”

**Consecutive Suffix -re**
The consecutive suffix (Mous 1993: 146) is realized as \(-re\).

When \(-re\) is suffixed to the form \textit{nga}, the \(\text{[a]}\) of the stem is raised to become \(\text{[i]}\).
2. A grammatical sketch of Gorwaa

(2.182)  **Raising of [a] to [i] preceding -re**

\[
\text{ng- a- } \emptyset \text{-re} \rightarrow \text{ngire} \quad \text{(E.g. [...] Dodó sleerós ngire húw. ‘(and) Dodo brought him his cow.’)
}\]

The consecutive suffix describes an action that follows naturally from the preceding action. It is used very commonly in narratives.

(2.183)  **Consecutive aspect: action whose outcome follows naturally from the preceding action**

\[
\text{mulqumo nguna sakií/, gadá’ inós ngure } \text{ki/}
\]

mulqumó ng- u- \emptyset -na sakií/
friend.LMo A.3- P.M- AUX -IMPRF betray.M.PST
gár -dá’ inós ng- u- \emptyset -re
thing.LFr -DEM4 Pro3Sg A.3- P.M- AUX -CONSEC
ki/
return.F.PST
“He betrayed a friend, and that thing (i.e. the betrayal) returned to him.”

(2.184)  **Consecutive aspect: action whose outcome follows naturally from the preceding action**

\[
\text{ga a diwi, kana ku’uús nee marlboro kure kwaáhh amór bihhí}
\]

[20150726d.188]

gár \emptyset diwitá t- ng- a- \emptyset -na
thing.LFr AUX salt.LFt MP- A.3- P.F- AUX -IMPRF
ku’uús nee marloró t- ng- u- \emptyset -re
pour.Pst with large.plastic.bag.LMo MP- A.3- P.M- AUX -CONSEC
kwaáhh amór bihhír
throw.Pst to side.LFr
“[It was (like) salt, it was poured from a large plastic bag and it (i.e. the bag) was thrown to the side.]”

**Background suffix -wa**
The background suffix (Mous 1993: 147) is realized as -wa. The background suffix occurs only in dependent clauses.
2. A grammatical sketch of Gorwaa

The background suffix marks an action as occurring as part of the action directly preceding or following it (that is, a background-marked action occurs simultaneously to or before its associated action).

(2.185) **BACKGROUND ASPECT: ACTION OCCURRING AS PART OF THE ACTION DIRECTLY FOLLOWING IT**

*imir tiwa haragaasaán, inós a intsahhatimiís*

[20131027_20150725c.12]

*imir ti* -wa haragaás -aán
since REC -BACK join.together.1 -1PL.PST
inós i- Ø -(g)a intsahhatimiís
PRO3SG S.3- AUX -PRF teach.M.PST

“From the time that we married, he taught.”

2.4.2.6 Mood

Mood provides information on the speaker’s attitude toward what they are saying. Mood is expressed in the selector through three\(^3\) (primarily) affixal morphemes, which will be examined below.

**Conditional “Prefix” bar**

The conditional affix (Mous 1993: 147) is derived from the adverb *bar* ‘if’. In its adverbial use, *bar* appears either clause-initially (2.186), or directly before the selector (2.187).

(2.186) **ADVERB BAR OCCURRING CLAUSE-INITIALLY**

*bar tiqóo u sla’akáng, awú un harís* [20151202d.147]

*bar tiqór* Ø- u- Ø sla’-akáng awú
if cutting,LFr A.P- P.M- AUX like.2 -NEG.PRES bull.LMo
Ø- u- Ø -n harís
A.P- P.M- AUX -EXPECT bring.2.SUBJ

“If you don’t like cutting (i.e. forest-clearing), (then) you will bring a bull.”

---

\(^3\) In addition to analogues of three mood affixes discussed here, Mous identifies a further, Concessive mood affix in *Iraqw*, derived from the adverb *tam* (1993: 147-150). Though the adverb *tam* exists in *Gorwaa*, I have not identified any instances of it being used as a mood prefix to the selector.
2. A grammatical sketch of Gorwaa

(2.187) **Adverb bar occurring directly before the selector**  
*firimbi bar ka taáhh* [20151202d.50]  
firimbír bar t- ng- a- ∅ taáhh  
whistle.LFR if MP- A.3- P.F- AUX hit.PST  
“If the whistle is blown.”

In the latter position, the selector may encliticize to *bar*. The vowel [a] of *bar* often assimilates to the initial vowel of the selector. Optional deletion of the final vowel (i.e. the selector base) results in what looks like suprafixation.

(2.188) **Vowel [a] of bar assimilating to initial vowel of the selector, final vowel [i] deleted**  
bar= i- ∅ → bir  
if= S.3- AUX hand goes here...

As per its name, the conditional suffix expresses a condition.

(2.189) **Conditional mood: expressing a condition**  
*burta óh, tun diif* [20151202d.152]  
bar= t- u- ∅ -(g)a óh  
if= MP- P.2sg.m AUX -PRF catch.PST  
t- u- ∅ -n diif  
MP- P.2sg.m- AUX -EXPECT beat.SBJ  
“If you were caught, you will be beaten.”

**Prohibitive Prefix m-**
The prohibitive prefix *m-* (Mous 1993: 151-152) is used in two primary ways. First, it is employed with the two negative imperative suffixes (*-aar, and -ara’*) to complete a negative imperative construction (2.190). Second, it is employed with the background suffix (*-wa*) to express negative commands for all persons other than 2nd (which are covered by the imperative forms) (2.191).

(2.190) **Prohibitive mood employed with the negative imperative**  
a. *[..] tisí ta o’má inki/aar* [20151021c.171]  
tisí t- ∅- a- ∅ -(g)a o’  
ProDem2,F MP- A.P- P.F- AUX -PRF say.2.SBJ  
m- ∅- a- ∅ inki/-aar  
Prohib- A.P- P.F- AUX repeat.2 -IMP.NEG  
”[..] this which you have said, don’t repeat it.”
2. A grammatical sketch of Gorwaa

b.  

\[ kuungá’ ma kwatiitara’ \]  

kuungá’ m- Φ- a- Φ kwatiit -ara’  
PRO.2PL PROHIB- A.P- P.F- AUX touch -IMP.NEG.PL  
“Don’t you (pl.) touch (it)!"

(2.191)  

PROHIBITIVE MOOD EMPLOYED WITH BACKGROUND SUFFIX -WA  

\[
\text{mwalimu hhara nga huwiká as gidabá garma muwa taáhh} 
\]

mwalimú hhartá ng- a- Φ -(g)a  
teacher.LM0 stick.LFT A.3- P.F- AUX -PRF  
húw =iká as.gidabá garmá  
bring =NEG.PST such.that boy.LM0  
m- u- Φ -wa taáhh  
PROHIB- P.2SG.M- AUX -BACK hit.M.PST  
“The teacher did not bring the stick such that the boy may not hit you.”

Questioning Prefix m-

The questioning prefix \( m- \) (Mous 1993: 150-151) is used along with the reason affix (see below) to form a ‘why’ question\(^{13}\).

(2.192)  

QUESTIONING MOOD: FORMING A ‘WHY’ QUESTION  

\[
\text{fu’unay misa bo/eemís} 
\]

fu’unáy m- s- Φ- i Φ -(g)a  
meat.LNØ Q- REASON- A.P- P.N- AUX -PRF  
bo/eemís  
blacken.2.PST  
“Why did you blacken the meat?”

(2.193)  

QUESTIONING MOOD: FORMING A ‘WHY’ QUESTION  

\[
\text{baahaa maska taáhh} 
\]

baaháár m- s- t- ng- a- Φ -(g)a  
hyena.LFr Q- REASON- MP- A.3- P.F- AUX -PRF  
taáhh  
hit.PST.Q.PST  
“Why was the hyena hit?”

---

\(^{13}\) The occurrence of this prefix in Gorwaa appears more restricted than the analogue described in Iraqw, which can affix to most any selector to produce the meaning ‘what’, as well as work with a number of adverbial case clitics to produce the meanings ‘how’, ‘why’, and ‘where to’.
2. A grammatical sketch of Gorwaa

2.4.2.7 Adverbial case

The only adverbial case affixes (Mous 1993: 152-154) attested thus far are the reason suffix -s, the instrumental suffix -r, the lative suffix -i, and the ablative suffix -wa.

Reason Sufffix -s

The reason suffix is typically used with the temporal copula to produce a construction with the meaning ‘the reason why...’.

(2.194)  REASON SUFFIX USED WITH TEMPORAL COPULA TA
gár tas daawa a tí   [20131108b_20150725j.6]
gár   t-   i-   Ø   -(g)a   -s   daawaár
thing.LFR MP- S.3- AUX -PRF -REASON medicine.LFR
i-   Ø   -(g)a   tí
S.3- AUX -PRF DEM.F
“The reason why it is medicine is this:”

Instrumental Suffix -r

To this point, the instrumental suffix has only been found on encapsulated nouns, producing a construction meaning ‘with...’ or ‘in the manner of’. The only way to tell the difference between an encapsulated noun ending in the linker -r~`~ and the instrumental suffix -r is that the form taking the instrumental suffix lacks the high tone.

(2.195)  LEVEL PITCH ACCENT ON SLEER INDICATES INSTRUMENTAL SUFFIX’S PRESENCE
[...] heeko oo qwaru ngun sleer slaaxw [DSC_5354_20150705b.63.2]
heé    -ko   oo   qwarkú
person.LMo -INDEF.M ANA.M hunger.LMk
ng- u- Ø -n
A.3- P.M- AUX -EXPECT
sleér    -r   slaaxw
cow.LFr -INSTR buy.M.SUBJ
“[...] some hungry person would buy it (i.e. millet) with a cow.”
2. A grammatical sketch of Gorwaa

(2.196) Level pitch accent on *idosir* indicates instrumental suffix’s presence

kií ar haree an *idosir* hi’imit

kií            ar       hareér   ō-    ō    -n
Pro.2SG.F   Ana.F  woman.LFr  S.P- Aux  -Expect

idór          -sí    -r        hi’imit
manner.LFr   -DEM2 -INSTR  travel.2.SBJ

“You, woman travel in this way.”

Lative Suffix -i
As for the instrumental suffix, the lative suffix -i has only been found on encapsulated nouns, producing a construction meaning ‘toward...’ or ‘to...’.

(2.197) Lative suffix: motion toward

xareemíwós ngina la/aás ina amodi hi’iít

xareemí      -ós    ng-    i-    ō    -na    la/aás
horns.LN∅   -Poss.3SG  A3-   P.N-  Aux  -IMPRF  wag.M.Pst
i-          ō    -na    amór   -dá’  -i    hi’iít
S.3-  AUX  -IMPRF  place.LFr  -DEM4  -ILL  walk.M.Pst

“He wagged his horns from side to side and went to there.”

Note that the encapsulated noun does not need to be the location to which the action of the verb is directed. In (2.198), it is not ‘to the medicine’ that the hitting is directed, but rather ‘to the tsetse flies’.

(2.198) Lative suffix: motion is not necessarily toward the marked noun

[...] seehhαa kan *daawaarí* taahh

seehhár          t-  ng-  a-    ō    -n
tsetse.flies.LFr  MP-  A3-  P.F-  Aux  -Expect

daawaár       -i    taahh
medicine.LFr   -ILL   hit.SBJ

“The tsetse flies would be hit by this medicine.”

Ablative Suffix -wa
As for the instrumental and lative suffixes, the ablative suffix -wa has only been found on encapsulated nouns, producing a construction meaning, roughly, ‘from...’.
2. A grammatical sketch of Gorwaa

(2.199) ABLATIVE SUFFIX: MOTION FROM
birkwa baraqqawa sláy [...] [20151202d.78]
bar= t- ng- u- ∅ -(g)a bará -qá’ -wa
if= MP- A.3- P.M- AUX -PRF in -DEM3 -ILL
sláy
get.PST
“if he is detected there [...]”

(2.200) ABLATIVE SUFFIX: MOTION FROM
kina didawa tahhtaáhh [DSC_5354_20150705b.14.5]
t- ng- i- ∅ -na dir -dá’ -wa
MP- A.3- P.N- AUX -IMPRF place.LFr -DEM4 -ABL
tahhtaáhh
drive.out.PST
“They were driven out from there.”

2.4.3 Pronouns

A division of Gorwaa anaphoric devices between the traditional concept of “pronoun” (“independent” (Mous 1993: 114-117)) versus “anaphoric clitic” (Payne 1997: 42-44) does not seem entirely appropriate. Indeed, the argument marking affixes of many selectors, glossed herein as S, A, and P are fully capable of standing as individual phonological words within most phrases, especially when in indicative mood and present tense, which add no additional morphology to which the form may affix. However, these forms are different in that they cannot bear tone or stress. As such, the proposed division is that of tonic versus non-tonic pronouns. This section will begin with a description of the tonic pronouns, and will then cover the non-tonic pronouns.

2.4.3.1 Tonic pronouns

The tonic pronouns are, by all measures, full nouns. As their name suggests, they have stress and tone. Tonic pronouns may serve as full arguments in any position
occupied by a full noun (e.g. subject of a nominal copula (2.201), object of a nominal copula (2.202), subject of an adjectival copula (2.203), object of a verb (2.204)), as well as be modified as a full noun (e.g. NP modifier (i.e. possession) (2.205)).

(2.201)  *Aní is subject of nominal copula*

> aní a uumtuuso’oo [20131027_20150725c.194]
> aní  ø  uumtuuso’oór
> PRO1SG  AUX  nurturer.♀.LFR
>
> “I am a nurturer.”

(2.202)  *Tí is object of nominal copula*

> aní, loohír ni tsawdiit a tí [20150724.74]
> aní  loohír  ni-  ø  tsawdiit
> PRO1SG  path.LFR  DEP.1SG-  AUX  choose.1.SUBJ
> a-  ø  -(g)a  tí
> COPN  AUX  -PRF  PRODEM1.F
>
> “Me, the path I choose is this.”

(2.203)  *Inós is subject of adjectival copula*

> inós ku tleér [20160119f.36]
> inós  t-  ng-  u-  ø  tleér
> PRO3SG  MP-  A.3-  P.M-  AUX  tall.M
>
> “He is tall.”

(2.204)  *Tók is object of verb*

> tók a faakaanaká tók [20150808a.152]
> tók  ø-  a-  ø  faák  -aán  -aká
> PROPOSSE.2SgF  A.P-  P.F-  AUX  finish.1  -1.PL-  NEG.PRES
> tók
> PROPOSSE.2SgF
>
> “Yours, we won’t finish yours.”

(2.205)  *Atén is modified by a full NP*

> atén oo hhawata [20160927l181-182.14]
> atén  oo  hhawató
> PRO1PL  ANA.M  men.LMo
>
> “we men”

---

14 In addition to the three types of tonic pronoun identified here (i.e. personal, possessive, and demonstrative), Mous (1993: 115) identifies a set of *indefinite* pronouns: independent forms which take indefinite noun suffixes. Though such noun suffixes exist in Gorwaa (see §2.4.1.3), a corresponding set of indefinite pronouns has not been identified.
Personal Pronouns refer back to entities associated with grammatical person. As noted by Mous (1993: 113), personal pronouns are semantically definite, and therefore may not be followed by indefinite suffixes. As they typically refer to people, they also may not be possessed. Personal pronouns are glossed: ProPrs

<table>
<thead>
<tr>
<th>Person</th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>aní (Formal Pron. aníng) (Reduced Form án)</td>
<td>atén (Relaxed Pron. át)</td>
</tr>
<tr>
<td>2M</td>
<td>kuúng (Relaxed Pron. kuú) (Reduced Form ku)</td>
<td>kuungá’</td>
</tr>
<tr>
<td>2F</td>
<td>kiíng (Relaxed Pron. kii)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>inós (Reduced Form ino)</td>
<td>inó'ín (Relaxed Pron. inín)</td>
</tr>
</tbody>
</table>

As can be seen, the pronouns vary slightly in form depending on factors including register (formal versus relaxed), and speed (fast speech typically results in reduced forms).

In usage, the presence of a personal pronoun generally has an effect of focusing that information (2.206) (which may include contrastive readings, such as in (2.207)).

(2.206) PERSONAL PRONOUN aní: OBJECT FOCUS
garma aní ngina taáhh [201609271168-171.1]
garmá aní ng- i- ₀ -na taáhh boy.LMo Pro1Sg A.3- P.1SG- AUX -IMPRF hit.M.PST “The boy hit me.” (Where ‘me’ is new information.)

(2.207) PERSONAL PRONOUN aníng: CONTRASTIVE FOCUS
aníng mi ga/awaar [20150817d.811]
aníng m- i- ₀ ga/aw -aar Prohib- P.1SG- AUX look.at.2 -IMP.NEG “Don’t look at me!” (i.e. look at the task at hand)
2. A grammatical sketch of Gorwaa

**Possessive Pronouns**
Possessive pronouns indicate possession. Morphologically, they are formed from the stems *ko-* (M/N) and *to-* (F), and the possessive determiners (see §2.4.1.1).

Again, their use may result in a focus reading (2.208), including contrastive focus (2.209). Possessive pronouns are glossed ProPoss.

<table>
<thead>
<tr>
<th>Person / Number</th>
<th>Masculine / Neuter</th>
<th>Feminine</th>
</tr>
</thead>
<tbody>
<tr>
<td>1Sg.</td>
<td>kwe’eé’</td>
<td>te’eé’</td>
</tr>
<tr>
<td>2Sg.</td>
<td>kók</td>
<td>tók</td>
</tr>
<tr>
<td>3Sg.</td>
<td>kós</td>
<td>tós</td>
</tr>
<tr>
<td>1Pl.</td>
<td>korén</td>
<td>torén</td>
</tr>
<tr>
<td>2Pl.</td>
<td>kohúng</td>
<td>tohúng</td>
</tr>
<tr>
<td>3Pl.</td>
<td>ko’ín</td>
<td>to’ín</td>
</tr>
</tbody>
</table>

(2.208) **POSSESSIVE PRONOUN Tówki: OBJECT FOCUS**
*kuú, tók aqo an aluqa’wa dog [20151202d.25]*

<table>
<thead>
<tr>
<th>PRO2Sg.M</th>
<th>ProPoss.2Sg.F</th>
<th>EMPH</th>
<th>A.P-</th>
<th>P.F-</th>
<th>AUX</th>
<th>-EXPECT</th>
</tr>
</thead>
<tbody>
<tr>
<td>alú</td>
<td>-qá’</td>
<td>-wa</td>
<td>dog</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>after</td>
<td>-DEM3</td>
<td>-ABL</td>
<td>add.2.SUBJ</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

“You, yours you add after that.”

(2.209) **POSSESSIVE PRONOUN Tohúng: CONTRASTIVE FOCUS**
*a’a ge! tohúng ar koloni [DSC_5354_20150705b.73]*

<table>
<thead>
<tr>
<th>EMPH</th>
<th>ProPoss.2Pl.F</th>
<th>ANA.F</th>
<th>colonial.times</th>
</tr>
</thead>
<tbody>
<tr>
<td>a’á ge</td>
<td>tohúng</td>
<td>ar</td>
<td>koloni</td>
</tr>
</tbody>
</table>

“No! Yours (i.e. your mores) are from colonial times.” (i.e. your mores versus ours)

**Demonstrative Pronouns**
Demonstrative pronouns are highly common, replacing common nouns.

Morphologically, they are formed from the stems *ko-* (M/N) and *to-* (F), and the demonstrative determiners (see §2.4.1.2). Demonstrative pronouns are glossed ProDem, with a following number indicating the deixis of the demonstrative.
2. A grammatical sketch of Gorwaa

Table 2.19: Demonstrative Pronouns

<table>
<thead>
<tr>
<th>Level of Deixis</th>
<th>Masculine</th>
<th>Feminine</th>
<th>Neuter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>kwí</td>
<td>tí</td>
<td>koká’</td>
</tr>
<tr>
<td>2</td>
<td>kwising</td>
<td>tising</td>
<td>kusíng</td>
</tr>
<tr>
<td>3</td>
<td>koqá’</td>
<td>toqá’</td>
<td>koqá’</td>
</tr>
<tr>
<td>4</td>
<td>kodá’</td>
<td>tidá’ / todá’ / tadá’</td>
<td>kodá’</td>
</tr>
</tbody>
</table>

(2.210) **Demonstrative Pronoun kodá’**

/Orundíyeekeé sleeme, kodá’ gitlay tleèr, /Orundí daqa niinà

[20150726d.59]

/Orundí =ee =ká sleeme kodá’ gitlay tleèr
/Orundí =TOP =NEG also **ProDem4.M** FILL tall.M.EMP
/Orundí daqa niinà
/Orundí FILL small.M.EMP

“It wasn’t /Orundí either, the one there was – uh – tall, /Orundí is – uh – short.”

(2.211) **Demonstrative Pronoun toqá’**

[...] toqá’ /awaakw amorgá’ taataahhee [...] [20150817d.430]

toqá’ /awaakw amór =qá’ taataahh -eek
**ProDem3.F** white.F place.LFr =Dem3 remove -IMP.O.Sg

“That white one there – take it away!”

Possessive and demonstrative pronouns are also used to contribute their meaning to a noun which has already been modified by an analogous suffix carrying one of these meanings (see §2.4.1).

(2.212) **Demonstrative Pronoun kwising used to modify a noun already modified by a possessive suffix -ók**

qwala/uwók kwising oo umó siwaroo a milâ [20150727.49]
qwala/û -ók kwising oo umó happiness.LM0 -Poss2SG **ProDem2.M** ANA.M every
siwar =oo Ø milâ
time.LFr =TOP AUX what

“What is this permanent happiness of yours?” (lit. happiness of every time)

**Interrogative Pronouns**

Interrogative pronouns are used in forming wh-questions (see §2.6.3.2).

Morphologically, each is composed of a nominal element, plus the suffix –(l)à. The ‘nominal element’ for ‘when’ (daqa- ~ daqi ‘time’), and ‘where’ (di- ~ di ‘place’) is
2. A grammatical sketch of Gorwaa

transparent. The ‘nominal elements’ (if they are indeed that) for ‘who’ (ma‘-) and ‘what’ (mi-) are less clear. Interrogative pronouns are glossed with their English equivalent.

Why-questions are formed on the selector using the questioning mood prefix (see §2.4.2.6).

Table 2.20: INTERROGATIVE PRONOUNS

<table>
<thead>
<tr>
<th>English Equivalent</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘who’</td>
<td>ma‘å</td>
</tr>
<tr>
<td>‘what’</td>
<td>milå</td>
</tr>
<tr>
<td>‘when’</td>
<td>daqalå</td>
</tr>
<tr>
<td>‘where’</td>
<td>dilå</td>
</tr>
</tbody>
</table>

(2.213) INTERROGATIVE PRONOUN ‘WHEN’ DAQALÂ

hhayumarók a daqalå [20150727.31]

journey.LFr =Poss.2Sg AUX when

“When is your trip?”

Anaphoric Pronouns

Anaphoric pronouns occur last on this list because they are somewhat different from their tonic counterparts. They are described by Mous (2016: 66) as pronouns referring to nouns, rather than directly to a referent. Anaphoric pronouns agree with the gender of the noun to which they refer, masculine and neuter forms are oo, and feminine forms are ar. The anaphoric pronoun is glossed Ana, along with the gender of its referent.

(2.214) ANAPHORIC PRONOUN (M) GENDER: oo

[... ] garmaqá‘ oo dó’ isa’[...] [20131108b_20150725].33

garmá -qá’ oo dó’ isá’

boy.LM0 -Dem3 ANA.M house.LM0 so-and-so.LM0

“[...] that boy of the house of so-and-so [...]”
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(2.215) **ANAPHORIC PRONOUN (N) GENDER: oo**

Asloó tsár oo dirèn ngina ohiís. [20150729b.17]

<table>
<thead>
<tr>
<th>asloó</th>
<th>tsár</th>
<th>oo</th>
<th>dirèn</th>
<th>~ ~</th>
<th>ng-</th>
<th>i-</th>
<th>ø</th>
<th>-na</th>
</tr>
</thead>
<tbody>
<tr>
<td>fires</td>
<td>LNØ</td>
<td>two</td>
<td>ANA.N</td>
<td>fat.N</td>
<td>EMPH</td>
<td>A.3-</td>
<td>P.N-</td>
<td>AUX-</td>
</tr>
</tbody>
</table>

“He lit two great fires.”

(2.216) **ANAPHORIC PRONOUN (F) GENDER: ar**

[...] qasee ar da/aat [20150817d.110]

<table>
<thead>
<tr>
<th>qas</th>
<th>-ee</th>
<th>ar</th>
<th>da/aat</th>
</tr>
</thead>
<tbody>
<tr>
<td>put</td>
<td>-IMP.Sg.O</td>
<td>ANA.F</td>
<td>red.F</td>
</tr>
</tbody>
</table>

“[...] put a red one.”

### 2.4.3.2 Non-tonic pronouns

Non-tonic pronouns are different from their tonic counterparts in many ways. As their name indicates, they do not bear stress or tone, and their environments are highly restricted within the clause. While they may occur directly before the verb (2.217), other material, such as adverbs (2.218) and direct objects (2.219), may intervene.

(2.217) **NON-TONIC PRONOUN: (P)ATIENT ARGUMENT MARKER A- (DIRECTLY BEFORE THE VERB)**

ani baahaa a da'ayumiít [20150727.43]

<table>
<thead>
<tr>
<th>ani</th>
<th>baahaa</th>
<th>a</th>
<th>da'ayumiít</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRO1SG</td>
<td>thing.LFR</td>
<td>A.P-</td>
<td>AUX-</td>
</tr>
</tbody>
</table>

“I am afraid of the hyaena.”

(2.218) **NON-TONIC PRONOUN: (P)ATIENT ARGUMENT MARKER A- (ADVERB INTERVENES BETWEEN PRONOUN AND VERB)**

ani, gari a lowa slaa'akáng [...] [20150808a.161]

<table>
<thead>
<tr>
<th>ani</th>
<th>gár</th>
<th>a</th>
<th>lowa</th>
<th>slaa'</th>
<th>akáng</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRO1SG</td>
<td>thing.LFR</td>
<td>-DEM1</td>
<td>A.P-</td>
<td>AUX-</td>
<td>very</td>
</tr>
</tbody>
</table>

“Me, I really don’t like this thing.”

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(2.219) Non-tonic pronoun: (S)ole argument marker A- (direct object intervenes between pronoun and verb)

\[
\text{aní a sleér dif} \quad [20150724.4]
\]
\[
\begin{array}{cccc}
\text{aní} & \text{∅-} & \text{∅} & \text{sleér} & \text{dif} \\
\text{PRO1SG} & \text{S.P-} & \text{AUX} & \text{cow.LFr} & \text{hit.1.PRES}
\end{array}
\]

“I hit the cow.”

Non-tonic pronouns are mandatory in every finite VP. Even if its noun anaphor (2.220) or a tonic pronoun equivalent (2.221) is present, the non-tonic form will occur concurrently with it.

(2.220) Non-tonic pronouns are mandatory: even if N anaphor aamarka is present

\[
aamarka i deer […] \quad [20131108b_20150725j.118]
\]
\[
\begin{array}{cccc}
daamá & \text{-ka} & \text{i-} & \text{∅} & \text{deer} \\
\text{grandmother.LFr} & \text{-INDEF.F} & \text{S.3-} & \text{AUX} & \text{be.present.3.PRES}
\end{array}
\]

“(Once) there is this old lady

(2.221) Non-tonic pronouns are mandatory: even if tonic pronoun kuúng is present

\[
kuúng a iwiwít [20150727.2]
\]
\[
\begin{array}{cccc}
kuúng & \text{∅-} & \text{∅} & \text{iwiwít} \\
\text{PRO2SG.M} & \text{S.P-} & \text{AUX} & \text{sit.2.PRES}
\end{array}
\]

“You are sitting.”

2.4.4 Prepositions

Prepositions in Gorwaa form a small class: just three forms. Two take a locative complement, and one takes an agentive complement. All forms precede the element they modify, and may thus be labeled prepositions.

2.4.4.1 Locative prepositions

The two most uncontroversial adpositional elements in Gorwaa are the lative ay (roughly, ‘to’) (2.222), and the ablative wa (roughly, ‘from’) (2.223). These may be used in a concrete, spatial sense, as well as extended figuratively (to describe, say,
time (2.224)). *Ay* is glossed by its English equivalent ‘to’, *wa* is glossed by its English equivalent ‘from’.

(2.222) **LATIVE PREPOSITION *AY***

```
garma ina tláy ay alú /aslaangw [20160927l74-101.22]
garmá i- Ø -na tláy ay alú
boy.LMo S.3- AUX -IMPRF go.M.PST to rear.LMo
/aslaángw
```

hut
“The boy went to the back of the hut.”

(2.223) **ABLATIVE PREPOSITION *WA***

```
garma ina tláy wa alú /aslaangw [20160927l74-101.23]
garmá i- Ø -na tláy wa alú
boy.LMo S.3- AUX -IMPRF go.M.PST from rear.LMo
/aslaángw
```

hut
“The boy went from the back of the hut.”

(2.224) **PREPOSITION *AY*** EXTENDED TO DESCRIBE TIME

```
aqo tan tlaaq ay deeloór mibeerí tám [20151202d.118]
aqo EMPH t- a =n tlaaq ay
EMPH MP- Ø =EXPECT cut.SUBJ to
deeloór mibeerí tám
days.LFr tens.LMo three
```

“They would cut until thirty days (elapsed).”

As demonstrated in the examples, these prepositions indicate motion (i.e. dynamic location). These two prepositions are commonly combined with a special set of ‘locational nouns’ in order to give more precise descriptions of static location and space (see §2.3.1.3).

### 2.4.4.2 Agentive preposition *nee*

The third peoposition of Gorwaa occurs in constructions in which the agent has been suppressed from the argument structure of the verb, and serves to re-
introduce an agent as an onlique argument. It is glossed by its English equivalent 'by'.

(2.225) **AGENTIVE PREPOSITION NEE**

danú kun tleehhiit née ba’aari [20131108 b_20150725j.3]
danú t- ng- u- Ø -n tleehhiit honey.LM0 MP- A.3- P.M- AUX -EXPECT make.SUBJ née ba’aarír
by bees.LFR

“Honey is made by bees.”

2.4.5 The coordinative conjunction

The coordinative conjunction *nee* is used to connect constituents such as NPs (2.226), as well as adjectives (2.227). Instances of it connecting clauses in the same manner is not present. This may be due to the occurrence of morphology which can express the concepts of simultaneity and consecutiveness (see §2.4.2.5). *Nee* is glossed by its English equivalent ‘and’.

(2.226) **COORDINATIVE CONJUNCTION NEE: COORDINATING TWO NPS**
tunáy ngu lowa kón – garí – tunáy née naanagi [20150808a.43]
tunáy ng- u- Ø lowa kón dried.honey.LM0 A.3- P.M- AUX very have.M.PRES gár -í tunáy née naanagitá
thing.LFR -DEM1 dried.honey.LM0 and larvae.LFR

“It has lots of dried honey, this - dried honey and larvae.”

(2.227) **COORDINATIVE CONJUNCTION NEE: COORDINATING TWO ADJECTIVES**
hayoo kin /awakw née bo/abò/ [20151021c.443]
hayoo t- ng- i- Ø -n /awakw feathers.LNØ MP- A.3- P.N- AUX -EXPECT white.N.Pl née ~Red~ bò/
and ~ATTEN~ black.N.Pl.EMPH

“the feathers will be white and blackish”

2.5 Constituents

The following subsection is concerned with words or word groupings which act as a single unit within the structured hierarchy of the larger clause. Following the
presentation of constituent order in main clauses, this subsection will treat verb phrases, noun phrases, adpositional phrases, and comparatives.

2.5.1 Constituent order in main clauses

Basic constituent order in pragmatically neutral clauses is Subj. Obj. Sel V, where:

Subj. = Subject
Obj. = Object
P = Patient
Sel = Selector (glossed here as ProObj and =Imprf)
V = Verb

(2.228) BASIC CONSTITUENT ORDER

\[ \text{garmà} \text{ baahaár ng- a-} \emptyset \text{-na taáhh} \]
boy.LM0 hyaena.LFR A.3- P.F- AUX -IMPRF hit.M.PST

“The boy hit the hyaena.”

2.5.2 Verb phrase

Within the VP, the selector always occurs to the left of the lexical verb.

(2.229) SELECTOR ALWAYS OCURRS TO THE LEFT OF THE LEXICAL VERB

a. \[ \text{ani ma'aáy i waáh} \] [20160120q.48]
\[ \text{ani} \quad \text{ma'aáy} \emptyset \text{-i-} \emptyset \text{waáhh} \]
\[ \text{PRO1SG} \quad \text{water.LN∅} \text{A.P-} \text{P.N-} \text{AUX} \text{drink.PRES} \]
“I drink water.”

b. \[ \text{ani a hhayút [...]} \] [20150727.30]
\[ \text{ani} \quad \emptyset \text{-} \emptyset \text{hhayút} \]
\[ \text{PRO1SG} \quad \text{S.P-} \text{AUX} \text{travel.PRES} \]
“I am travelling [...]”

The only free elements obligatory to the VP are the selector (which, itself is composed of a series of dependent affixes) and the lexical V. Clauses in imperative mood lack a selector.

VPs may feature incorporated nouns, or encapsulated nouns.
2. A grammatical sketch of Gorwaa

Incorporated nouns are located between the selector and the lexical verb, but do not exhibit linker morphology (as do ‘encapsulated’ forms):

(2.230) **INCORPORATED NOUN SLEE**

\[ uga \text{slee-}gás \quad [20161119f.34] \]
\[ \emptyset-\quad u-\quad \emptyset \quad -(g)\text{a} \text{slee-}gás \]
A.P-\quad P.M-\quad AUX-\quad PRF \text{cow-} \text{kill.2SG.PST} \\
“You(M) killed a cow on him.” (lit. ‘You cow-killed him.’)

According to the literal translation given, incorporated patients appear to be non-specific (which would be consistent with the semantics of incorporated nouns in many languages).

Nouns may also be ‘encapsulated’ (so named by Wifred H. Whiteley (1958: 31)), where a patient occurs to the immediate left of the lexical V, but unlike incorporated nouns, retains a specific reading. Encapsulated nouns always show a linker:

(2.231) **ENCAPSULATED NOUN SLEE**

\[ \text{aní a sleér diíf} \quad [20160927l222-228.26] \]
\[ \text{aní-} \quad a- \quad \emptyset \quad \text{sleér} \quad \text{diíf} \]
PRO1SG-\quad S.1-\quad AUX-\quad \text{cow.FR} \quad \text{hit.1SG.PST} \\
“I hit the cow.”

The vast majority of VP adverbs occur in one of two patterns. First, a set consistently occurs directly to the left of the V:

(2.232) **VP ADVERBS CONSISTENTLY OCCURRING TO THE LEFT OF THE LEXICAL VERB**

a. \[ [...] \text{i mak maahhát} [...] \quad [20131108b_20150725j.179] \]
\[ \text{i-} \quad \emptyset \quad \text{mak} \quad \text{maahhát} \]
S.3-\quad AUX-\quad somewhat \text{crouch.down.F.PRES} \\
“She crouches down somewhat.”

b. \[ [...] \text{aga qaro hhaáf} \quad [20150817d.161] \]
\[ \emptyset-\quad a-\quad \emptyset \quad -(g)\text{a} \text{qaro} \text{hhaáf} \]
A.P-\quad P.F-\quad AUX-\quad PRF \text{already} \text{lay.out.1.PST} \\
“I’ve already lain it out.”
2. A grammatical sketch of Gorwaa

Many of the VP adverbs which occur in this position are those of degree (i.e. affecting the intensity of the verb), or those of aspect (i.e. affecting the temporal consistency of the verb). Other VP adverbs are less loosely bound, often occurring to the right of the V, or possibly at the very beginning of the clause.

(2.233) **Adverbs occurring clause-initially, or clause-finally**

a. *hindí u tu/űm* [...] [20150808a.49]
   
   hindí ０- u- ０ tu/űm
   now  A.P-  P.M- AUX  dig.out.PRES
   “Now I am digging it out [...]”

b. *ani aqo hardáh hindí* [20151021c.139]
   
   ani ０- ０ -a =qo hardáh hindí
   Pro1Sg  S.P-  AUX  -PRF =EMPH arrive.1.PST  now
   “I have arrived now.”

**2.5.3 Noun phrase**

When modified, the noun occurs first (2.234), except when modified by the quantifier *umó*, which itself precedes the noun it modifies (2.235). Nouns quantified by *umó* obligatorily occur with the topic marker.

(2.234) **Noun-modifier order**

*garmaqá’ wák tlarantleér* [...] [20160927i124-128.12]

garmá -qá’ wák ~Red~  tleér
boy  -DEM3 one ~AMP~  tall.M
“That one very tall boy [...]”

(2.235) **Special modifier-noun order for umó**

* [...] umó kurkoo* [...] [20151202d.158]

umó  kurkú  =oo
every year.LMk  =TOP
“[...] every year [...]”

Greenberg’s Universal 20 states that, if demonstratives, numerals, and descriptive adjectives follow the noun, that they should either occur in the order listed, or in the exact opposite order (i.e. descriptive adjective, numeral, demonstrative). Gorwaa
complies with this universal, in that these elements can occur in the first of these orders (demonstrative, numeral, descriptive adjective) only (2.236).

(2.236) **DEMONSTRATIVE-NUMERAL-DESCRIPTIVE ADJECTIVE ORDER**

`moro'osi tám afahhamít` [20131027_20150725c.89]

`moro'ó -si tám afahhamít`

things.LMo -DEM2 three important.M.Pl

“These three important things.”

### 2.5.4 Adpositional phrase

The two most uncontroversial adpositional elements in Gorwaa are the lative *ay* (roughly, ‘to’), and the ablative *wa* (roughly, ‘from’). These may be used in a concrete, spatial sense, as well as extended figuratively (to describe, say, time).

(2.237) **ADPOSITIONS**

a. `nire ki/á’ ay dirí` [20151202d.136]
   `ni -re ki/ -á’ ay`
   `VENT -CONSEC return.2 -2Pl to`
   `dir -í`
   `place.LFR -DEM1`
   “And you(pl.) returned to this place.”

b. `ina oó’ wa gawaqá’ [...]` [20131108b_20150725j.78]
   `i- ō -na oó’ wa gawá -qá’`
   `S.3- AUX -IMPRF say.M.PST from on -DEM4`
   “He said from on there [...]”

c. `aqo tan tlaaq ay deelór mibeerí tám` [20151202d.118]
   `aqo t- ō -n tlaaq ay r`
   `EMPH MP- AUX -EXPECT cut.SUBJ to`
   `deeló mibeerí tám`
   `days.LFR tens.LMo three`
   “They would cut until thirty days (elapsed).”

As demonstrated in the examples, these forms precede the element they modify, and may thus be labeled prepositions.
2. A grammatical sketch of Gorwaa

Prepositions are commonly combined with a special set of ‘locational nouns’ in order to give more precise descriptions of space. Such preposition-locational noun strings can run up to 3 elements long, and exhibit restrictions on ordering and co-occurrence. For more on locational nouns, see §2.3.1.3.

The lative *ay* is undoubtedly related to the adverbial suffix, -*i*. -*i* occurs consistently in dative-shift constructions, in which a noun which may otherwise be expressed as an adjunct is promoted to an object of the verb in a now double-object construction (compare (2.238) (non-dative-shift) with (2.239) (dative-shift)). In this new dative-shift construction, -*i* encliticises to the end of the noun which would have served as the direct object in the non-dative-shift construction.

(2.238) **DITRANSITIVE (DOUBLE-OBJECT) CONSTRUCTION: NO DATIVE-SHIFT**

*mwalimu kitaabu ngwa hariís dír desí*  [20160928c.44]
mwalimú kitaabú ng- u- Ø - (g) a hariís
dír desír
to girl.LFR
“The teacher brought the book to the girl.”

(2.239) **DITRANSITIVE (DOUBLE-OBJECT) CONSTRUCTION: DATIVE-SHIFT**

*mwalimu desi ngina kitaabuwi hariís*  [20160927123-29.3]
mwalimú desi ng- a- Ø - na
teacher.LMo girl.LFR A.3- P.F- AUX -IMPRF
kitaabú -i hariís
book.LMo -LAT bring.M.Pst
“The teacher brought the girl the book.”

This enclitic form should not be viewed as a case-marker in Gorwaa, as the noun to which it affixes is not the dative (recipient or destination) noun. Perhaps the most explicit role of -*i* is to identify the double-object clause as one which has undergone dative-shift.
2. A grammatical sketch of Gorwaa

2.5.5 Comparatives

Comparative constructions in Gorwaa place the item being compared to the standard (inós in (2.240) below) in an adjectival copula construction, followed by the quality by which comparison is being made (in this case tleer), followed by the comparative marker ta, and then the standard (in this case garma). The standard occurs with topic morphology.

(2.240)       Comparative construction
inós ka tleer ta garmaawoo  [20160927m.1]
inós  t- ng- a- Ø tleer ta garmá =oo
she    MP- A.3- P.F- AUX tall.F COMP boy.LM0 =TOP
“she is tall compared to the boy.”

As may be seen, the construction in Gorwaa features comparative deletion – obligatory ellipsis in the clause featuring the standard (the elided material (underlined) in (2.240) above is inós ka tleer ta garmaawoo ku tleér ‘she is taller than the boy is tall’).

2.6 Pragmatically marked structures

Pragmatically marked structures convey salient information structure (focus, contrast, topicalization), as well as negation, and non-declarative speech acts. Each will be examined below.

2.6.1 Focus, contrast, and topicalization

An array of different morphosyntactic tools exist for the signaling of salient information structure. First, use of demonstrative (determiners and pronouns) and indefinites (determiners) will be examined. Second, comment will be made on
2. A grammatical sketch of Gorwaa

‘topic’ morphology. Third, dislocation and special constituent orders will be described. The subsection will conclude with comment on clefts and pseudo-clefts.

2.6.1.1 Use of demonstratives and indefinites

Perhaps the most common markers of pragmatic status are the series of demonstratives – suffixes which attach to nouns, or independent pronouns. For more comment on the forms of demonstrative determiners, see §2.4.1.2. For more on demonstrative pronouns, see §2.4.3.1. Pragmatically, these forms are often used to give nouns a definite reading.

(2.241)  

**DEMONSTRATIVE SUFFIX -dá’**

[...] hee i kaáhh, aqo gofaangwá’ oo tlaqati

heé  i-  ø  kaáhh  ø  =qo
person.LMo  S.3-  AUX  be.absent.M  AUX  =EMPH
gofaángw  -dá’  oo  tlaqatí
buck.LMo  -DEM4  ANA.M  antelope.LFr

“[...] there was no one to bee seen, it was that antelope buck.” (i.e. the same buck that the old woman had met earlier in the story)

(2.242)  

**DEMONSTRATIVE PRONOUN koqá’**

A tsá/a/án. Koqá’ na/áy deti nguna tsaát [...]  

i-  ø  -(g)a  ~Red~  tsá/añ  koqá’
S.3-  AUX  ~PRF  ~PLUR~  climb.M  PRODEM3.M
na/áy  detitá  ng-  u-  ø  -na tsaát
child.LMo  tree.sp.LFT  A.3-  P.M-  AUX  ~IMPRF  cut.M.PST

“He is climbing. That one, cut a seed pod of the deti tree [...]” (i.e. The antagonist is climbing up the tree. The protagonist – koqá’ (lit. that one) – cut a seed pod.)

In addition to the demonstrative determiners, which give nouns a definite reading, there is also an indefinite suffix, which renders the noun in question not-yet-identified (2.243). For more on the forms of the indefinite determiner, see §2.4.1.3.
2. *A grammatical sketch of Gorwaa*

(2.243) **INDEFINITE SUFFIX** -ko

\[
\begin{array}{c}
tana hardáh dir xa'anó yariir \\
\text{t- Ø -na hardáh dir xa'anó -ko}
\end{array}
\]

MP- AUX -IMPRF arrive.PST at tree.LMo -INDEF.M

*yariir*

big.EMPH

“They arrived at a *great* tree.” (i.e. a tree that is being mentioned for the first time, and one that will feature prominently in the story).

2.6.1.2 ‘Topic’ morphology

An enclitic exists to background information. In this sketch, it will be referred to as the ‘topic’ marker. The form is =oo, =ee if the noun to which it attaches ends in RPA.

(2.244) **TOPIC MARKER**

a. \[
\begin{array}{c}
[...] matlatleer oo ya ta /amiín \\
\text{matlatléér =oo ya t- Ø ~Red~ /amiín}
\end{array}
\]

morning.LFr =Top thus MP- AUX ~PLUR~ cry.Pst

“In the morning it was thus: they cried.”

b. \[
\begin{array}{c}
idosiyee ugwa gwét neer awu \\
\text{idór -si =ee Ø- u- Ø -(g)a}
\end{array}
\]

manner.LFr -DEM3 =Top A.P- P.2SG.M- AUX -PRF

gwét neer awú

free.2.PST with bull.LMo

“In this way you freed with a bull.”

As can be seen from the last example, the ‘topic’ marker can join to a demonstrative clitic already attached to the head noun.

The term ‘topic’ marker is not particularly satisfactory for this form, as it occurs in several, seemingly disparate morphosyntactic environments, including on the object of comparison (2.245), on nouns quantified by umó (2.246), as part of the negative morphology for nominals (2.247), and on polar questions (2.248).
2. A grammatical sketch of Gorwaa

(2.245) **TOPIC MARKER ON THE OBJECT OF COMPARISON**
inós ka tleer ta garmawoo [20160927m.1]
inós t- ng- a- ∅ tleer ta
PRO.3SG MP- A.3- P.F- AUX tall.F COMP
garmá =oo
boy.LM0 =Top
“She is tall compared to the boy.”

(2.246) **TOPIC MARKER ON NOUNS QUANTIFIED BY UMÓ**
[... umó qoomaroo [20150730.74]
umó qoomár =oo
every time.LFR =Top
“[...] all the time”

(2.247) **TOPIC MARKER AS PART OF NEGATIVE MORPHOLOGY ON NOUNS**
a tsir/ooweeqá’ garí [20151021c.354]
∅ tsir/oór =ee =(a)kágár -í
AUX birds.LFR =Top =NEG thing.LFR -DEM1
“this is not a type of bird”

(2.248) **TOPIC MARKER AS PART OF POLAR QUESTIONS**
[...] gár a idór tsir/iroqó [20151021c.369]
gár ∅ idór tsir/ir =oo ~√
thing.LFR AUX manner.LFR bird.LFR =Top -Q
“[...] the thing is like a bird?”

2.6.1.2 Dislocation

This section will first treat left- and right- dislocation, then repetition.

**Left- and right-dislocation**
Left- (2.249) and right-dislocation (2.250) are both commonly employed special constituent orders. Pragmatically, dislocated elements are focused. Left-dislocation is not fronting, because there is a referential pronoun in the main clause.

(2.249) **LEFT-DISLOCATION**
desirqá’ aní ana gaás [20131108b_20150725j.83]
desír -qá’ aní ∅- a- ∅ -na
girl.LFR -DEM3 PRO1SG A.P- P.F- AUX -IMPRF
gaás kill.1.PST
“That girl, I killed her.”
2. A grammatical sketch of Gorwaa

(2.250) **Right-dislocation**

\[
\begin{align*}
\text{da'ayumiít da'aangoo} & \quad \text{[20150727.21]} \\
\emptyset - \emptyset \hspace{1cm} \text{da'ayumiít} & \quad \text{da'aängw} = \emptyset \\
\text{S.P.- AUX fear.1 PRES} & \quad \text{singing.LMo TOP}
\end{align*}
\]

“*I am afraid of singing.*"

**Repetition**

A variant of dislocation, a noun may be repeated. This too seems to function as a pragmatic focus operation. Sometimes, it even appears that more than an NP may be repeated, as in (2.252), where the form *nee* is doubled as well as the noun *danú*.

(2.251) **Repetition of NP dowí**

\[
\begin{align*}
\text{aní dowí oo dir afeé uruwa u slaa'aká dowí} & \quad \text{[20131108b_20150725j.123]} \\
\text{aní dó'} & \quad \text{-í oo dir afeé uruwár} \\
\text{PRO1SG house.LMo -DEM1 PROMod.M} & \quad \text{at Beside road.LFr} \\
\emptyset - u - \emptyset \hspace{1cm} \text{slaá'} & \quad \text{=aká dó'} - \text{-í} \\
\text{A.P.- P.M- AUX like.1 =NEG.PRES house.LMo} & \quad \text{-DEM1}
\end{align*}
\]

“This house beside the road I do not want – this house.”

(2.252) **Repetition of PP danú nee**

\[
\begin{align*}
\text{danú nee an al/a/ayaan danú nee} & \quad \text{[20131108b_20150725j.38]} \\
\text{danú} & \quad \text{nee} \hspace{1cm} \emptyset - a - \emptyset - n \\
\text{honey.LMo with A.P.- P.F- AUX -EXPECT} & \quad \text{al/a/áy} - \text{aan danú nee} \\
\text{eat.together.1-1PL.SBJ honey.LMo with} & \quad \text{honey.LMo with}
\end{align*}
\]

“With honey we would eat together – with honey!”

2.6.1.3 Clefts and pseudo-clefts

The two cleft-constructions identified in Gorwaa thus far are the it-cleft construction, as well as the pseudo-cleft construction. it-cleft constructions (2.253) feature the auxiliary, followed by an NP, followed by a dependent clause. The NP following the auxiliary is generally in focus. Pseudo-cleft constructions (2.254) feature a wh-relative clause, an auxiliary, and an NP. The NP following the clause is in focus.
2. A grammatical sketch of Gorwaa

(2.253) **IT-CLEFT CONSTRUCTION**

```
hindi a /ayto'o an dooslaan [DSC_5354_20150705b.69.6]
hindi ∅ /ayto'oɔr ∅- a- ∅ -n
now AUX corn.ŁFR A.1- P.Ł- AUX -EXPECT
doosl -aan
farm.1 -1PL.SUBJ
```

“Now, it is corn that we farm.”

(2.254) **PSEUDO-IT-CLEFT CONSTRUCTION**

```
gär ni slaa a fa/aɑ [20160927159-158.39]
gär ni- ∅ slaa ∅
thing.ŁFR Dep.1SG- AUX want.1SG.SUBJ AUX
fa/aɑr
ugali.ŁFR
```

“What I want is ugali.”

2.6.2 Negation

Negation is accomplished in Gorwaa by the enclitic =ká(ng). The following provides an overview of verbal negation, nominal negation, and clausal negation (in Gorwaa, derivational negation (such as the un- in English unhappy), has not been identified). Finally, a creative usage of the enclitic =ká(ng) is described.

2.6.2.1 Verbal negation

Negative clauses are marked by the negative clitic =káŋ (often reduced to =ká).

This clitic attaches to verb roots only if the roots have been extended by the suffix -a (in the present tense) and -i (in the past tense).

(2.255) **VERBAL NEGATION IN THE PRESENT TENSE**

```
tam motloo ngi xu'aká [20131108a.191]
tam motloo in- ∅ xu'- ∅ -aká'
even tomorrow A.3- P.Ł- AUX know.Ł -NEG.PRES
```

“She doesn’t even know tomorrow.” (lit. she isn’t thinking about tomorrow)
2. A grammatical sketch of Gorwaa

(2.256) **Verbal negation in the past tense**

inós tunáy ngu xu’iká’ [20150808a.147]

<table>
<thead>
<tr>
<th>PRO3SG</th>
<th>ng-</th>
<th>u-</th>
<th>∅</th>
</tr>
</thead>
<tbody>
<tr>
<td>dried.honey.LMo</td>
<td>A.3-</td>
<td>P.M-</td>
<td>AUX</td>
</tr>
</tbody>
</table>

xú’-iká’
know.F - NEG.PST

“She didn’t know of dried honey.”

2.6.2.2 Nominal and adjectival negation

On nouns, noun phrases, and adjectives the negative clitic =ká(ng) attaches to forms extended with the topic clitic.

(2.257) **Negation of N tsir/oo**

gár a tsir/iroo ká ge [20151021c.376]

gár -i ∅ tsir/iroór =ee =ká ge
thing.LFr -DEM1 AUX bird.LFr =TOP =NEG.EMPH

“This thing isn’t a type of bird.”

(2.258) **Negation of NP dirí**

/aatsoroók a diriheeká [20150727.17]

/aattoór -ók ∅ dír -i =ee =ká
playing.LFr -POSS2SG AUX place.LFr -DEM1 =TOP =NEG

“Your playing is not here.”

(2.259) **Negation of Adjective boo/ [...] ka boo/EEKá [...] [20150818a.13]**

t- ng- a- ∅ boo/ =ee =ká
MP- A.3- P.F- AUX black.F =TOP =NEG

“[...] it is not black [...]”

2.6.2.3 Clausal negation

Entire clauses may be negated, in which case the morphology attaches to the last element in the clause.

(2.260) **Clausal negation**

Babati sawemawóos a idór oo Dawareeká [20150727.64]

Babati.LFr sawemá -ós ∅ idór
Babati.LFr distance.LN∅ -POSS3SG AUX manner.LFr
oo Dawár =ee =ká
ANA.M Dawár.LMo =TOP =NEG

“The distance of Babati isn’t like the distance of Dawár.”
2. A grammatical sketch of Gorwaa

2.6.2.4 Creative use of the negative

Negative morphology may be applied to a constituent not to negate it, but to emphasize its superlative or astonishing nature (2.261).

(2.261) NEGATIVE MORPHOLOGY TO EMPHASIZE A SUPERLATIVE QUALITY

gadá’ a uru’umisooaká [20150726d.35]
gár -dá’ Ø uru’umís =oo =aká
thing.LFr -DEM4 AUX ululation.LMo =Top =Neg
“That thing was astounding ululation.” (lit. not ululation)

The form kangokang is a reduplication of two negative clitics, to mean something like ‘astonishing’ or ‘unbelievable’.

(2.262) KANGOKANG: ‘ASTONISHING’ OR ‘UNBELIEVABLE’
a kangokang [20150818a.154]
Ø kangokang
AUX astonishing
“it’s astonishing”

2.6.3 Non-declarative speech acts

Below is a description of polar questions, information questions, and imperatives.

2.6.3.1 Polar questions

Polar questions are usually marked by the particle xáy, which occurs as the first element in the phrase.

(2.263) POLAR QUESTION PARTICLE XÁY

a. xáy, do’u tlehanah [20160120q.9]
xáy dó’ Ø- u- Ø
PolarQ house.LMo A.P- P.M- AUX
tleéhh -aán -å
make.1-1Pl -Q.PRES
“Are we making a house?”
2. A grammatical sketch of Gorwaa

b.  
  
xáy, sukaarí aga qasî bará chayiroô  
  xáy  sukaarîr  Ø- a-  Ø  -(g)a  
PolarQ sugar.LFr  A.P-  P.F-  AUX  -PRF  
qás -î  bará chayîr =oo  
put.2 -Q.PST in  tea.LFr  =TOP  
“Did you put sugar in the tea?”

2.6.3.2 Information questions

Information question words are predicates in copular constructions (2.264). For ‘why’ questions, question morphology is prefixed to the selector (2.265).

(2.264)  
INFORMATION QUESTIONS ARE PREDICATES IN COPULAR CONSTRUCTIONS

a.  
  hareér a ma’â  
  hareérr  -î  Ø  ma’â  
woman.LFr  -DEM1  AUX  who  
“Who is this woman?”

b.  
  tsir/ír hatlá’ a milâ  
  tsir/ír  hatlá’  Ø  milâ  
bird.LFr  other  AUX  what  
“What is the other bird?”

c.  
  hhayumarók a daqalá  
  hhayumár  -ók  Ø  daqalá  
journey.LFr  -POSS2SG  AUX  when  
“When is your journey?”

d.  
  dirí a dilâ  
  dir  -î  Ø  dilâ  
place.LFr  -DEM1  AUX  where  
“What is this place?”

(2.265)  
‘WHY’ QUESTIONS: QUESTION MORPHOLOGY IS PREFIXED TO THE SELECTOR

fu’unay misa bo/eemís  
fu’unáy  m-  s-  Ø-  i-  Ø  -(g)a  
meat.LNØ  Q-  REASON-  A.P-  P.N-  AUX  -PRF  
bo/eemís  blacken.2.PST  
“Why did you blacken the meat?”
2. A grammatical sketch of Gorwaa

In why questions in which the state of affairs seems unexpected or is surprising in some way, the adverb *bere* may be used as a stronger alternative to question morphology. A possible English translation is ‘whyever’.

(2.266) *BERE: ‘WHYEVER’*

\[
\text{do’-í } \text{bere } t-n g- u- } \emptyset \text{ lowna úr}
\]

dowí bere ku lowa úr[20150817.d.491]

house.LMo -DEM 1 whyever MP- A.3- P.M- Aux very úr

big,M

“Why is this house so damn big?”

2.6.3.3 Imperatives

Imperatives are formed by a group of suffixes added to the verb. Most imperatives do not feature a selector, though the two negative imperatives are used with the prohibitive selector *ma*.

<table>
<thead>
<tr>
<th>Meaning</th>
<th>Sg</th>
<th>Pl</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imperative</td>
<td>-∅</td>
<td>-e’</td>
</tr>
<tr>
<td></td>
<td>oo’ ‘speak!’</td>
<td>oo’e’ ‘speak!’ (many addressees)</td>
</tr>
<tr>
<td>Imperative with object</td>
<td>-ee(k)</td>
<td>-aak</td>
</tr>
<tr>
<td></td>
<td>oo’ee ‘say it!’</td>
<td>oo’aaak ‘say it!’ (many addressees)</td>
</tr>
<tr>
<td>Imperative towards the speaker (ventive)</td>
<td>-áng</td>
<td>-aré’</td>
</tr>
<tr>
<td></td>
<td>oo’áng ‘speak to me!’</td>
<td>oo’aré’ ‘speak to me!’ (many addressees)</td>
</tr>
<tr>
<td>Imperative towards the speaker (ventive) with object</td>
<td>-ang</td>
<td>-are’</td>
</tr>
<tr>
<td></td>
<td>oo’ang ‘say it to me!’</td>
<td>oo’are’ ‘say it to me’ (many addressees)</td>
</tr>
<tr>
<td>Negative imperative</td>
<td>ma -aar</td>
<td>ma –ara’</td>
</tr>
<tr>
<td></td>
<td>ma oo’aar ‘don’t speak!’</td>
<td>ma oo’ara’ ‘don’t speak!’ (many addressees)</td>
</tr>
</tbody>
</table>
2. A grammatical sketch of Gorwaa

So-called ‘first person imperatives’, or hortatives, occur as verb forms marked with 1st person plural morphology, and no selector.

(2.267) **HORTATIVES: 1st PERSON PL MORAPOHMY ON THE V, NO SELECTOR**

\[ tla\text{w}\text{án} \]
\[ tl\text{áw} \text{-áán} \]
\[ \text{go.1 -1PL} \]
\[ \text{’let’s go’} \]

2.7 Clause combinations

Below provides an overview of relative clauses, as well as coordination.

2.7.1 Relative clauses

Relative clauses in Gorwaa are postnominal, that is, the relative clause follows the head noun it modifies. The head noun shows the linker. Mous (1993: 281) notes that conditional and prohibitive mood prefixes, as well as imperfect, expectative, and consecutive aspect suffixes cannot be used within relative clauses.

(2.268) **SUBJECT RELATIVE CLAUSES**

a. \[ \text{garmá baahaa nga taahh} \]
\[ \text{garmá baahaár ng- a-} \text{∅ -(g)a} \]
\[ \text{boy.LMo hyaena.LFR A.3- P.F- AUX -PRF} \]
\[ \text{taahh} \]
\[ \text{hit.M.SUBJ} \]
\[ ‘The boy who hit the hyaena.’ \]

b. \[ \text{desír baahaa nga tahlh} \]
\[ \text{desír baahaár ng- a-} \text{∅ -(g)a} \]
\[ \text{girl.LFR hyaena.LFR A.3- P.F- AUX -PRF} \]
\[ \text{tahh} \]
\[ \text{hit.F.SUBJ} \]
\[ ‘The girl who hit the hyaena.’ \]
2. A grammatical sketch of Gorwaa

c.  *na/i’í baahaa nga diifiyi’*  [20160928c.36]
    na/i’í   baahár   ng-   a-   Ø  -(g)a
    children.LNØ  hyaena.LFR  A.3-  P.F-  AUX  -PRF
    diif    -iyi’
    hit.N   -N.PST
    ‘The children who hit the hyaena.’

d.  *anír kitaabu ngwa hariis dir garmá*[20161003.7]
    anír    kitaabú    ng-    u-    Ø   -(g)a
    PRO1SG  book.LM0  A.3-  P.M-  AUX  -PRF
    hariis  dir  garmá
    bring.1.SUBJ  to  boy.LM0
    ‘I(F) who brought the book to the boy.’

e.  *kuúng oo kitaabu ngwa hariis dir garmá*[20161003.8]
    kuúng   oo    kitaabú    ng-    u-    Ø   -(g)a
    PRO2SGM  ANA.M  book.LM0  A.3-  P.M-  AUX  -PRF
    hariis  dir  garmá
    bring.2.SUBJ  to  boy.LM0
    ‘You(M) who brought the book to the boy.’

f.  *garmá a mamaa/*  [20160928c.26]
    garmá    i-    Ø   -(g)a  mamaa/
    boy.LM0  S.3-  AUX  -PRF  be.ill.M.SUBJ
    ‘The boy who was ill.’

g.  *desír a mamaa/*  [20160928c.27]
    desír    i-    Ø   -(g)a  mamaa/
    girl.LFR  S.3-  AUX  -PRF  be.ill.F.SUBJ
    ‘The girl who was ill.’

Positions on the relativizability hierarchy which can be relativized in Gorwaa range from subject (2.269), to direct object (2.270), to indirect object (2.271), to oblique (2.272).

(2.269)  *SUBJECT RELATIVE CLAUSE (B) VERSUS INDEPENDENT CLAUSE (A)*

a.  *garma baahaár ngina taáhh*  [20160921i.1]
    garma    baahaár    ng-    a-    Ø   -na
    boy.LM0  hyaena.LFR  A.3-  P.F-  AUX  -IMPRF
    taáhh
    hit.M.PST
    ‘The boy hit the hyaena.’
b. *garmá baaha nga taahh* [20160928c.32]
garmá baahaár ng- a- Ø -(g)a
taahh
hit.M.Subj
‘The boy who hit the hyaena.’

(2.270) **DIRECT OBJECT RELATIVE CLAUSE (B) VERSUS INDEPENDENT CLAUSE (A)**
a. *mwalimu na/i’i ngina kitaabwí hariís* [20160927123-29.5]
mwalimú na/i’í ng- i- Ø -na
teacher.M.O children.LNØ A.3- P.N- AUX -IMPRF
kitaabú -i hariís
book.L.O -LAT bring.M.PST
‘The teacher brought the children the book.’

b. *kitaabú mwalimu a hariís dír na/i’i* [20160928c.49]
kitaabú mwalimú i- Ø -(g)a
hariís dír na/i’í
bring.M.PST to children.LNØ
‘The children to whom the teacher brought the book.’

(2.271) **INDIRECT OBJECT RELATIVE CLAUSE (B) VERSUS INDEPENDENT CLAUSE (A)**
a. *mwalimu na/i’i ngina kitaabwí hariís* [20160927123-29.5]
mwalimú na/i’í ng- i- Ø -na
teacher.L.O children.LNØ A.3- P.N- AUX -IMPRF
kitaabú -i hariís
book.L.O -LAT bring.M.PST
‘The teacher brought the children the book.’

b. *na/i’í mwalimu a kitaabwí hariís [...]* [20160928c.47]
na/i’í mwalimú i- Ø -(g)a
children.LNØ teacher.L.O MP.S3-AUX -PRF
kitaabú -i hariís
book.L.O -VÉNT bring.M.PST
‘The children to whom the teacher brought the book [...]’

(2.272) **OBLIQUE RELATIVE CLAUSE (B) VERSUS INDEPENDENT CLAUSE (A)**
a. *garma tla/anó nguna kwaáhh bará qaymoór* [20161004b.1]
garmá tla/anó ng- u- Ø -na
kwaáhh bará qaymoór
throw.M.PST in field.LFR
‘The boy threw the stone into the field.’
2. A grammatical sketch of Gorwaa

b. *qaymoór garma a tla/anowi kwaáhh* [20161004b.2]

<table>
<thead>
<tr>
<th>qaymoór</th>
<th>garma</th>
<th>a</th>
<th>tla/anowi</th>
<th>kwaáhh</th>
</tr>
</thead>
<tbody>
<tr>
<td>field.LFR</td>
<td>boy.LM₀</td>
<td>MP.S.3-</td>
<td>AUX</td>
<td>-PRF</td>
</tr>
</tbody>
</table>

'the field into which the boy threw the stone.'

In each case, the relativized NP is conspicuously absent from the relative clause, including in any sort of agreement on the selector. It is this 'gapping' phenomenon which allows case recoverability from the relative. Subject agreement (on the verb of the relative clause) indicates gender of the subject.

(2.273) **SUBJECT RELATIVE CLAUSE (B) VERSUS INDEPENDENT CLAUSE (A)**

a. *garma baahaa nga taáhh* [20160921i.1]

<table>
<thead>
<tr>
<th>garma</th>
<th>baahaa</th>
<th>nga</th>
<th>a</th>
<th>na</th>
</tr>
</thead>
<tbody>
<tr>
<td>boy.LM₀</td>
<td>hyaena.LFR</td>
<td>A.3-</td>
<td>P.F-</td>
<td>AUX</td>
</tr>
</tbody>
</table>

'the boy hit the hyaena.'

b. *garmá [∅ baahaa nga taahh]* [20160928c.32]

<table>
<thead>
<tr>
<th>garmá</th>
<th>[∅ baahaa</th>
<th>nga</th>
<th>a</th>
<th>-na</th>
</tr>
</thead>
<tbody>
<tr>
<td>boy.LM₀</td>
<td>[boy]</td>
<td>hyaena.LFR</td>
<td>A.3-</td>
<td>P.F-</td>
</tr>
</tbody>
</table>

'the boy who hit the hyaena.'

(2.274) **OBJECT RELATIVE CLAUSE (B) VERSUS INDEPENDENT CLAUSE (A)**

a. *mwaliimu na/i’í nga kitaabuwi hariís* [20160927123-29.5]

<table>
<thead>
<tr>
<th>mwaliimu</th>
<th>na/i’í</th>
<th>nga</th>
<th>i</th>
<th>na</th>
</tr>
</thead>
<tbody>
<tr>
<td>teacher.LM₀</td>
<td>children.LNØ</td>
<td>A.3-</td>
<td>P.N-</td>
<td>AUX</td>
</tr>
</tbody>
</table>

'he teacher brought the children the book.'

b. *na/i’í [mwaliimu ∅ a kitaabuwi hariís] [...]* [20160928c.47]

<table>
<thead>
<tr>
<th>na/i’í</th>
<th>[mwaliimu</th>
<th>∅</th>
<th>i</th>
<th>-na</th>
</tr>
</thead>
<tbody>
<tr>
<td>children.LNØ</td>
<td>teacher.LM₀</td>
<td>[children]</td>
<td>MP.S3-AUX</td>
<td>-PRF</td>
</tr>
</tbody>
</table>

'the children to whom the teacher brought the book [...]'
2. A grammatical sketch of Gorwaa

2.7.2 Coordination

As mentioned above (see §2.4.5), the conjunction nee is used solely to coordinate constituents such noun phrases (2.275) and adjectives (2.276). For verbal concepts, a more complex interplay of mood and morphological marking achieves a similar effect of simultaneity (2.277) and consequitiveness (2.278).

(2.275) Coordination conjunction nee coordinating two NPs

[...] na/a’ín nee tiyay’ín  [20131027_20150725c.31]
na/á’-ín nee tiyá- ‘ín
children.LNØ-Poss.3Pl and wives.LNØ -Poss.3Pl
“[...] their children and their wives”

(2.276) Coordination conjunction nee coordinating two adjectives

hayoo kin /awakw nee bo/abò/  [20151021c.443]
hayoó t- ng- i- Ø -n /awakw
feathers.LNØ MP- A.3- P.N- AUX -EXPECT white.N.Pl
nee ~Red~ bò/ and ~ATTEN~ black.N.Pl.EMPH
“the feathers will be white and blackish”

(2.277) Background aspect suffix -wa marks simultaneity

/aatsoo kwa hhe’eés pernat kuná diff  [20150726d.13]
/aatsoór t- ng- a- Ø -wa hhe’eés
game.LFR MP- A.3- P.F- AUX -BACK finish.Pst
pernató t- ng- u- Ø -na diff
penalty.LMØ MP- A.3- P.M- AUX -IMPRF hit.Pst
“When the game was over, the penalties were taken.”

(2.278) Consecutive aspect suffix -re marks consequitiveness

[...] yiikwa ka húw dó’ Dodóód, koqá’ Dodó sleérós ngire húw
yiikwá t- ng- a- Ø húw dó’
cow.LNØ MP- A.3- P.F- AUX bring.Pst house.LMo
Dodoód koqá’ Dodó sleér- ós
Dodoóó.LMØ PRODEM3.M Dodoóó.LMØ cow.LFR -Poss.3SG
ng- a- Ø -re húw
A.3- P.F- AUX -CONSEC bring.M.Pst
“[...] a cow was brought to Dodoóó, and that person (i.e. that rainmaker), Dodoóó brought him the cow.”
3. The theoretical framework

3.1 Introduction

Following the sketch grammar presented in the previous chapter (which was necessarily both brief and general) the rest of this work will provide more detailed description and analysis of the Gorwaa noun. This chapter is primarily concerned with furnishing a basic description of the theoretical framework employed for analysis: Distributed Morphology (Halle & Marantz 1993, 1994). This will provide a basis for further elaboration and modification in the coming chapters.

Because Distributed Morphology (hereafter DM) is largely predicated on some model of syntax, the next section (3.2) of this chapter introduces Minimalist Syntax as the chosen model of syntax for this work. Section 3.3 provides a sample derivation of a basic English phrase using the Minimalist model. Having established a model of syntax, section 3.4 introduces DM proper. The section 3.5 summarizes and concludes.

3.2 A model of syntax

Distributed morphology is ‘distributed’ because there exists no single repository for words, their meanings, and their pronunciations in the grammar. Rather, these functions are spread (distributed) throughout different parts of the grammar. It is the syntax, broadly construed, which ties these different parts together, allowing abstract bundles of structural primitives to receive both
3. The theoretical framework

pronunciation and meaning. Because of the central role the syntax plays in this system, it is here where our introduction to DM will begin.

There exist a great range of frameworks available to linguists wishing to both represent syntactic structure, as well as conduct syntactic analysis, many of which have produced interesting and useful insight on empirical data. The framework chosen in this work is Minimalism. This is, to some degree, a choice of convenience: it is the framework with which the author is most familiar. More pertinently, it is largely within this tradition of Generative Phrase Structure Grammars (e.g. Chomsky 1995) that DM was conceived. As such, Minimalism and DM are largely compatible.

What follows is based heavily on Merchant (2014) and Adger (2002). The reader is referred to these two works if further detail is required.

To begin, a grammar is made up of two sets: a set of lexical elements, and a set of operations.

(3.1) THE GRAMMAR

<table>
<thead>
<tr>
<th>Lexical Elements</th>
<th>Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charles, young, Finch, examine, Galapagos, write, T\textsc{Present}, ...</td>
<td>Merge, Adjoin, Agree, Move</td>
</tr>
</tbody>
</table>

Each of these sets will be further examined in the subsections below.
3. The theoretical framework

3.2.1 The lexical elements

All utterances are derived from a numeration, which itself is a set of lexical elements drawn from the grammar’s larger set of lexical elements, and (possibly) a set of phrase markers, themselves the result of separate derivations\(^1\).

(3.2) **INITIAL NUMERATION FOR**: *Charles examines finches on the Galapagos*

<table>
<thead>
<tr>
<th>Lexical Elements</th>
<th>Phrase Markers {PP [on the Galapagos]}</th>
</tr>
</thead>
<tbody>
<tr>
<td>examine</td>
<td></td>
</tr>
<tr>
<td>( T_{\text{PRESENT}} ) Charles</td>
<td></td>
</tr>
<tr>
<td>( V_{\text{TRANS}} ) finches</td>
<td></td>
</tr>
</tbody>
</table>

All lexical elements (and most phrase markers) are composed of features. These features are of three broad types: categorical (cat) features, which determine the lexical category and the inherent semantic features of a given lexical item; inflectional features (infl), which are sensitive to the syntax and determine the particular shape a word has; and selectional (sel) features, which dictate the further lexical elements with which the lexical element must occur to result in a grammatical (convergent) structure.

\(^1\) Note that it is not necessary that the PP [on the Galapagos] already be derived at this stage. In fact, it is likely that all the forms would first exist in the set of lexical elements at the very beginning of the derivation. The PP is represented here as previously derived simply in order to exemplify what may constitute a phrase marker.
Features are of two types: interpretable, and uninterpretable. Interpretable features have an effect on the semantic interpretation of the lexical item. For example, person/number/gender features (abbreviated $\phi$) are essential to the interpretation of nouns\textsuperscript{2}, the Pl. $\phi$-feature on *finches, ensures that it will be interpreted as more than one finch. Uninterpretable features do not have an effect on semantic interpretation of the lexical item. Accusative case on the transitive light verb $v_{TRANS}$ is an example of an uninterpretable feature. In addition to this, features may enter the numeration as valued, or as unvalued. *Charles is valued for category (i.e. it is N), but unvalued for Case, for example.

Features play an integral role in agreement operations, to be examined below.

\textsuperscript{2} But see §7.4.2 and §7.5.1 below for more on gender and interpretability.
3. The theoretical framework

With the numeration having been established as two unordered sets -- one set of lexical elements and one set of phrase markers -- where lexical items are essentially bundles of features, the derivation (i.e. the formation of the utterance) may now proceed. This is accomplished via the application of a set of operations (displayed in (3.1) as the second set of the grammar).

3.2.2 The operations

Minimalism employs four syntactic operations, each of which will be briefly described and exemplified below. Note that the operations given below do not necessarily occur in this order, nor do the examples (3.4)-(3.8) represent sequential stages in the derivation of the clause Charles examines finches on the Galapagos. For the full derivation, see subsection 3.3.

3.2.2.1 Merge

Merge joins two syntactic objects together. Merge begins with a syntactic object $\alpha$ which bears an unchecked selectional feature $F$, and joins $\alpha$ with a syntactic object $\beta$ bearing a matching categorical feature $F'$. $F$ is checked (checked features will be written as $<F>$), and the two syntactic objects fall under the new label $\gamma$, of which $\alpha$ is the head. All category features and unchecked selectional features of the head project, or, in other words, are inherited as features of the new label $\gamma$. The operation is demonstrated in (3.4).
3. The theoretical framework

(3.4) MERGE OF EXAMINE AND FINCHES

a. Step 1: *examine* (syntactic object $\alpha$) bears an unchecked selectional feature $N$, and *finches* (syntactic object $\beta$) bears a matching categorial feature $N$

```
examine [cat [V, -aux], infl [], sel [N]]
finches [cat [N, $\phi$: 3PlM], infl [Case: []], sel []]
```

b. Step 2: Merge joins the two syntactic objects together, and the unchecked selectional feature of *examine* is checked

```
examine [cat [V, -aux], infl [], sel < [N]>]
finches [cat [N, $\phi$: 3PlM], infl [Case: []], sel []]
```

c. Step 3: The two syntactic objects *examine* and *finches* fall under a new label (label $\gamma$) of which *examine* (by virtue of it being syntactic object $\alpha$) is head, hence its label VP. VP inherits all categorial and unchecked selectional features of the head, *examine*.

```
VP
examine finches
[cat [V, -aux], infl []]
```

3.2.2.2 Agree

Agree values unvalued inflectional features. In order for agree to apply, both syntactic objects must be in a relationship of c-command. Using (3.5) as an example, because $v_{TRANS}$ and VP *examine finches* are siblings, and both *examine* and *finches* are descendants of VP *examine finches*, a relationship called c-command exists between the $v_{TRANS}$ and *finches*: $v_{TRANS}$ c-commands *finches*, and *finches* is c-commanded by $v_{TRANS}$. 
3. The theoretical framework

(3.5) AGREE BETWEEN $V_{\text{TRANS}}$ AND FINCHES

a. Step 1: $V_{\text{TRANS}}$ c-commands finches

```
\begin{array}{c}
\text{vP} \\
V_{\text{TRANS}} \text{examine finches} \hspace{1cm} \text{VP examine finches} \\
\text{sel [N]} \\
\phi: [ ] \\
V^* \\
\text{Infl: [ ]} \\
\text{Case: ACC} \\
\text{finches} \hspace{1cm} \text{cat [V, -aux]} \\
\text{sel [N, < V >]} \\
\text{infl [ ]} \\
\text{sel [< N >]} \\
\end{array}
```

b. Step 2: $V_{\text{TRANS}}$ has a valued case feature, and finches has an unvalued case feature

```
\begin{array}{c}
\text{vP} \\
V_{\text{TRANS}} \text{examine finches} \hspace{1cm} \text{VP examine finches} \\
\text{sel [N]} \\
\phi: [ ] \\
V^* \\
\text{Infl: [ ]} \\
\text{Case: ACC} \\
\text{finches} \hspace{1cm} \text{cat [V, -aux]} \\
\text{sel [N, < V >]} \\
\text{infl [ ]} \\
\text{sel [< N >]} \\
\end{array}
```
3. The theoretical framework

c. Step 3: $v_{TR}$, which c-commands finches, agrees in case with finches, valuing the unvalued case feature on finches as ACC.

\[
\begin{array}{c}
\text{VP} \\
\text{examine finches} \\
\text{[cat [v, −aux]]} \\
\text{sel [N]} \\
\text{VP examine finches} \\
\text{[cat[V, −aux]]} \\
\text{infl [ ]} \\
\text{Case: ACC} \\
\text{sel [N, < V >]} \\
\text{examine} \\
\text{[cat[V, −aux]]} \\
\text{infl [ ]} \\
\text{sel [< N >]} \\
\text{finches} \\
\text{[cat, φ: 3PlM]} \\
\text{infl [Case: [ ACC ]] } \\
\text{sel [ ]}
\end{array}
\]

3.2.2.3 Move

Move moves a syntactic object to a higher projection. This is exemplified in (3.6).
3. The theoretical framework

(3.6)  **Move to satisfy the feature \( V^* \) on \( v_{\text{TRANS}} \)**

a. **Step 1**: \( v_{\text{TRANS}} \) is a head with a strong inflectional feature \( V^* \) (where * indicates a feature is strong). *examine* is a head with a matching categorial feature \( V \).

\[
\begin{align*}
vP & \quad \text{examine finches} \\
v_{\text{TRANS}} & \quad \text{cat \([v, -\text{aux}]\)} \\
& \quad \text{sel \([N]\)} \\
VP & \quad \text{examine finches} \\
v_{\text{TRANS}} & \quad \text{cat \([v, -\text{aux}]\)} \\
& \quad \text{sel \([N, < V >]\)} \\
\end{align*}
\]

b. **Step 2**: \( v_{\text{TRANS}} \) c-commands *examine*

\[
\begin{align*}
vP & \quad \text{examine finches} \\
v_{\text{TRANS}} & \quad \text{cat \([v, -\text{aux}]\)} \\
& \quad \text{sel \([N]\)} \\
VP & \quad \text{examine finches} \\
v_{\text{TRANS}} & \quad \text{cat \([v, -\text{aux}]\)} \\
& \quad \text{sel \([N, < V >]\)} \\
\end{align*}
\]
3. The theoretical framework

c. Step 3: examine moves to a higher projection, checking the strong feature of V. examine leaves behind a trace, written <examine> which goes unpronounced. The new syntactic object is still headed by \( v_{\text{TRANS}} \), and is therefore still labeled vP.

\[
\begin{array}{c}
\text{vP} \\
\text{examine} \\
\text{v}_{\text{TRANS}} \text{examine finches} \\
[\text{cat} \ [v, \neg \text{aux}]] \\
\text{sel} \ [\text{N}] \\
\text{v}_{\text{TRANS}} \text{examines finches} \\
[\text{cat} \ [v, \neg \text{aux}]] \\
\text{infl} \ [\ ] \\
\text{Case} : \text{ACC} \\
\text{sel} \ [\ < \text{N} > ]
\end{array}
\]

\[
\begin{array}{c}
\text{finches} \\
\text{cat} \ [v, \neg \text{aux}] \\
\phi : [ ] \\
infl \ [ ] \\
\text{Case} : \text{ACC} \\
\text{sel} \ [N, < V > ]
\end{array}
\]

\[
\begin{array}{c}
\langle \text{examine} \rangle \\
\text{finches} \\
\text{cat} \ [N, \phi : \text{3PlM}] \\
infl \ [\text{Case} : [ \text{ACC} ]] \\
\text{sel} \ [ ]
\end{array}
\]

3.2.2.4 Adjoin

Adjoin attaches two syntactic objects, where neither has any unchecked selectional features remaining. This final operation is demonstrated in (3.7).
3. The theoretical framework

(3.7) **Adjoin in Charles examines finches on the Galapagos**

a. Step 1: The TP \( \text{Charles } T_{\text{PRESENT}} \text{examine } v_{\text{TRANS}}^- \text{finches} \) (syntactic object \( \alpha \)) bears no unchecked selectional features, and the PP \( \text{on the Galapagos} \) (syntactic object \( \beta \)) also bears no unchecked selectional features.

b. Step 2: Adjoin joins the two syntactic objects together, with the TP as the host.
3. The theoretical framework

c. Step 3: The two syntactic objects TP \( T_{\text{PRESENT}} \) examines \( \text{v}_{\text{TRANS}} \) -s finches and PP on the Galapagos fall under a new label (label \( \gamma \)) of which TP \( T_{\text{PRESENT}} \) examines \( \text{v}_{\text{TRANS}} \) -s finches (by virtue of it being host) is head, hence its label TP. VP inherits all categorial and unchecked selectional features of the clausal head, \( T_{\text{PRESENT}} \) examines \( \text{v}_{\text{TRANS}} \) -s finches.

\[
\begin{align*}
\text{TP} & \quad \text{Charles} \quad T_{\text{PRESENT}} \quad \text{examine} \quad \text{v}_{\text{TRANS}} \quad \text{-s finches on the Galapagos} \\
\text{VP} & \quad \{\text{cat}[T, +fin, Tns: pres}\}
\end{align*}
\]

3.3 Sample derivation of an English clause

The following provides a description of the full derivation for the clause \( \text{Charles examines finches on the Galapagos} \).

The numeration for this clause contains the lexical elements \( \text{examine}, T_{\text{PRESENT}}, \text{Charles}, \text{v}_{\text{TRANS}}, \text{and finches} \), and the phrase markers on the Galapagos. This numeration is shown in (3.2) above. All lexical elements exist as bundles of specific features. Feature bundles for each lexical element in the numeration are shown in (3.3) above.

The first operation to apply is Merge of \( \text{examine} \) and \( \text{finches} \). Step 1: \( \text{examine} \) (syntactic object \( \alpha \)) bears an unchecked selectional feature N, and \( \text{finches} \) (syntactic object \( \beta \)) bears a matching categorial feature N. Step 2: Merge joins
3. The theoretical framework

the two syntactic objects together, and the unchecked selectional feature of examine is checked. Step 3: The two syntactic objects examine and finches fall under a new label (label $\gamma$) of which examine (by virtue of it being syntactic object $\alpha$) is head, hence its label VP. VP examine finches inherits all categorical and unchecked selectional features of the head, examine. This operation is illustrated in (3.4) above.

The second operation to apply is Merge of $v_{TRANS}$ and VP examine finches. Step 1: $v_{TRANS}$, a transitive light verb (syntactic object $\alpha$) bears an unchecked selectional feature V, and examine finches (syntactic object $\beta$) bears a matching categorical feature V. Step 2: Merge joins the two syntactic objects together, and the unchecked selectional feature of $v_{TRANS}$ is checked. Step 3: The two syntactic objects $v_{TRANS}$ and examine finches fall under a new label (label $\gamma$) of which $v_{TRANS}$ (by virtue of it being syntactic object $\alpha$) is head, hence its label vP. vP inherits all categorical and unchecked selectional features of the head, $v_{TRANS}$.

The third operation to apply is Agree between $v_{TRANS}$ and finches. Step 1: $v_{TRANS}$ c-commands finches. Step 2: $v_{TRANS}$ has a valued case feature, and finches has an unvalued case feature. Step 3: $v_{TRANS}$, which c-commands finches, agrees in case with finches, valuing the unvalued case feature on finches as ACC. This operation is illustrated in (3.5) above.

The fourth operation to apply is Move of examine to satisfy a strong feature V* on $v_{TRANS}$. Step 1: $v_{TRANS}$ is a head with a strong inflectional feature V*. examine is a head with a matching categorical feature V. Step 2: $v_{TRANS}$ c-commands examine. Step 3: examine moves to a higher projection, checking the strong feature of V.
3. The theoretical framework

*examine* leaves behind a trace, written <examine> which goes unpronounced.

The new syntactic object is still headed by \( v_{TRANS} \), and is therefore still labeled \( vP \). This operation is illustrated in (3.6) above.

The fifth operation to apply is Merge of \( vP \) *examine* \( v_{TRANS} \) *finches* and *Charles*.

Step 1: \( vP \) *examine* \( v_{TRANS} \) *finches* (syntactic object \( \alpha \)) bears an unchecked selectional feature N, and *Charles* (syntactic object \( \beta \)) bears a matching categorial feature N. Step 2: Merge joins the two syntactic objects together, and the unchecked selectional feature of \( vP \) \( v_{TRANS} \) *examine* *finches* is checked. Step 3: The two syntactic objects *Charles* and \( vP \) \( v_{TRANS} \) *examine* *finches* fall under a new label (label \( \gamma \)) of which \( vP \) *examine* \( v_{TRANS} \) *finches* (by virtue of it being syntactic object \( \alpha \)) is head, hence its label \( vP \). \( vP \) inherits all categorial and unchecked selectional features of the head, \( vP \) *examine* \( v_{TRANS} \) *finches*.

The sixth operation to apply is Agree between *Charles* and *examine*. Step 1: *Charles* c-commands \( v_{TRANS} \). Step 2: *Charles* has valued \( \phi \)-features, and \( v_{TRANS} \) has an unvalued \( \phi \)-features. Step 3: *Charles*, which c-commands \( v_{TRANS} \), agrees in \( \phi \)-features with \( v_{TRANS} \), valuing the unvalued case feature on \( v_{TRANS} \) as 3SgM. Since \( \phi \)-features are interpretable on \( v_{TRANS} \), this will be instantiated as the morpheme *s*.

The seventh operation to apply is Merge of \( T_{PRESENT} \) and \( vP \) *Charles* \( v_{TRANS} \) *examines* *finches*. Step 1: \( T_{PRESENT} \) (syntactic object \( \alpha \)) bears an unchecked selectional feature v, and \( vP \) *Charles* \( v_{TRANS} \) *examines* *finches* (syntactic object \( \beta \)) bears a matching categorial feature v. Step 2: Merge joins the two syntactic
3. The theoretical framework

objects together, and the unchecked selectional feature of $T_{PRESENT}$ is checked.

Step 3: The two syntactic objects $T_{PRESENT}$ and $Charles\ v_{TRANS}$ examines finches fall under a new label (label $\gamma$) of which $T_{PRESENT}$ (by virtue of it being syntactic object $\alpha$) is head, hence its label TP. TP inherits all categorial and unchecked selectional features of the head, $T_{PRESENT}$.

The eighth operation to apply is Agree between $T_{PRESENT}$ and $Charles$. Step 1: $T_{PRESENT}$ c-commands $Charles$. Step 2: $T_{PRESENT}$ has a valued Case feature, and $Charles$ has an unvalued Case feature. Step 3: $T_{PRESENT}$, which c-commands $Charles$, agrees in Case with $Charles$, valuing the unvalued case feature on $Charles$ as NOM.

The ninth operation to apply is Agree between $T_{PRESENT}$ and $v_{TRANS}$. Step 1: $T_{PRESENT}$ c-commands $v_{TRANS}$. Step 2: $T_{PRESENT}$ has a Tns: $pres$ categorial feature, and $v_{TRANS}$ has an unvalued inflection feature. Step 3: $T_{PRESENT}$, which c-commands $v_{TRANS}$ agrees in Case with $v_{TRANS}$ valuing the unvalued inflection feature on $v_{TRANS}$ as $pres$.

The tenth operation to apply is Move of $Charles$ to satisfy a strong $N^*$ feature on $T_{PRESENT}$. Step 1: $T_{PRESENT}$ is a head with a strong inflectional feature $N^*$ (where * indicates a feature is strong). $Charles$ is a head with a matching categorial feature $N$. Step 2: $T_{PRESENT}$ c-commands $Charles$. Step 3: $Charles$ moves to a higher projection, checking the strong feature of $N$. $Charles$ leaves behind a trace, written <Charles> which goes unpronounced. The new syntactic object is still headed by $T_{PRESENT}$ and is therefore still labeled TP.
3. The theoretical framework

The eleventh operation to apply is Agree between Charles and \( T_{\text{PRESENT}} \). Step 1: Charles c-commands \( T_{\text{PRESENT}} \). Step 2: Charles has valued \( \phi \)-features, and \( T_{\text{PRESENT}} \) has unvalued \( \phi \)-features. Step 3: Charles, which c-commands \( T_{\text{PRESENT}} \), agrees in \( \phi \)-features with \( T_{\text{PRESENT}} \) valuing the unvalued \( \phi \)-features on \( T_{\text{PRESENT}} \) as 3SgM.

The twelfth operation to apply is Adjoin of the TP Charles \( T_{\text{PRESENT}} \) examines \( v_{\text{TRANS}} \)-s finches and the PP on the Galapagos. Step 1: The TP Charles \( T_{\text{PRESENT}} \) examines \( v_{\text{TRANS}} \)-s finches (syntactic object \( \alpha \)) bears no unchecked selectional features, and the PP on the Galapagos (syntactic object \( \beta \)) also bears no unchecked selectional features. Step 2: Adjoin joins the two syntactic objects together, with the TP as the host. Step 3: The two syntactic objects TP Charles \( T_{\text{PRESENT}} \) examines \( v_{\text{TRANS}} \)-s finches and PP on the Galapagos fall under a new label (label \( \gamma \)) of which TP Charles \( T_{\text{PRESENT}} \) examines \( v_{\text{TRANS}} \)-s finches (by virtue of it being host) is head, hence its label TP. VP inherits all categorial and unchecked selectional features of the head, Charles \( T_{\text{PRESENT}} \) examines \( v_{\text{TRANS}} \)-s finches. This operation is illustrated in (3.7) above.

3.4 Distributed Morphology

In the preceding two subsections, the syntax was introduced as the mechanism which gives lexical elements structure. As such, from an inchoate numeration such as (3.2) emerges a structured clause Charles examines finches on the Galapagos. Our topic, of course, is the noun. What has been represented in the examples thus far as a single lexical element, nouns are, in fact, considerably more complex than this. Consider the noun finches: what was above represented as a single lexical element may easily be subdivided into at least two identifiable elements: finch, and the pluralizing element -s. Furthermore, such sub-word
3. The theoretical framework

elements exhibit restrictions on ordering: *es-finch is as meaningless a correspondent to finch-es as *examines finches Charles on the Galapagos is to Charles examines finches on the Galapagos. It is at this point that appeal will be made to Distributed Morphology.

Based on observations such as finch, finch-es, *es-finch, and numerous others, DM (Halle & Marantz 1993, 1994) views the process of building phrases from words, and building words from morphemes as the same. That is, as the words in sections 3.2 and 3.3 above were formulated as feature bundles and manipulated in the syntax by operations, so too are the individual morphemes. As such, finches may be reanalyzed as follows:\(^3\):

\[
(3.8) \text{INITIAL NUMERATION FOR: finches}
\]

<table>
<thead>
<tr>
<th>Lexical Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>*s-finches</td>
</tr>
</tbody>
</table>

\[
(3.9) \text{FEATURE STRUCTURES FOR THE LEXICAL ELEMENTS IN (3.8)}
\]

\[
\text{-s} \begin{cases} 
\text{cat} & [F, \phi; P] \\
\text{infl} & [ ] \\
\text{sel} & [N] 
\end{cases}
\]

\[
\text{finch} \begin{cases} 
\text{cat} & \phi [3] \\
\text{infl} & \text{Case} [ ] \\
\text{sel} & [ ] 
\end{cases}
\]

Derivation of finches would proceed thus.\(^4\)

\(^3\) Note that the category of the lexical element -s is simply labeled F (for 'functional'). This is an indication that the identity of this element is unknown, and not of central importance to the current explanation.

\(^4\) Note that, for this derivation, the morpheme -s (syntactic object \(\alpha\)) has merged as the rightmost element, and the morpheme finch (syntactic object \(\beta\)) has merged as the
3. The theoretical framework

(3.10) **FINCHES UNDER DISTRIBUTED MORPHOLOGY**

a. Operation 1: Merge of -s (syntactic object α) and N finch (syntactic object β).

```
  FP
   finch -s
      [cat [F, φ: Pl]]
   finch
     [cat [N, φ: 3]]
     [infl [Case: [ ]]]
     [sel [ ]]
   -s
     [cat [F, φ: Pl]]
     [infl [ ]]
     [sel [< N >]]
```

Within the larger architecture, this syntactic derivation represents one step in the larger process. Following derivation, syntactic items are 'spelled-out', and simultaneously transferred to the phonological component, where they receive pronunciation (*List 2*), and to the semantic component, where they receive meaning (*List 3*). Harley’s (2014) model, based Halle and Marantz (1993), is a classic representation.

---

leftmost element. This is the first time that such a configuration has been displayed, and is essentially one of convenience, in that merging the elements in this way results in *finch-s*, rather than *-s finch* and, therefore, eliminates the need for a Move operation. Such a decision is not uncontroversial (see esp. Kayne 1994), but is licit under the rules given up to this point (where the structure is sensitive to *hierarchy*, but not *linear order*). This configuration will, in fact, suit the structure of the Gorwaa noun as well, and will be employed throughout.
3. The theoretical framework

As exposition progresses, the DM architecture will be modified and further refined. Suffice it to say at this point that, nouns (and other lexical elements) may have a complex structure. Resultantly, their feature structures will be considerably less complete than has been represented in (3.3), and their internal syntactic structures considerably more rich. This will be a central assumption running throughout the rest of the work, visited and re-visited with the DM architecture as a useful framework.

3.5 Summary

This chapter has outlined Distributed Morphology as the theoretical framework which will be applied in the coming chapters to analyse the structure of the Gorwaa noun. The basis provided here will be further elaborated and modified as necessary.
3. The theoretical framework

Because the DM architecture is built around a phrase structure grammar, section 3.2 provided an introduction to Minimalist syntax, its components and its functions. Section 3.3 provided a stepwise derivation of a simple sentence in the language of examination: English. Section 3.4 introduced DM as an architecture within which i) syntax applies to morphemes in the same way in which it applies to words and ii) pronunciation and meaning are fed by feature bundles (List 1) structured and mediated by the syntax.
4. Fundamentals: nominal structure and noun stems

4.1 Introduction

In Chapter 3, it was identified that English nouns are not unitary lexical elements, but decomposable into subparts (finches, in a rudimentary example, was recognized as being composed of finch and -s). Further, it was established that the mechanisms which dictate the composition of the word finches were the same as those which dictate the composition of larger units: finch and -s are bundles of features which undergo Merge in the syntax to form finches – the same mechanisms to how larger elements form, say, clauses. This chapter examines these claims at a greater level of detail, applying them to the Gorwaa noun.

§4.2 establishes the precise object of study -- the Gorwaa noun -- and establishes its major subparts. §4.3 makes some comment on the noun’s wordhood criteria. §4.4 provides an analysis for the stem (STM). §4.5 provides a summary.

4.2 Nominal structure

In the sketch grammar presented in Chapter 2, nouns were identified as those forms highlighted in ((4.1))1.

(4.1) a. \textit{garma ina} /akuít [20160921i.23] 
garmái- Ø -na /akuít 
\textit{boy} S.3- Aux -Imprf jump.M.Pst 
“The boy jumped.”

b. \textit{slee} aga gaás [20161102b.51] 
sleér Ø- a- Ø -(g)a gaás 
cow A.P- P.F- Aux -Prf kill.1Sg.Pst 
“I killed the cow.”

---

1 The unbolded forms in ((4.1)c) xaa’í and sla/aa are also nouns.
4. Fundamentals: nominal structure and noun stems

c. **xaai'í sla/aa a daawaa**

[20131108b_20150725j.7]

xaai'í sla/aatá i- ø -(g)a daawaa  daawaa

trees forest S.3- Aux -Prf medicine

“The trees of the forest are medicine.”

Up to this point, the Gorwaa nouns have been presented as unitary lexical elements, evident in the way in which the nominal gloss appears in a one-to-one relationship with the form identified. In fact, nouns are formed of at least three identifiable subparts: the stem (STM), the suffix (SFX), and the linker (L). The nouns above may therefore be reanalyzed as follows:

(4.2)  a. *garma*

```
garm- -a -ó
STM- -SFX -L
```

‘a boy’

b. *slee*

```
sl- -ee -r~
STM- -SFX -L
```

‘a cow’

c. *daawaa*

```
daaw- -aa -r~
STM- -SFX -L
```

‘medicine’

The decompositions made here may not be immediately intuitive, and will be motivated below. In the meantime, it is important to state that I adopt an underbrace notation in order to indicate that, at this level, the meaning of the noun (e.g. ‘boy’, ‘cow’, or ‘medicine’) is purely compositional: as will be seen in §4.4, the stems are not interpretable in a denotational sense (e.g. *garm-* does not mean ‘boy’) unless they are combined with the proper suffix (in this case, -*a*).

This special notation will be used throughout the rest of this work for nouns to
4. Fundamentals: nominal structure and noun stems

which the reader’s attention should be drawn. Otherwise, nouns will be given a
simplified notation, as in (4.1).

The first decomposition to be made is between the stem (STM) and the suffix
(SFX). The nouns daawaa ‘medicine’ and daawudu ‘medicines’ suggest two
distinguishable parts: that meaning ‘medicine’, the stem, and that indicating
number, the suffix. This basic decomposition appears as in (4.3).2

(4.3) a. daawaa ‘medicine’ = daaw- medicine + -aa
    b. daawudu ‘medicines’ = daaw- medicine + -udu

Further occurrences of both suffixes -aa and -udu may be observed on other
noun pairs, including buraa ‘beer’ and burdu ‘beers’, layaa ‘branding iron’ and
laydu ‘branding irons’, and naadaa ‘cattle market’ and naadadu ‘cattle markets’.
In other cases, -aa enters into pairs with other suffixes: baahaa ‘hyaena’ and
bahu ‘hyaenas’, for example. -udu may also occur with other suffixes: lo’oo
‘curse’ and lo’odu ‘curses’, for example. A total of 42 different suffixes have been
identified in Gorwaa thus far, and are treated in detail in Chapter 5. Note that
suffixes may also be null, such as gwar/i ‘wildebeest’ and gwár/‘wildebeests’.
As with the suffixes, the stems may also occur in different combinations as well.
Consider the pairs yaa’ee ‘river’ and ya’eemi ‘stream’, and tsifiraangw ‘tongue’
and tsifiri ‘language’. Stems will be examined in §4.4 below.

---

2 As explained above, this is a simplification (i.e. daaw- does not mean ‘medicine’, nor
does -aa mean ‘singular’ or -udu mean ‘plural’). The labeling here is useful for our
purpose of introducing these subparts of the noun.
4. Fundamentals: nominal structure and noun stems

A further element exists, which has been labeled the linker (L). Its overt occurrence is restricted to certain syntactic environments (4.4)a, and elsewhere is either unpronounced (4.4)b or absent (4.4)c.3

\[(4.4)\]

a. \( \text{aní a sleér diif} \)
   \[\text{[20160927l222-228.26]}\]
   \( \text{Pro1Sg S.P- Aux Stm- Sfx -L hit.1Sg} \)
   “I hit the cow.”

b. \( \text{slee aga gaás} \)
   \[\text{[20161102b.51]}\]
   \( \text{sl-ee -r~ sl-ee -a -(g)a gaás} \)
   “I killed the cow.”

c. \( \text{uga slee-gás} \)
   \[\text{[20161119f.34]}\]
   \( \text{∅- u- ∅ -(g)a sl-ee gás} \)
   “You(M) killed a cow on him.”

This final distinction -- that of whether the linker is absent or unpronounced -- is not trivial, and analysis will be provided in §7.3. In cases in which the linker is present but unpronounced, it will be represented in both the second and third line of the gloss.

For the purposes of the immediate discussion, it suffices to point out two major properties of the linker. First, when the linker is expressed, it makes explicit the agreement patterns that the noun will trigger on targets such as the adjective (i.e. its gender). As shown in (4.5), the nouns \text{desi} ‘girl’ and \text{booloo} ‘day’ are both (F) gender (triggering the same agreement on the adjective \text{hhoó} ‘nice’ in (a) and (b)). When the gender linker is overt (as in (c) and (d)), both \text{desi} and \text{booloo} are

---

3 In (4.4)a the form \text{ani} ‘I’ is a pronoun. These are considered a special kind of noun, and will not be considered here.
marked with the same morphology, making this gender value explicit on the noun\(^4\).

\[(4.5)\]

a. *desí ka hhoo’*

\[
\begin{array}{c}
\text{des-} \\
\text{STM-} \\
\hline
\end{array}
\begin{array}{c}
\text{-i} \\
\text{-SFX} \\
\hline
\text{-r~`} \\
\text{-L} \\
\hline
\text{ng-} \\
\text{MP-} \\
\hline
\text{a-} \\
\text{A.3-} \\
\hline
\text{Ø} \\
\text{P.F-} \\
\hline
\text{hhoo’} \\
\text{Aux} \\
\hline
\text{good.F} \\
\text{noun girl} \\
\text{good.F}
\end{array}
\]

‘the girl is good’

b. *booloo ka hhoo’*

\[
\begin{array}{c}
\text{bool-} \\
\text{STM-} \\
\hline
\end{array}
\begin{array}{c}
\text{-oo} \\
\text{-SFX} \\
\hline
\text{-r~`} \\
\text{-L} \\
\hline
\text{ng-} \\
\text{MP-} \\
\hline
\text{a-} \\
\text{A.3-} \\
\hline
\text{Ø} \\
\text{P.F-} \\
\hline
\text{hhoo’} \\
\text{Aux} \\
\hline
\text{good.F} \\
\text{noun day}
\end{array}
\]

‘the day is good’

c. *desír hhoo’*

\[
\begin{array}{c}
\text{des-} \\
\text{STM-} \\
\hline
\end{array}
\begin{array}{c}
\text{-i} \\
\text{-SFX} \\
\hline
\text{-r~`} \\
\text{-L} \\
\hline
\text{hhoo’} \\
\text{good.F}
\end{array}
\]

‘a good girl’

d. *booloor hhoo’*

\[
\begin{array}{c}
\text{bool-} \\
\text{STM-} \\
\hline
\end{array}
\begin{array}{c}
\text{-oo} \\
\text{-SFX} \\
\hline
\text{-r~`} \\
\text{-L} \\
\hline
\text{hhoo’} \\
\text{good.F}
\end{array}
\]

‘a good day’

Second, the form taken by the linker is controlled not by the *stem*, but by the *suffix*. Note that in (4.6), the stem *tlaf-* is the same in both (a) and (b), but the suffixes are different: *-i* in (a) and *-oo* in (b). Resultantly, the form of the linker in (a) is *-tá*, and the form of the linker in (b) is rising pitch accent. It is, therefore, the suffix which determines the gender of the linker.\(^5\)

\[(4.6)\]

a. *tlafítá /awaakw*

\[
\begin{array}{c}
\text{tlaf-} \\
\text{STM-} \\
\hline
\end{array}
\begin{array}{c}
\text{-i} \\
\text{-Sfx} \\
\hline
\text{white.F} \\
\text{cloud}
\end{array}
\]

‘a white cloud’

---

\(^4\) When further data is considered, the picture is slightly less straightforward than this. More detailed discussion will take place in §6.3.5.

\(^5\) Furthermore, it is the suffix that determines the gender agreement of all forms beyond the noun (such as the adjective /awaákw* ‘white’ in the example). This will be more explicitly established in Chapter 6 below.
This section established the noun as morphologically complex, and identified the three major elements into which every noun can be subdivided\(^6\). The following section examines some criteria by which these three elements may be considered a word.

### 4.3 Nouns as words? Comments on wordhood

With a basic structure for the noun established, the forms in (4.1), originally identified as nouns in the sketch grammar (see esp. §2.3.1) may be re-glossed as follows:

\[(4.7)\]

\[\begin{array}{ll}
\text{a.} & \text{garma ina /akuút} \quad [20160921i.23] \\
& \text{garm- -a -ό i- Ø -na /akuút} \\
& \text{Stm- -Sfx -L} \quad \text{S.3- Aux -Imprf jump.M.Pst} \\
& \text{boy} \\
& \text{“The boy jumped.”}
\end{array}\]

\[\begin{array}{ll}
\text{b.} & \text{slee aga gaás} \quad [20161102b.51] \\
& \text{sl- -ee -r~́} \quad \Ø- a- Ø -ga gaás \\
& \text{Stm- -Sfx -L} \quad \text{A.P- P.F Aux -Prf kill.1Sg.Pst} \\
& \text{cow} \\
& \text{“I killed the cow.”}
\end{array}\]

\[\begin{array}{ll}
\text{c.} & \text{xaa’í sla/a a daawaa} [20131108b_20150725j.7] \\
& \text{xaa’í sla/atá i- Ø -(g)a daaw- -aa -r~́} \\
& \text{trees forest S.3- Aux -Prf Stm- -Sfx -L} \\
& \text{medicine} \\
& \text{“The trees of the forest are medicine.”}
\end{array}\]

---

\(^6\) Though see §5.2.1 below for a possible further subdivision of some suffix morphemes.
4. Fundamentals: nominal structure and noun stems

It is when nouns appear with additional morphology that the issue of identity becomes more complex. Why, for example, should the bolded forms in (4.8)\textit{a,c,e)} be analyzed as part of the noun, and the forms in (4.8)\textit{b,d,f)} be analyzed as extra-nominal morphology?

(4.8) a. \[\ldots\] garmá tleér \[20160927m.35\]

<table>
<thead>
<tr>
<th>garm-</th>
<th>-a</th>
<th>-ó</th>
<th>tleér</th>
</tr>
</thead>
<tbody>
<tr>
<td>STM-</td>
<td>-Sfx</td>
<td>-L</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>boy</td>
<td></td>
</tr>
</tbody>
</table>

\textit{‘The tall boy.’}

b. 

garmaqá' a tláy \[20161102b.28\]

<table>
<thead>
<tr>
<th>garm-</th>
<th>-a</th>
<th>-ó</th>
<th>-qá'</th>
<th>i-</th>
<th>Ø</th>
<th>-(g)a</th>
</tr>
</thead>
<tbody>
<tr>
<td>STM-</td>
<td>-Sfx</td>
<td>-L</td>
<td>-Dem3</td>
<td>S.3-</td>
<td>Aux</td>
<td>-Prf</td>
</tr>
<tr>
<td></td>
<td></td>
<td>boy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\textit{~Red~} tláy  
\textit{~Plur~} go.M.Pst

\textit{‘That boy was leaving.’}

c. aní a sleér diíf \[20160927l222-228.26\]

<table>
<thead>
<tr>
<th>aní</th>
<th>a-</th>
<th>Ø</th>
<th>sl-</th>
<th>-ee</th>
<th>-r-~</th>
<th>diíf</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pro1Sg</td>
<td>S.1-</td>
<td>Aux</td>
<td>STM-</td>
<td>-Sfx</td>
<td>-L</td>
<td>hit.1Sg</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>cow</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\textit{‘I hit the cow.’}

d. \textit{Dodó sleerós ngire húw} \[20151202e.161-163\]

<table>
<thead>
<tr>
<th>Dodó</th>
<th>sl-</th>
<th>-ee</th>
<th>-r-~</th>
<th>-ósf</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dodoód</td>
<td>STM-</td>
<td>-Sfx</td>
<td>-L</td>
<td>-Poss.3Sg</td>
</tr>
<tr>
<td>ng-</td>
<td>a-</td>
<td>Ø</td>
<td>re</td>
<td>húw</td>
</tr>
<tr>
<td>A.3-</td>
<td>P.F-</td>
<td>Aux</td>
<td>-Consec</td>
<td>bring.M.Pst</td>
</tr>
</tbody>
</table>

\textit{[.] Dodoód brought him his cow.’}

e. \textit{daawaa}

<table>
<thead>
<tr>
<th>daaw-</th>
<th>-aa</th>
<th>-r-~</th>
</tr>
</thead>
<tbody>
<tr>
<td>STM-</td>
<td>-Sfx</td>
<td>-L</td>
</tr>
</tbody>
</table>

\textit{‘medicines’}

f. \textit{daaawaróô}

<table>
<thead>
<tr>
<th>daaw-</th>
<th>-aa</th>
<th>-r-~</th>
<th>=oo</th>
<th>~~</th>
</tr>
</thead>
<tbody>
<tr>
<td>STM-</td>
<td>-Sfx</td>
<td>-L</td>
<td>=Top</td>
<td>~Q-</td>
</tr>
</tbody>
</table>

\textit{‘medicine?’}
4. Fundamentals: nominal structure and noun stems

This is clearly important for the scope of the present work: if it claims to treat ‘the noun’, then there must be some reason why the stem, suffix, and linker are considered part of the noun, whereas forms such as demonstratives (such as =qá’ and =ós) as well as the topic and question morphology (e.g. =oo and ~~) are not. To this end, this section explores wordhood in Gorwaa, arriving at a cluster of criteria which hold within a word, but do not hold elsewhere. As such, the primary evidence for considering the -aa of daawaa (4.8)e a part of the noun, and the -roô of daawaroô (4.8)f as not part of the noun is that certain relations hold between daaw- and -aa that do not hold between daawaa and -roô. These relations differ between languages (c.f. Haspelmath 2011), but four which are commonly cited (and for which there is sufficient data in Gorwaa) are orthographic boundaries, potential pause, phonetic boundaries, and indivisibility. Each of these criteria will be examined in turn below, and evaluated to determine their usefulness for identifying words.

4.3.1 Orthographic boundaries

The first commonly-cited criterion for identifying a word are orthographic boundaries. The assumption is that, Gorwaa-speakers who are acquainted with a writing system which conventionally separates words with spaces (such as Swahili and English) will generalize this spacing convention to Gorwaa, writing what they perceive as words with a space before and after. The data used to test this hypothesis are examples of the Gorwaa language as written by Gorwaa-speakers unacquainted with either formal linguistic analysis, or the standardized Gorwaa writing system. Throughout the samples of informal Gorwaa orthographies recorded in the corpus, nouns are consistently separated from
other lexical categories by spaces. Examples are provided in (4.9) below. Note especially the object nouns (na/ay 'child' (written NAAY) in (a), and yiikwa 'cattle' (written HIKWA) in (b), both of which are realized as distinct orthographic units.

(4.9) a. MUNGU NAAY GHWA HUU [20150815m]
   *Muungú na/ay ngwa húw*
   God child A.3- P.M- Aux -Imprf bring.Pst
   'God brought a child.'

b. [...] AMAMII UREN ONA LAQWALIJKANG NE I HIKWA KONAH [20151127h]
   *amaami’í uren nguna laqwaalikáng nee i yiikwá koná’*
   grandmothers.LF old.F.Pl A.3- P.M- Aux -Imprf
give.birth.F -Neg.Pst and S.3- Aux cattle.LF have.N.Pst
   ‘[...] old women have not given birth and they have cattle’

However, the written materials collected also tend to represent additional suffixes as part of the orthographic unit.

(4.10) a. HE BIRA GWA, HHIYAWOS HARE NG’IN AL [20151127g]
   *hee bira gwaá hhiyawós haree ngin aal*
   person if= S.3- Aux -Prf die.M.Pst brother -Poss.3
haree ng- a- Ø -n aal
wife A.3- P.F- Aux -Expect inherit.M.Subj
   ‘If a person dies, his brother will inherit the wife.’

b. AMASI BIRA-HARDAT DOOWOSE [20151127h]
   *aamasí  bira hardát dowosee*
   grandfather -Dem2 if= S.3- Aux -Prf arrive.F.Pst
   house.LF -Poss.3 =Top
   ‘If that lady arrived at their house [...]’

As such, Gorwaa speakers seem to consistently separate lexical categories from each other, but many functional categories are written together with the noun as
4. Fundamentals: nominal structure and noun stems

one orthographic unit. This criterion is therefore not entirely useful for
distinguishing noun-internal morphology from extra-nominal morphology.

4.3.2 Pausa

In slow speech, subject nouns occur with distinguishable post-pause. Defining
pause as “any interval of the oscillographic trace where the amplitude is
indistinguishable from that of the background noise” (Duez 1982: 13) for a
period of 100ms or longer, the following pausa were identified and measured
using the Praat software programme (Boersma &Weenink, 2016).

(4.11) a. sleep (0.1) i galây [20160111h.26]
     slee (0.1) i- Ø galây
cow PAUSE S.3- AUX where
“When is the cow?”

b. [... ilaá (0.2) tám [...][20150810.15]
     ilaá (0.2) tám
eyes PAUSE three
“three eyes”

However, pausa are not a particularly reliable criterion of wordhood in Gorwaa.
First, most nouns end in a vowel, which, even in slow speech, tend to eliminate
pausa by filling them with residual vocalic sound. Second, object nouns, even
when consonant-final, do not show significant pausa. In (4.12)a), this seems to
be due both to the object noun baaha ‘hyaena’ being vowel-final, and to the
general tendency of the following selector to be uttered in very close succession
with the object noun. In (4.12)b), this seems to be due both to the object noun
/aaymár ‘food’ ending in a vocalic consonant, as well as the general tendency for
the encapsulated object noun and the following verb to be uttered in very close
succession.
4. Fundamentals: nominal structure and noun stems

(4.12) a.  
\[ \text{desi} (0.5) \text{ baahaa } (0.0) \text{ ngina tāh}h \]  [20160921.2]
\[ \text{desi} (0.5) \text{ baahaa } (0.0) \text{ ng- a- } \emptyset -\text{na} \]
\[ \text{táh}h \]
girl PAUSE hyaena NoPAUSE A.3- P.F- Aux -Imprf
hit.Pst
“The girl hit the hyaena.”

b.  
\[ \text{bar} /\text{aaymár} (0.0) \text{ sla’} \]  [20150808a.117]
\[ \text{bar- } \emptyset - \emptyset /\text{aaymár} (0.0) \text{ sla’} \]
[...]	if S.P- Aux food.LF NoPAUSE want.2.Subj
[... if you want food.”

Pause is therefore not a reliable criterion for distinguishing noun-internal morphology from extra-nominal morphology.

4.3.3 Word-internal phonological operations

A third criterion (or rather, set of criteria) to explore are phonological operations which operate within the domain of the word. Detailed in §2.2.5.3 above, these word-internal operations will be repeated briefly below. Essentially, these phonological operations are of two kinds: metrical (syllabification and stress assignment), and segmental (vowel epenthesis).

Firstly, it is within the word that the rules of syllabification and stress-assignment apply. This is especially manifest when nouns are used in their vocative forms, which targets the penultimate syllable for high tone, followed by low tone on the final syllable.

(4.13) a.  
\[ \text{[dési]} \text{ desi! ‘girl!’} \]
b.  
\[ \text{[hhe:wä:si]} \text{ Hheewaasi! ‘Mr. Hheewaasi!’} \]

The noun in Gorwaa is therefore a metrical domain.
The segmental operation of epenthesis also operates exclusively within the
domain of the word, producing an epenthetic vowel to break a consonant cluster
in (4.14)a,b), but not in (4.14)c).

(4.14) a.  hhurahür \( \rightarrow \) bulbul, greenbul’
b.  qoonqalumó \( \rightarrow \) ‘a crowned crane’
c.  qoonqalsíng \( \rightarrow \) ‘this flock of crowned cranes’ (i.e. qoonqalØsing)

Note that other segmental operations, notably vowel coalescence, vowel
assimilation, and consonant cluster simplification also operate within the word.
They do not, however, operate solely within the word, and may hold between
larger elements. (4.15) shows vowel deletion between a noun and its
determiner.

(4.15) a.  muukú + -í \( \rightarrow \) muukí ‘these people’
b.  asltá + -í \( \rightarrow \) asltí ‘these fires’

As such, these segmental operations, though sometimes word-internal, are not
exclusively so.

4.3.4 Indivisibility

Perhaps the most consistent criterion for determining morphology internal to
the noun versus morphology external to the noun is indivisibility. Word-external
morphology is separable from the noun itself (such as the determiner -dá’ in
(4.16), whereas morphology internal to the word cannot be separated from it
(such as the suffix and linker -udú in (4.17).

(4.16) a.  garmadá’ una taáhh [20160927l159-168.21]
garmá -dá’ Ø u- Ø -na taáhh
boy.LF -Dem4 A.P- P.M- Aux -Imprf hit 1.Pst
“I hit that boy.”
4. Fundamentals: nominal structure and noun stems

b. [...] garmásí - kudá’ oo da/alusumo [...]  
   [20131108b_20150725j.30-31]
garmá -sí  kudá’ oo da/alusumo  
boy.LF -Dem2 ProDem2.M ProMod.M  sorcerer  
“[...] this boy - that one of the sorcerer [...]”

(4.17) a. daawudu  
daawudu  
medicines  
“medicines”

b. *daawasí todú ar da/alusumo  
daawár  -sí  to(a)du  ar  da/alusumo  
medicine.LF -Dem2 ProDem.Pl.F ProMod.F  sorcerer  
(intended meaning: ‘this medicine - those ones of the sorcerer’)

As such, that the noun is a word may be based on its indivisibility.

4.3.5 Wordhood: summary

To summarize, four types of evidence were examined above in order to establish the noun as a word: orthographic boundaries, pausa, word-internal phonological operations, and indivisibility. Informal Gorwaa orthographies consistently place boundaries between all lexical categories, but treat lexical categories with enclitics as one orthographic word. Pausa occur following subject nouns, but not obligatorily. Furthermore, no such pause can be identified for object nouns. Phonologically, the noun is reliably a metrical domain for syllabification and stress-assignment. The segmental operation of epenthetic vowel insertion is a consistent word-internal operation, but vowel coalescence, vowel assimilation, and consonant cluster simplification may apply both within the word, as well within elements larger than the word (e.g. the noun phrase). Most consistently, noun-internal morphology cannot occur separate from the noun, whereas extra-nominal morphology may appear separate from the noun, attached to elements such as demonstratives.
4. Fundamentals: nominal structure and noun stems

As such, perhaps the best definition of the Gorwaa noun we may present thus far is a complex structure whose subparts are indivisible from each other and which serves as a metrical domain for syllabification and stress assignment, and is a domain for epenthetic vowel insertion. Further research, along the lines of Dyck (2009), Haspelmath (2011), and Green and Morrison (2016) would be highly useful but will remain a desideratum for now.

This work is largely concerned with the phenomena which fall within the noun as defined above. This includes the stem, the suffix, and the linker. All other material falls outside the scope of the present inquiry.

4.4 The stem

The remainder of this chapter will treat the leftmost subpart of the noun: the stem (STM). All bolded material in (4.18) below corresponds to stems.

\[(4.18)\]

a. \(tsir/i\)
\[\underline{tsir/-} \quad \underline{-i} \quad \underline{-r~′~}\]
\[\underline{Stm-} \quad \underline{-SFX} \quad \underline{-L}\]
\[\text{bird}\]
\[\text{‘a bird’}\]

b. \(tsifiri\)
\[\underline{tsifir/-} \quad \underline{-i} \quad \underline{-r~′~}\]
\[\underline{Stm-} \quad \underline{-SFX} \quad \underline{-L}\]
\[\text{language}\]
\[\text{‘a language’}\]

c. \(slee\)
\[\underline{sl-} \quad \underline{-ee} \quad \underline{-r~′~}\]
\[\underline{Stm-} \quad \underline{-SFX} \quad \underline{-L}\]
\[\text{cow}\]
\[\text{‘a cow’}\]
4. Fundamentals: nominal structure and noun stems

d.  wa/aangw  
    wa/-  -aangw  -ó  
    Stm- -SFX  -L  
    \[ \text{arroyo} \]  
    ‘an arroyo’

e.  do’  
    do’ -∅  -ó  
    Stm- -SFX  -L  
    \[ \text{house} \]  
    ‘a house’

Subsection 4.4.1 offers a review of the phonotactic constraints that hold within stems. Subsection 4.4.2 examines the difficulty associated with defining the stem, and concludes that a unified account of stems based on either phonological or semantic identity is impossible. Subsection 4.4.3 applies a DM analysis to the stem, decomposing it into a categoriless root (\( √ \)) within a nominal syntactic environment. This allows a unified syntactic account of the stem. Subsection 4.4.4 summarizes.

4.4.1 Stem-internal phonotactic constraints

Stems are the domain of several phonotactic constraints. Detailed in §2.2.5.2 above, they will be briefly reviewed here, a subset of the examples given in Chapter 2 have been parsed according to the underbrace notation, showing the stem, suffix, and linker.

Initial syllables of polysyllabic stems are usually of CV or CVC structure, with CVV possible, but usually before an NC cluster (see (4.5), based on (2.12.b). CV:, CVNC, and CV:NC are never licit structures for polysyllabic stems.
4. Fundamentals: nominal structure and noun stems

(4.19) *daangafi*

\[ \text{daangaf-} \quad -i \quad -\text{tá} \]
\[ \text{STM-} \quad -\text{SFX} \quad -\text{L} \]
\[ \text{millet-filled.gourd} \]

"a millet-filled gourd"

Vowel-sequencing restrictions apply to polysyllabic stems. Either i) the first vowel is high or low (not mid), and the second vowel is either epenthetic, low, or mid (not high) (see (4.20)), or ii) all vowels are identical (see (4.21)).

(4.20) *kitangeeri*

\[ \text{kitangeer-} \quad -i \quad -r \sim \sim \]
\[ \text{STM-} \quad -\text{SFX} \quad -\text{L} \]
\[ \text{drying.rack} \]

"a drying rack"

(4.21) *kwe/e/eni*

\[ \text{kwe/e/en-} \quad -i \quad -\text{tá} \]
\[ \text{STM-} \quad -\text{SFX} \quad -\text{L} \]
\[ \text{black-necked.rock.hyrax} \]

"a black-necked rock hyrax"

Exceptionally, for polysyllabic stems with a long vowel in their initial syllable, this vowel may be mid (see (4.22)).

(4.22) *nee/ár*

\[ \text{nee/ár-} \quad -\emptyset \quad -\text{ó} \]
\[ \text{STM-} \quad -\text{SFX} \quad -\text{L} \]
\[ \text{heavy.clouds} \]

"heavy clouds"

4.4.2 Phonetics and semantics: difficulties in identifying the stem

Thus far in the analysis, our definition of the stem is that i) they are the part of the noun which is both not the suffix and not the linker, and ii) they are domains of certain phonotactic constraints. This, in fact, represents the full extent by which the stem may be defined. As we shall see, while it is possible to identify two instances of the same stem by phonetic identity and by semantic identity, some stems can be identified only by phonetic identity, and some can be identified only by semantic identity.
4. Fundamentals: nominal structure and noun stems

4.4.2.1 Stems identifiable by phonetic identity and semantic identity

Consider the following pair in (4.23), in which the stem has been bolded.

(4.23) a. \( \text{tsir/i} \)
\( \text{tsir/- } -i \quad -r^\sim \sim \)
\( \text{Stm- } \text{-SFX L} \)
\( \text{bird} \)
\( \text{‘a bird’} \)

b. \( \text{tsir/oo} \)
\( \text{tsir/- } -oo \quad -r^\sim \sim \)
\( \text{Stm- } \text{-SFX L} \)
\( \text{bird} \)
\( \text{‘birds’} \)

In this example, the stems of both forms (i.e. ‘a bird’ and ‘birds’) may be identified as two instances of the same stem by applying both phonetic and semantic criteria. Phonetically, the stems have the same form: \( \text{tsir-} \).

Semantically, the stems have the same meaning: ‘bird’. Such stems, which may be identified by both phonetic and semantic criteria, are common, with some further examples below.

(4.24) a. \( \text{daawaa} \)
\( \text{daaw- } -aa \quad -r^\sim \sim \)
\( \text{Stm- } \text{-SFX L} \)
\( \text{medicine} \)
\( \text{‘medicine’} \)

b. \( \text{daawudu} \)
\( \text{daaw- } -(a)du \quad ~\sim \sim \)
\( \text{Stm- } \text{-SFX L} \)
\( \text{medicine} \)
\( \text{‘medicine’} \)

(4.25) a. \( \text{awu} \)
\( \text{aw- } -u \quad -ó \)
\( \text{Stm- } \text{-SFX L} \)
\( \text{bull} \)
\( \text{‘a bull’} \)
4. Fundamentals: nominal structure and noun stems

b.  
\[\text{awee}\]
\[\text{aw} - \text{ee} - \text{r} \sim ~\text{bulls}\]
\[\text{Stm} - \text{-SFX} - \text{L}\]

'bulls'

(4.26) a.  
\[\text{qafi}\]
\[\text{qaf} - \text{i} - \text{tá} \sim ~\text{bark\:shells}'
\[\text{Stm} - \text{-SFX} - \text{L}\]

'bark, shells'

b.  
\[\text{qafoo}\]
\[\text{qaf} - \text{oo} \sim ~\text{barks, shells}'
\[\text{Stm} - \text{-SFX} - \text{L}\]

Based on this data alone, one could posit that the stem possesses both a phonetic and a semantic identity. The picture is, however, considerably more complex than this, as the other two configurations will make clear.

4.4.2.2 Stems identifiable by phonetic identity only

Consider the following pair in (4.27).

(4.27) a.  
\[\text{tsifiri}\]
\[\text{tsifir} - \text{i} - \text{r} \sim ~\text{a language}'
\[\text{Stm} - \text{-SFX} - \text{L}\]

'b a language'

b.  
\[\text{tsifireeri}\]
\[\text{tsifir} - \text{eeri} - \text{r} \sim ~\text{languages}'
\[\text{Stm} - \text{-SFX} - \text{L}\]

'languages'

Once again, it would appear that the bolded form is identifiable as two instances of the same according to both phonetic (as tsifir-) and semantic (as 'language') criteria. Data in (4.28) complicates the picture.
4. Fundamentals: nominal structure and noun stems

(4.28) a. **tsifiraangw**  
**tsifir-**-aangw -ó  
Stm- -SFX -L  
'tongue'

(4.28) shows that, given the right suffix, the stem **tsifir**- means not only 'language', but also means 'tongue'. This indicates that the form **tsifir**- as it occurs in (4.27) and (4.28) is no longer identifiable as the same stem by using semantic criteria, as it is being used to express two different meanings⁷. Further examples are provided below.

(4.29) a. **niinga**  
**niing-** -a -ó  
Stm- -SFX -L  
'drum'

b. **niingá**  
**niing-** -á -ó  
Stm- -SFX -L  
'green pigeon'

(4.30) a. **se'eengw**  
**see'-** -aangw -ó  
Stm- -SFX -L  
'hair'

b. **soo'ay**  
**see'-** -ay -ó  
Stm- -SFX -L  
'dog'

(4.31) a. **bee/i**  
**bee/-** -i -r~'~  
Stm- -SFX -L  
'sheep'

⁷ The argument may be made that the two meanings (i.e. 'language' and 'tongue') are sufficiently similar so as to still constitute 'one meaning'. Examples with less clear semantic ties are given in (4.29)-(4.31).
b. **bee/amó**
   - **bee/-** -(a)mó-ó
   - **Stm-** -SFX -L
   - **bird.sp.**
   - ‘a sp. of bird’

c. **Bee/á**
   - **bee/-** -á -ó
   - **Stm-** -SFX -L
   - **[personal.name]**
   - ‘a (male) person named Bee/á’

### 4.4.2.3 Stems identifiable by semantic identity only

Finally, consider the following pair in (4.32)⁸:

(4.32)  
   a. **slee**
   - **sl-** -ee -r~´~
   - **Stm-** -SFX -L
   - **cow**
   - ‘a cow’

   b. **yiikwá**
   - **yiikw-** -a’i ~´~
   - **Stm-** -SFX -L
   - **cattle**
   - ‘cattle’

(4.32) shows two instances of a single stem identifiable not by phonetic form, but by semantic meaning. Further examples are provided below⁹:

(4.33)  
   a. **garma**
   - **garm-** -a -ó
   - **Stm-** -SFX -L
   - **boy**
   - ‘a boy’

   b. **daaqay**
   - **daaq-** -ay -ó
   - **Stm-** -SFX -L
   - **boys**
   - ‘boys’

---

⁸ Note that in (4.32)b) the final vowel and the glottal consonant of the suffix are not present. This is due to word-final apocope - a common process for this suffix, further explained in §5.3.4.4.

⁹ With an additional case of the apocope described in fn.7 in(4.35).
(4.34) a. 
\[ \text{haree} \]
\[ \text{Stm-} -SFX -L \]
\[ \text{woman} \]
\[ a \text{ woman}' \]

b. 
\[ \text{tiyay} \]
\[ \text{Stm-} -SFX -L \]
\[ \text{women} \]
\[ 'wom\text{en}' \]

(4.35) a. 
\[ \text{lee'i} \]
\[ \text{Stm-} -SFX -L \]
\[ \text{goat} \]
\[ 'a goat' \]

b. 
\[ \text{aar} \]
\[ \text{Stm-} -SFX -L \]
\[ \text{goats} \]
\[ 'goats' \]

To summarize, this subsection shows us that the stem is not consistently a coherent entity by either phonetic or semantic criteria. As will be shown in the following subsection, this confounding pattern can be addressed by appealing to a higher level of abstraction available in the DM architecture.

4.4.3 The internal structure of the stem

Having determined above that establishing any two instances of a given stem is not always possible using phonetic or semantic criteria, we will begin this subsection by posing the question of whether the stem may even be considered nominal in nature. All the examples in this section thus far (4.23)-(4.35) would indicate yes: the elements identified as stems consistently occur as part of a larger noun. Consider, however, the following:
4. Fundamentals: nominal structure and noun stems

(4.36) a. \textit{wa/aangw}
\textit{wa/-} -aangw -ó
\textit{Stm- -SFX -L} \textit{arroyo}

\textit{‘an arroyo’}

b. \textit{aga waá/}
\emptyset - \\ 
\textit{S.P - Aux -Prf vomit.1.Pst}

\textit{‘I vomited’}

The bolded material in (4.36) could reasonably be two instances of the same stem, both by phonetic criteria (\textit{wa/-} and \textit{waá/} are quite similar), as well as semantic criteria (\textit{an arroyo} is a dry river bed which occasionally floods, an action evocative of vomiting). However, the example in (a) is a noun, and the example in (b) is a verb. Similar examples are given below, where (4.37) is a noun-verb pair, (4.38) is a noun-adjective pair, and (4.39) features a noun, a verb, and an adjective.

(4.37) a. \textit{da’aangw}
\textit{da’-} -aangw -ó
\textit{Stm- -SFX -L song}

\textit{‘a song’}

b. \textit{aga daá’}
\textit{a} -ga \textit{daá’}
\textit{ProSubj.P -Prf sing.1.Pst}

\textit{‘I sang’}

(4.38) a. \textit{diraangw}
\textit{dir-} -aangw -ó
\textit{Stm- -SFX -L lion}

\textit{‘a lion’}

b. \textit{ku dirén}
\textit{ku} \textit{dirén}
\textit{CopAdj.M big.M.Pl}

\textit{‘they are big’}
4. Fundamentals: nominal structure and noun stems

(4.39) a. \( \text{na}/\text{ay} \)
\( \text{na}/-\text{ay} - \hat{\text{o}} \)
\( \text{Stm-} -\text{Sfx} -\text{L} \)
\( \text{child} \)

‘a child’

b. \( \text{uga na}/\text{aás} \)
\( \emptyset - \text{u} - \emptyset -\{\text{g}\} - \text{a} \)
\( \text{na}/\text{aás} \)
\( \text{A.P.- P.M.- Aux -Prf} \)
\( \text{daub.with.mud.1.Pst} \)

‘I daubed it with mud’

c. \( \text{ku naá/} \)
\( \text{t- ng - u -} \emptyset \text{ naá/} \)
\( \text{MP- A.3- P.M.- Aux} \)
\( \text{wet.M} \)

‘it is wet, it is unripe’

Pairs such as this are common cross-linguistically, English being no exception\(^{10}\).

(4.40) a. Hans Zimmer to score Sir David Attenborough’s \textit{Blue Planet II}

b. [...] I turned on my torch and \textit{David Attenboroughed} the entire incident [...] (said of an event in which the author narrates a cat eating a rat)

(4.41) a. Charles examines \textit{finches} on the Galapagos.

b. The young are fed in the usual \textit{fringilline} manner, on the pulp from the crops of the parent birds.

The obvious argument here is that these forms are all simply products of historical processes: \textit{tsifiraangw} ‘a tongue’ – \textit{tsifiri} ‘a language’ show a metonymic link; \textit{slee} ‘a cow’ – \textit{yiikwa} ‘cows’ are a suppletive pair; \textit{niinga} ‘a drum’ – \textit{niingá} ‘a sp. of pigeon’ show a large degree of homophony. To rely on such descriptions, many of which have already been well documented in work such as Kießling and Mous (2003), is to miss the point of the present work, which, rather than seeking to describe such phenomena as the result of historical change, aims

4. Fundamentals: nominal structure and noun stems

for a synchronic account of how these forms are represented in the grammar of a
given speaker, none of whom would be expected to know or feel that most of
these pairs are in any way linked, either historically or conceptually.

With the aim of a synchronic description in mind, and having seen the evidence
in (4.36)-(4.39), a valid question that may be asked is whether stems are nominal
at all. The answer to be developed here is yes, but not in a primitive sense. In
many works, including Marantz (2001), Arad (2003, 2005), Borer (2005a, b), and
Merchant (2018), it is argued that lexical items enter the derivation without a
predetermined lexical category, and that this category is realized by their larger
syntactic context. Therefore, the pair wa/aangw ‘arroyo’ and waá/ ‘to vomit’ are
formed of the same categoriless base, wa/aangw coming to be a noun through its
larger nominal structure, and waá/ coming to be a verb through its larger verbal
structure. A (rudimentary) example of what a nominal structure versus a verbal
structure might look like is offered below, where √x refers to the categoriless
base (i.e. root) common to both wa/aangw and waá/.11

(4.42) CATEGORILESS BASE √x REALIZED AS DIFFERENT LEXICAL CATEGORIES BASED ON
DIFFERENT SYNTACTIC CONTEXTS

<table>
<thead>
<tr>
<th></th>
<th>wa/aangw</th>
<th>waá/</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>wa/aangw</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DP</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>NP</td>
<td>D</td>
</tr>
<tr>
<td></td>
<td>√x</td>
<td>-ó</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-aangw</td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td>waá/</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TP</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>VP</td>
<td>T</td>
</tr>
<tr>
<td></td>
<td>√x</td>
<td></td>
</tr>
<tr>
<td></td>
<td>V'</td>
<td>pro</td>
</tr>
<tr>
<td></td>
<td>[1, Sg]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>V_{intrans}</td>
<td></td>
</tr>
</tbody>
</table>

---

11 The nominal structure arrived at in this work will, ultimately, look very different from
this one, but this structure (based on Abney 1987) is useful as a simplified starting
point.
4. Fundamentals: nominal structure and noun stems

In fact, this analysis will not only be able to account for data such as (4.36)-(4.39), but will also provide a unified account for stems which does not rely on phonetic or semantic criteria, thus addressing data discussed above, and exemplified in (4.27)-(4.35). An implementation of the DM principle of late insertion will be undertaken directly below, beginning with a discussion of the roots as an unspecified index, and followed by a description of how these underspecified indices are realized post-syntactically.

4.4.3.1 The root

In the previous chapter, the Distributed Morphology concept of syntax governing both the construction of phrases and the construction of words allowed us to propose how the individual subparts of nouns were put together. In this chapter, the DM concept of late insertion will help specify what, exactly, these subparts are, and how they are realized.

Late insertion views syntactic categories as abstract. With reference to the model of Distributed Morphology (see Figure 3.1, §3.4), all elements in List 1 (and resultantly, all elements in the Numeration) are feature bundles lacking in any phonetic content. Phonetic values are inserted, following Spellout, at the phonological component (List 2). This concept is extended by Acquaviva (2009) and Harley (2014) to semantic content: all elements in List 1 are semantically empty as they are processed in the syntax, and semantically valued following spellout, at the semantic component (List 3).
In the case of the stems examined above, by putting the rest of the syntactic structure aside, what is left (i.e. what we are calling the root) seems to be an element virtually free of features. Aside from the categorial (cat) feature √, roots have no inflectional (infl) features, nor selectional (sel) features. This seems uncontroversial (Merchant (2018) argues the same, though see Lowenstamm (2014)). Essentially, the sole function of roots is providing instructions for pronunciation and interpretation, which in turn, contributes to the pronunciation and interpretation of the larger structure of which they are part. The instructions of √x in (4.42)a are: i) in the environment of the heads N and D, pronounce as wa/ and interpret as ‘arroyo’; ii) in the in the environment of the heads V$_{intr}$ and T, and a pro with the feature [1, Sg], pronounce as waá/ and interpret as ‘to vomit’. If this root -- √x of (4.42)-- were replaced by another, say the root of (4.37), let us call it √y, then the instructions would be different: i) in the environment of the heads N and D, pronounce as da/ and interpret as ‘song’; ii) in the in the environment of the heads V$_{intr}$ and T, and a pro with the feature [1, Sg], pronounce as daá’ and interpret as ‘to sing’. Such instructions are listed (see Acquaviva 2008) in the sense that the pronunciations and meanings cannot be reduced to the syntactic features. Taking this logic to its natural conclusion, Acquaviva (2008) adopts an index notation (e.g. √709, √028, etc.) for roots in the syntax, where the unique number refers to an ‘entry’ in both List 2 and List 3, containing the appropriate instructions for pronunciation and interpretation, respectively. As such, the feature structure for the root in (4.42)would appear thus:

(4.43) Feature structure for the root in (4.42)

[Let: $\sqrt{364}$ represent the root common to the forms wa/aangw and waá/]
Having arrived at a feature structure for the root, it is possible to insert it in the syntax. This will satisfy the contexts which were specified in the instructions above (i.e. the part of the instructions which read *in the environment of*). These instructions are spellout rules, and will be discussed below.

### 4.4.3.2 The post-syntax

Having established that the identity of the stem as a featureless index $\sqrt{364}$ within a larger (nominal) syntactic context, the process of its realization (in the case of (4.41)a), as *wa/aangw* ‘an arroyo’) post-syntax, can now be examined.

According to the principle of late insertion, phonetic and semantic realization can only be accomplished following spellout, where the structured elements (which are at this point still feature bundles) are ‘shipped off’ to both the phonological component and the semantic component. It is likely that spellout only occurs after the syntactic structure has reached a certain point (Chomsky 2001), most likely at a point after merger with the suffix and the linker. For the sake of exposition, a simplified example of how the element $\sqrt{364}$ is valued (where $\sqrt{364}$ is the root common to the forms *wa/aangw* and *waá*) is given in Table 4.1.

**Table 4.1: Valuation of the root of the set *wa/aangw, waá* ($\sqrt{364}$)**

<table>
<thead>
<tr>
<th>Root Input</th>
<th>Syntactic Context</th>
<th>Value</th>
<th>Root</th>
<th>Syntactic Context</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\sqrt{364}$</td>
<td>/ N, D</td>
<td>[waʕ]</td>
<td>$\sqrt{364}$</td>
<td>/ N, D</td>
<td>‘arroyo’</td>
</tr>
<tr>
<td></td>
<td>/V_{intrans}, T</td>
<td></td>
<td></td>
<td>/V_{intrans}, T</td>
<td></td>
</tr>
<tr>
<td></td>
<td>pro [1, Sg]</td>
<td></td>
<td></td>
<td>pro [1, Sg]</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Phonological Component (List 2)</th>
<th>Semantic Component (List 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Root Input</td>
<td>Syntactic Context</td>
<td>Value</td>
</tr>
<tr>
<td>$\sqrt{364}$</td>
<td>/ N, D</td>
<td>[waʕ]</td>
</tr>
<tr>
<td></td>
<td>/V_{intrans}, T</td>
<td></td>
</tr>
<tr>
<td></td>
<td>pro [1, Sg]</td>
<td></td>
</tr>
</tbody>
</table>
Returning to the data presented subsection 4.4.2, it is precisely this valuation process which can account for stems identifiable by phonetic identity only, and for stems identifiable by semantic identity only. In each of these cases, the root of the stem is the same: an acategorial element, devoid of most syntactic features, but which serves as a reference for the phonetic and semantic components after spellout. The difference comes with valuation. As can be seen in the case of 

\textit{tsifiri} ‘language’ and \textit{tsifiraangw} ‘tongue’ (originally given in (4.27) above), the phonetic component values the forms in the same way, and the semantic component values them differently, depending on which suffix they receive (in this table, represented by a different subscripts on the head N). Conversely, in the case of \textit{garma} ‘boy’ and \textit{daaqay} ‘boys’ (originally given in (4.33) above), the semantic component values the forms in the same way, and the phonetic component values them differently.

### Table 4.2: Valuation of the root of the set \textit{tsifiri} and \textit{tsifiraangw} ($\sqrt{709}$)

<table>
<thead>
<tr>
<th>Root Input</th>
<th>Syntactic Context</th>
<th>Value</th>
<th>Root Input</th>
<th>Syntactic Context</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\sqrt{709}$</td>
<td>/ N, D</td>
<td>[ts’ifir]</td>
<td>$\sqrt{709}$</td>
<td>/ N_1426, D pro [Sg]</td>
<td>‘language’</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>/ N_2528, D pro [Sg]</td>
<td>‘tongue’</td>
</tr>
</tbody>
</table>

### Table 4.3: Valuation of the root of the set \textit{garma} and \textit{daaqay} ($\sqrt{765}$)

<table>
<thead>
<tr>
<th>Root Input</th>
<th>Syntactic Context</th>
<th>Value</th>
<th>Root Input</th>
<th>Syntactic Context</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\sqrt{765}$</td>
<td>/ N_1218, D [Sg]</td>
<td>[garm]</td>
<td>$\sqrt{765}$</td>
<td>/ N_1218, D</td>
<td>‘boy’</td>
</tr>
<tr>
<td></td>
<td>/ N_1218, D [Pl]</td>
<td>[da:q]</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Both of these cases represent extremes: \textit{tsifiraangw} – \textit{tsifiri} of a root with a strong phonological identity, and \textit{garma} – \textit{daaqay} of a root with a strong
semantic identity. More typically, however, a given root will not fall toward one of the extremes, but rather, occupy a sort of middle ground: its superficial identity not strongly phonological, nor strongly semantic. A good example of this is the following set, where the stem is highlighted:

(4.44) a. \( \text{do'} \quad \text{do'}^- \quad -\emptyset \quad -\dot{o} \quad \text{Stm}- \quad -\text{SF} \quad -\text{L} \quad \text{house} \) ‘a house’

b. \( \text{maray} \quad \text{mar}^- \quad -\text{ay} \quad ~\text{~} ~ \quad \text{Stm}- \quad -\text{SF} \quad -\text{L} \quad \text{houses} \) ‘houses’

c. \( \text{mar'i} \quad \text{‘cave’} \quad \text{mar}'^- \quad -\text{i} \quad -\text{r~} ~ \quad \text{Stm}- \quad -\text{SF} \quad -\text{L} \quad \text{cave} \) ‘a cave’

d. \( \text{mar’oo} \quad \text{mar}'^- \quad -\text{oo} \quad -\text{r~} ~ \quad \text{Stm}- \quad -\text{SF} \quad -\text{L} \quad \text{caves} \) ‘caves’

Valuation would proceed thus.

Table 4.4: Valuation of the root of the set \( \text{do'}, \text{maray}, \text{mar'i}, \) and \( \text{mar’oo} \) (\( \sqrt{201} \))

| Root Input | Syntactic Context | Value | | Root | Syntactic Context | Value |
|------------|------------------|-------||-------|------------------|-------|
| \( \sqrt{201} \) | / \( N_{1510} \) D [PI] | \text{[mar]} | | \( \sqrt{201} \) | / \( N_{1413} \) D | ‘cave’ |
| | / \( N_{1510} \) D [Sg] | \text{[do?]} | | | / \( N_{1510} \) D | ‘house’ |
| | / \( N_{1413} \) D | \text{[mar?]} | | | | |

4.5 Remarks and summary

This chapter has provided a basis for those that follow, first by establishing the Gorwaa noun as a complex structure and naming its major parts, and second by
4. Fundamentals: nominal structure and noun stems

providing a morphosyntactic analysis of the leftmost of these parts, the stem.
Subsection 4.5.1 offers some further discussion of syntactic context, and
subsection 4.5.2 summarizes.

4.5.1 Remarks on syntactic context

In §4.4.3 above, it was established that a common conceptualization of lexical
items was that they enter the derivation without a predetermined lexical
category, and that this category is realized by their larger syntactic context. In
this chapter, the syntactic context relevant for the realization of nouns has been
presented as the presence of a head N and a head D, though (as mentioned in
fn.11), this context is a simplification, used mainly to introduce the way in which
a root may come to be nominal.

In fact, most works are much more explicit about the kind of syntactic context
which result in a root becoming a noun or noun stem. Typically (e.g. Marantz
2001, Arad 2003, 2005, Merchant 2017), this is accomplished by a categorizing
head, N, which directly dominates the root. Using the structure posited above,
this categorizing head could be identified directly in the above structure as N.

(4.45) √x realized as nominal by the categorizing head N (as per Marantz 2001,

Borer (2005a, b), on the other hand, eliminates the categorizing head entirely,
arguing that a nominal reading arises not from an explicitly nominalizing head,
4. Fundamentals: nominal structure and noun stems

but from a more complex nominal structure, often involving heads lower than D which mediate functions such as divison and quantification -- heads which may occur in a verbal syntactic context to mediate similar functions. Evidence for this nominal morphology will be presented for Gorwaa (see esp. §5.4). This would, therefore, seem to motivate an approach which either dispenses of the categorizing head completely (as in the work of Borer), or in which the categorizing head is (or can be) merged at a point higher up in the structure. This work opts for the latter approach, positing the categorizing head n, which, at its highest merge point (i.e. for number-valued nouns) directly dominates the #P. Such an approach will be discussed in §5.4 and §6.5).

Acquaviva (2008: 270) provides a structure with quantification and division projections as well as a categorizing head n, but in this structure, n directly dominates the root, as in (4.45). As such, the approach of the present work is, as far as I know, unique.

4.5.2 Summary

§4.2 established the precise object of study -- the Gorwaa noun -- and establishes its major subparts as the stem (STM), the suffix (SFX), and the linker (L). §4.3 reviewed wordhood criteria that may be applied to the noun, distinguishing these core subparts from extra-nominal material such as demonstrative enclitics and topic markers. §4.4 appealed to DM to provide an analysis for the stem (STM), establishing it as composed of an acategorial root (√) within a larger syntactic context (in the case of the STM, a nominal context). Phonetic form and semantic meaning are realized post-syntactically in a process of evaluation in
which the index provided by the root and the larger syntactic context is processed by *List 2* and *List 3*. In concluding, section 4.5 provided some closing marks on the specific identity of the larger syntactic context (to be developed in some detail in the coming chapters), and summarized.
5. The suffix 1: the regular phenomena

5.1 Introduction

In chapter 4, the noun was established as consisting of three major subparts: the stem, the suffix, and the linker. The stem was analysed as an acategorial root (√) within a larger nominal syntactic context (the description of which will form much of the subsequent discussion in this work). Attention will now turn to the next element in the series: the suffix (SFX).

(5.1) **The suffix (SFX)**

a. `wa/áangw wák`
   `wa/- -aangw -ó wák`
   `STM- -Sfx -L one`
   “one arroyo”

b. `we/eerí tsár`
   `wa/- -eeri ˜˜ tsár`
   `STM- -Sfx ˜˜ two`
   “two arroyos”

Suffixes are morphosyntactically complex elements: a list of their basic characteristics follows in (5.2) below.

(5.2) **Morphosyntactic characteristics of the Gorwaa suffix**

I. Regular Phenomena:

a. *Many suffixes (identified thus far as SFX) may be divided into separate morphemes: SFX1 and SFX2. All suffixes feature the SFX2 morpheme, not all suffixes feature the SFX1 morpheme.*

b. *Suffixes with a SFX1 morpheme are either Sg or Pl in number, and can therefore occur with external elements (e.g. adjectives) only if they show matching agreement.*

c. *Suffixes without a SFX1 morpheme are unvalued for number, and can therefore occur with external elements (e.g. adjectives) which show either Sg or Pl agreement. (though see II.d. for exceptions.)*
5. The suffix 1: the regular phenomena

II. Listed Phenomena

a. *A given noun stem takes a set of suffixes, known as a paradigm. Paradigms may be monads, pairs, or triads.*

b. *The paradigm taken by any given noun is unpredictable.*

c. *A given noun stem may have more than one paradigm. Selection of paradigm may or may not affect the semantic interpretation of the resultant noun.*

d. *Suffixes unvalued for number may have the kinds of agreement with which they may occur restricted by the composition of their paradigm.*

e. *The grammatical gender (i.e. M, F, or N) of a noun is determined by the SFX2 morpheme, which has a stable association with gender. If a noun is changed for number, its gender may also change.*

It will be observed that the major division in the list above is between phenomena deemed ‘regular’, and phenomena deemed ‘listed’. Using the Distributed Morphology architecture as the point of reference (Figure 3.1 in §3.4), regular phenomena are defined as stable correspondences which can largely be explained as products of feature bundles (i.e. material from List 1) being manipulated in the syntax (i.e. the syntactic operations), whereas listed phenomena require recourse to more detailed explanations of realization rules post-Spellout (i.e. material from List 2 and List 3) -- hence the term listed.

Each of the morphosyntactic characteristics described above is relatively complex, and a full understanding requires a detailed look at a rather large body of data. Because of these two factors, discussion of the suffix will span two chapters. The current chapter will address the regular phenomena of (5.2), and the next chapter, Chapter 6, will address the listed phenomena of (5.2).

Following this introduction, §5.2 of this chapter will provide a brief overview of each of the regular phenomena listed in (5.2) above. §5.3 is a detailed presentation and description of the empirical basis of this chapter: the suffixes.
5. The suffix 1: the regular phenomena

§5.4 provides a syntactic analysis to account for these regular phenomena. §5.5 summarizes.

5.2 Overview of the regular phenomena

This section expands on each of the regular phenomena associated with the Gorwaa suffix. For ease of presentation, these are repeated in (5.3) below.

(5.3) The regular morphosyntactic characteristics of the Gorwaa suffix

a. Many suffixes (identified thus far as SFX) may be divided into separate morphemes: SFX1 and SFX2. All suffixes feature the SFX2 morpheme, not all suffixes feature the SFX1 morpheme.

b. Suffixes with a SFX1 morpheme are either Sg or Pl in number, and can therefore occur with external elements (e.g. adjectives) only if they show matching agreement.

c. Suffixes without a SFX1 morpheme are unvalued for number, and can therefore occur with external elements (e.g. adjectives) which show either Sg or Pl agreement. (though see II.d. for exceptions.)

What follows is a discussion of each characteristic. Subsection 5.2.1 treats characteristic (a): the decomposability of the suffix. Subsection 5.2.2 treats characteristic (b): suffixes with number value. Subsection 5.2.3 treats characteristic (c): suffixes without number value.

5.2.1 Characteristic (a): the decomposability of the suffix

Mous (1993: 47) noticed that several suffixes in Iraqw are present “as fused elements in other suffixes”. This is important to the analysis, and will be established here. Many suffixes themselves may be divided into two separate morphemes, all of which arebolded in (5.4) below¹.

¹ From this point on, SFX1 and SFX2 will be indicated in the gloss.
5. The suffix 1: the regular phenomena

(5.4) **The suffix (SFX): composed of subparts SFX1 and SFX2**

a. \( \text{wa/á dúngw wák} \)
\[
\begin{array}{l}
\text{wa/- } \rightarrow \text{aangw -ó wák} \\
\text{STM- Sfx2 -L one} \\
\end{array}
\]
one arroyo
“one arroyo”

b. \( \text{we/eerí tsár} \)
\[
\begin{array}{l}
\text{wa/- } \rightarrow \text{eer -(a)’i tsár} \\
\text{STM- Sfx1 -Sfx2 -L two} \\
\end{array}
\]
two arroyos
“two arroyos”

As may be seen in (5.4) above, when both morphemes are present, SFX1 occurs closest to the stem. Additionally, (5.4) shows that, while all suffixes feature a SFX2 morpheme, not all suffixes feature an SFX1 morpheme.

The example in (5.4) risks implying that SFX1 ought to be interpreted as plural marking. Data in (5.5) shows that this is not the case, with SFX1 present on the singular form of the noun, and absent on the form used for plural.

(5.5) **SFX1 is present in singular nouns, such as ire/imi ‘cosmetic scar’**

a. \( \text{ire/imítá wák} \)
\[
\begin{array}{l}
\text{ire/- } \rightarrow \text{iim -i tá wák} \\
\text{STM- Sfx1 -Sfx2 -L one} \\
\end{array}
\]
one cosmetic scar
“one cosmetic scar”

b. \( \text{ire/iíngw tsár} \)
\[
\begin{array}{l}
\text{ire/- } \rightarrow \text{aangw -ó tsár} \\
\text{STM- Sfx2 -L two} \\
\end{array}
\]
two cosmetic scars
“two cosmetic scars”

5.2.2 Characteristic (b): suffixes with number value

There are two number values in Gorwaa: singular (Sg) and plural (Pl). Notably, the only category that shows number agreement in Gorwaa is the adjective. This is true in modifier constructions (as in (5.6)), as well as predicate adjective
5. The suffix 1: the regular phenomena

constructions (as in (5.7)). For a full description of the adjective and its
agreement patterns, see §2.3.3.1.

(5.6) Number agreement on modifier adjectives

a. \textit{kookumó} \textit{tleér}

kook- -(a)m -ó -ó \textit{tleér}
STM- -Sfx1 -Sfx2 -L tall.M
rooster
‘a tall rooster’

b. \textit{kookumá’} \textit{tlet}

kook- -(a)m -a’(!) ~’ ~ \textit{tlet}
STM- -Sfx1 -Sfx2 -L tall.N.Pl
roosters
‘tall roosters’

(5.7) Number agreement on predicate adjectives

a. \textit{kookumo ku} \textit{tleér}

kook- -(a)m -ó -ó t- ng- u- Ø \textit{tleér}
STM- -Sfx1 -Sfx2 -L MP- A.3- P.M- Aux tall.M
rooster
‘the rooster is tall’

b. \textit{kookuma’} \textit{ki} \textit{tlet}

kook- -(a)m -a’(!) ~’ ~ t- ng- i- Ø \textit{tlet}
STM- -Sfx1 -Sfx2 -L MP- A.3- P.N- Aux tall.N.Pl
roosters
‘the roosters are tall’

Suffixes with a SFX1 morpheme are either Sg or Pl in number. As such, the suffix -(a)mó is always Sg, and only used with nouns denoting singular entities (see (5.8)). Conversely, the suffix -(a)ma’ is always Pl, and only used with nouns denoting plural entities (see (5.9)).

(5.8) The suffix -(A)mó is Sg in number

a. \textit{kookumó}

kook- -(a)m -ó -ó
STM- -Sfx1 -Sfx2 -L
rooster
‘a rooster’
5. The suffix 1: the regular phenomena

b.  \textit{xarmó}
\begin{align*}
\text{ STM-} & \quad \text{ -Sfx1 -Sfx2 } -L \\
\text{ 'a horn'}
\end{align*}

c.  \textit{tlaptumó}
\begin{align*}
\text{ STM-} & \quad \text{ -Sfx1 -Sfx2 } -L \\
\text{ 'a falcon'}
\end{align*}

(5.9) \textbf{THE SUFFIX -(A)MA' IS PL IN NUMBER}

a.  \textit{kookuma’}
\begin{align*}
\text{ STM-} & \quad \text{ -Sfx1 -Sfx2 } -L \\
\text{ 'roosters'}
\end{align*}

b.  \textit{irindima’}
\begin{align*}
\text{ STM-} & \quad \text{ -Sfx1 -Sfx2 } -L \\
\text{ 'biceps, calves'}
\end{align*}

c.  \textit{slahhama’}
\begin{align*}
\text{ STM-} & \quad \text{ -Sfx1 -Sfx2 } -L \\
\text{ 'acacias (Acacia kirkii)'}
\end{align*}

Suffixes with an SFX1 morpheme occur with external elements, such as adjectives and numerals, \emph{only} if they show matching agreement, or are otherwise semantically consistent with the number value of the noun.

(5.10) \textbf{THE NOUN KOOKUMÓ CANNOT OCCUR WITH EXTERNAL ELEMENTS INCONSISTENT WITH SG NUMBER}

a.  \textit{*kookumó tlét}
\begin{align*}
\text{ STM-} & \quad \text{ -Sfx1 -Sfx2 } -L \\
\text{ tall.M.Pl}
\end{align*}

(intended meaning) 'a tall rooster' or 'tall roosters'
5. The suffix 1: the regular phenomena

b. *\(\text{kookumó tsár}\)
\[
\begin{array}{l}
\text{kook-} - (a)m \quad -ó \quad -ó \quad \text{tsár} \\
\text{STM-} \quad -\text{Sfx}1 \quad -\text{Sfx}2 \quad -\text{L} \quad \text{two} \\
\end{array}
\]
(intended meaning) ‘two roosters’, ‘two (groups of) roosters’

(5.11) The noun \text{kookuma}' cannot occur with external elements inconsistent with PL number

a. *\(\text{kookumá’ leer}\)
\[
\begin{array}{l}
\text{kook-} - (a)m \quad -a'(!) \quad \text{́} \quad \text{́} \quad \text{ler} \\
\text{STM-} \quad -\text{Sfx}1 \quad -\text{Sfx}2 \quad -\text{L} \quad \text{tall.M.Pl} \\
\end{array}
\]
(intended meaning) ‘a tall rooster’, ‘tall roosters’

b. *\(\text{kookumá’ wák}\)
\[
\begin{array}{l}
\text{kook-} - (a)m \quad -a'(!) \quad \text{́} \quad \text{́} \quad \text{wák} \\
\text{STM-} \quad -\text{Sfx}1 \quad -\text{Sfx}2 \quad -\text{L} \quad \text{one} \\
\end{array}
\]
(intended meaning) ‘one rooster’, ‘one (group of) roosters’

Configurations of nouns valued for number therefore result in the highly common distinction of singular vs. plural.

(5.12) Singular vs. plural

<table>
<thead>
<tr>
<th>'rooster'</th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>kookumó</strong></td>
<td>kookumá’</td>
<td></td>
</tr>
<tr>
<td>kookumó úr</td>
<td>kookumá’ uren</td>
<td></td>
</tr>
<tr>
<td>kook- (a)m -ó -ó úr</td>
<td>kook- (a)m -a’ ~ ~ uren</td>
<td></td>
</tr>
<tr>
<td>STM- -Sfx1 -Sfx2 -L big.M</td>
<td>STM- -Sfx1 -Sfx2 -L big.N.Pl</td>
<td></td>
</tr>
</tbody>
</table>

At this point, noting such a configuration may seem painfully obvious. However, in the coming subsection, a range of less common configurations will be introduced, allowing this singular vs. plural configuration to act as a familiar benchmark.
5. The suffix 1: the regular phenomena

5.2.3 Characteristic (c): suffixes without number value

Suffixes without a SFX1 morpheme are unvalued for number, and can be used with nouns referring to entities whose number value is either not important or indeterminate (5.13).

(5.13) The suffix -oo (Fr) is unvalued for number

a. tsir/oo
   tsir/ -oo -r'~'
   STM - SFX2 -L
   birds
   ‘a species, kind of, or flock of birds’, ‘birds’

b. daka’oo
   daka’ -oo -r’~'
   STM - SFX2 -L
   baobabs
   ‘a species, kind of, or stand of baobabs’, ‘baobabs’

c. xooroo
   xoor -oo -r’~'
   STM - SFX2 -L
   multitude
   ‘a multitude (of people)’

Because these suffixes are unvalued for number, they may occur with external elements (such as adjectives or numerals) with show both Sg or Pl agreement.

(5.14) The noun Tsir/oo can occur with external elements showing both Sg or Pl agreement

a. tsir/oór tleer
   tsir/ -oo -r ~~ tleer
   STM - SFX2 -L tall.F
   birds
   “a tall species of bird”

b. tsir/oór wák
   tsir/ -oo -r ~~ wák
   STM - SFX2 -L one
   birds
   “one species of bird”
5. The suffix 1: the regular phenomena

c. tsir/oór tlet
   tsir/- -oo -r ~~ tlet
   STM- -SFX2 -L tall.F.Pl
   "tall species of birds", "tall birds"

d. tsir/oór tsár
   tsir/- -oo -r ~~ tsár
   STM- -SFX2 -L two
   "two species of birds", "two birds"

Having noun forms unspecified for number is not unique to Gorwaa and is also described in Corbett (2000:9) as occurring in the Cushitic language Bayso (bsw; Ethiopia) and other unrelated languages. Mous 2008 notes the same phenomenon in Tsamakko (tsb; Ethiopia) (relevant data in Savà 2005: 61) and K’abeena (alw; Ethiopia) (relevant data in Crass 2005:63). The form is labeled by Corbett as general number, and the distinction between it and number-valued forms is represented as follows.

Figure 5.1: General number versus singular and plural (from Corbett 2000: 11)

As such, the noun tsir/oo (with the suffix -oo (Fr)) is, on its own, noncommittal as to number. Perhaps the best translation would be 'bird' in the general sense.

That is, if one 'hunts bird', it is uncertain as to how many birds are actually involved: perhaps one, perhaps many -- it is simply not conveyed in the utterance.

Close examination of the translations of these forms is salutary. In every case in which the noun is unambiguously expressing general number (Gen), the noun
5. The suffix 1: the regular phenomena

refers to a kind or group, not an individual or plurality of individuals. This is demonstrated in the translations in (5.15).

(5.15) TRANSLATIONS OF GEN FORMS

a. \textit{qoonqal}
\begin{align*}
\text{STM} & - \text{Sfx2} - \text{L} \\
\text{crowned.crane} & - \emptyset - \acute{\text{o}} \\
\end{align*}

\textit{‘a flock of crowned crane’, or ‘a species of crowned crane’, or ‘crowned crane’}

b. \textit{malmáw}
\begin{align*}
\text{STM} & - \text{Sfx2} - \text{L} \\
\text{lime.tree} & - \emptyset - \acute{\text{o}} \\
\end{align*}

\textit{‘a stand of lime tree’, or ‘a species of lime tree’, or ‘lime tree’}

c. \textit{nee’ár}
\begin{align*}
\text{STM} & - \text{Sfx2} - \text{L} \\
\text{thrush} & - \emptyset - \acute{\text{o}} \\
\end{align*}

\textit{‘a flock of thrush’, or ‘a species of thrush’, or ‘thrush’}

Crucially, then, these nouns of general number in Gorwaa may be defined as referring to a kind of undifferentiated unity, homogeneous in consistency and indeterminate in shape and boundary. This therefore explains \textit{qoonqal} having the resultant meaning of ‘flock of crowned cranes’, ‘type of crowned crane’, or ‘crowned crane’ \textit{tout court}. Conversely, nouns which occur with Sg or Pl number agreement refer to discrete individuals or sets of individuals, both well-defined in terms of shape and physical boundary (Koptjevskaya-Tamm, 2006).

The introduction of nouns unvalued for number (i.e. general number) allows for a system of considerable complexity. As noted in the sketch above (§2.3.1.2), much of this complexity has to do with nouns being arranged in a manner that does not always fit well with the traditional notions of singular versus plural.
5. The suffix 1: the regular phenomena

With singular vs. plural as a benchmark in (5.12) above, all patterns are examined in detail below.

A less familiar configuration is a noun stem which takes two different suffixes, one triggering singular agreement on the adjective, and the other allowing the noun to occur with either singular or plural agreement on the adjective. This configuration is called singular vs. general.

(5.16) SINGULAR vs. GENERAL

<table>
<thead>
<tr>
<th>SINGULAR</th>
<th>GENERAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>loo/i</td>
<td>loo/oo</td>
</tr>
<tr>
<td>loo/-i</td>
<td>loo/oór ur</td>
</tr>
<tr>
<td>ur</td>
<td>ur</td>
</tr>
<tr>
<td>STM- -SFX2 -L big.F</td>
<td>STM- -SFX2 -L big.F</td>
</tr>
<tr>
<td>'leaf'</td>
<td>'leaves (foliage)'</td>
</tr>
<tr>
<td>'a big leaf'</td>
<td>'many leaves (foliage)'</td>
</tr>
</tbody>
</table>

Conversely, a noun stem may take two different suffixes, one triggering plural agreement on the adjective, and the other occurring with either singular or plural agreement on the adjective. This configuration is called general vs. plural.

(5.17) GENERAL vs. PLURAL

<table>
<thead>
<tr>
<th>GENERAL</th>
<th>PLURAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>piiró úr</td>
<td>piireemá' uren</td>
</tr>
<tr>
<td>piir- -ó</td>
<td>piir- -eem-a'(!)</td>
</tr>
<tr>
<td>STM- -SFX2 -L big.M</td>
<td>STM- -SFX1-SFX2 -L big.N.Pl</td>
</tr>
<tr>
<td>'a big dragonfly'</td>
<td>'big dragonflies'</td>
</tr>
</tbody>
</table>

A noun stem may take three different suffixes. In this configuration, one triggers singular agreement on the adjective, another triggers plural agreement on the
5. The suffix 1: the regular phenomena

adjective, and the third may occur with either singular or plural agreement on
the adjective. This configuration is called singular vs. general vs. plural.

(5.18) SINGULAR VS. GENERAL VS. PLURAL

<table>
<thead>
<tr>
<th>SINGULAR</th>
<th>GENERAL</th>
<th>PLURAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>qoonqalumó</td>
<td>qoonqaló uúr</td>
<td>qoonqalima'</td>
</tr>
<tr>
<td>qoonqál</td>
<td>qoonqaló urén</td>
<td>qoonqalima' uren</td>
</tr>
<tr>
<td>qoonqál</td>
<td>qoonqál-Ø-ô uúr</td>
<td>qoonqál-Ø-ô urén</td>
</tr>
<tr>
<td>crowned.cranes</td>
<td>crowned.cranes</td>
<td>crowned.cranes</td>
</tr>
<tr>
<td>&quot;a big crane&quot;</td>
<td>&quot;a big (flock of) cranes&quot;</td>
<td>&quot;many (flocks of) cranes&quot;</td>
</tr>
</tbody>
</table>

When a noun takes only one suffix, it may be mass, as in (5.19), singularia
tantum, as in (5.20) or general (5.21). Properties associated with Gorwaa mass
nouns recorded so far (based on Chierchia 1998) are their inability to take
cardinal numerals without use of an obligatory measure (5.22), the choice of
adjectives of quantity available to them (5.23), and their independence from
structure of the matter at hand (5.24).

(5.19) MASS

<table>
<thead>
<tr>
<th>'WATER'</th>
</tr>
</thead>
<tbody>
<tr>
<td>MASS</td>
</tr>
<tr>
<td>ma'ay</td>
</tr>
<tr>
<td>ma'áy yaariir</td>
</tr>
<tr>
<td>STM- -SFX2 -L much.N</td>
</tr>
<tr>
<td>water</td>
</tr>
<tr>
<td>&quot;much water&quot;</td>
</tr>
</tbody>
</table>

(5.20) SINGULARIA TANTUM

<table>
<thead>
<tr>
<th>SINGULAR</th>
<th>PLURAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>dawrír ur</td>
<td></td>
</tr>
<tr>
<td>dawr- -i -r~'-~ ur</td>
<td></td>
</tr>
<tr>
<td>STM- -SFX2 -L</td>
<td></td>
</tr>
<tr>
<td>big.F</td>
<td></td>
</tr>
<tr>
<td>sky</td>
<td></td>
</tr>
<tr>
<td>&quot;the great sky&quot;</td>
<td></td>
</tr>
</tbody>
</table>
5. The suffix 1: the regular phenomena

<table>
<thead>
<tr>
<th>(5.21) General</th>
<th>‘Earthquake’</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General</strong></td>
<td></td>
</tr>
<tr>
<td><strong>kuunseeli</strong></td>
<td></td>
</tr>
<tr>
<td>kuunseilir ur</td>
<td></td>
</tr>
<tr>
<td>kuunseel- -i</td>
<td></td>
</tr>
<tr>
<td>ur</td>
<td></td>
</tr>
<tr>
<td>STM- -Sfx2 -L</td>
<td>big.F</td>
</tr>
<tr>
<td>earthquake</td>
<td></td>
</tr>
<tr>
<td>“a big earthquake”</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(5.22) Mass nouns cannot take cardinals without a measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. <em>ma’áy wák</em> [see comment in 20150810d.8]</td>
</tr>
<tr>
<td>ma’- -ay <del>’</del> wák</td>
</tr>
<tr>
<td>STM- -Sfx2 -L one</td>
</tr>
<tr>
<td>water</td>
</tr>
<tr>
<td>(intended meaning) ‘one water’</td>
</tr>
<tr>
<td>b. [...] *ma’ay chu-pa-dú tám [...] [20150810d.10]</td>
</tr>
<tr>
<td>ma’- -ay <del>’</del> chu-pa-dú tám</td>
</tr>
<tr>
<td>STM- -Sfx2 -L bottles.LNØ three</td>
</tr>
<tr>
<td>water</td>
</tr>
<tr>
<td>“[... three bottles of water [...]]”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(5.23) Mass nouns and quantity adjectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. <em>tséereér uren</em></td>
</tr>
<tr>
<td>tseer- -ee -r <del>’</del> uren</td>
</tr>
<tr>
<td>STM- -Sfx2 -L big.F.Pl</td>
</tr>
<tr>
<td>blood</td>
</tr>
<tr>
<td>(intended meaning) ‘much blood’</td>
</tr>
<tr>
<td>b. #tséereér ur</td>
</tr>
<tr>
<td>tseer- -ee -r <del>’</del> ur</td>
</tr>
<tr>
<td>STM- -Sfx2 -L big.F</td>
</tr>
<tr>
<td>blood</td>
</tr>
<tr>
<td>(intended meaning) ‘much blood’</td>
</tr>
<tr>
<td>c. tséereér yaariir</td>
</tr>
<tr>
<td>tseer- -ee -r <del>’</del> yaariir</td>
</tr>
<tr>
<td>STM- -Sfx2 -L much.F</td>
</tr>
<tr>
<td>blood</td>
</tr>
<tr>
<td>‘much blood’</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(5.24) Masses are independent of the structure of the matter</th>
</tr>
</thead>
<tbody>
<tr>
<td>karkari vs. naanagumó</td>
</tr>
<tr>
<td>‘grubs’</td>
</tr>
</tbody>
</table>

In some cases noun stems may take one suffix and be mass, and take another suffix and trigger plural agreement. In this latter case, they come to mean the
5. The suffix 1: the regular phenomena

substance of the mass has been dispersed. They gain all the properties of count nouns. As demonstrated in (5.23), the mass noun *tseere* most naturally takes the quantity adjective *yaariir*, and is ungrammatical with the quantity adjective *uren*. In (5.25), the pluralized form of *tseere* can grammatically take the quantity adjective *uren*.

(5.25) **MASS vs. PLURAL**

<table>
<thead>
<tr>
<th>MASS</th>
<th>'BLOOD'</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>tseere</em></td>
<td><em>tseerdú</em></td>
</tr>
<tr>
<td><em>tseereér yaariir</em></td>
<td><em>tseerdú uren</em></td>
</tr>
<tr>
<td>tseer- -ee -r~'~ yaariir</td>
<td>tseer- -(a)d -u(!) -r~'~ uren</td>
</tr>
<tr>
<td>STM- -SFX2 -L much.F</td>
<td>STM- -SFX1-SFX2 -L big.N.Pl</td>
</tr>
<tr>
<td><strong>blood</strong></td>
<td><strong>blood</strong></td>
</tr>
<tr>
<td>“much blood”</td>
<td>“many spots (or pools) of blood”</td>
</tr>
</tbody>
</table>

For exceptions to this characteristic, i.e. situations in which forms marked with general number suffixes are restricted to only Sg or only Pl contexts, see §6.3.4.

5.3 Characterizing the suffix: data presentation

This is a detailed presentation and description of the empirical basis of this chapter: the suffixes.

42 different noun suffixes have been identified in Gorwaa thus far, and are presented in Table 5.1 below. A detailed discussion of each suffix follows.

Suffixes have been organized according roughly to their occurrence with Sg versus Pl morphology: ‘Sg’ suffixes occurring toward the top, and ‘Pl’ suffixes occurring toward the bottom. Those suffixes in between are organized on a cline with those which are ‘general (Sg-leaning)’ bleeding into the ‘general’ suffixes, which in turn bleed into the suffixes which are ‘general (Pl-leaning)’. This continuum is based on frequency in the sample: as shown above, the -oo (F)
5. The suffix 1: the regular phenomena

suffix of lo/oo in (5.16) and the -∅ (M) suffix of qoonqál in (5.17) can both take either a Sg or a Pl adjective: a different (or larger) sample could indeed yield a different arrangement of these in-between cases. What is certain is that there are three broad groups: suffixes that are consistently Sg number, suffixes that are consistently Pl number, and suffixes that are, more or less, general number.

Suffixes are shown with their gender, as well as their subgender. As described above (§2.3.1.2), subgender refers to a different morphological pattern occurring within a given gender, usually in a very restricted environment. In the case of Gorwaa, every gender has two subgender patterns: Mo and Mk, Fr and Ft, and N∅ and Na. This morphology is only ever instantiated on the gender linker, and each suffix is linked with one and only one subgender. This is why, for example, the morpheme -a is considered three different suffixes: one suffix -a triggers Mo agreement, another suffix -a triggers Mk agreement, and a third suffix -a triggers Ft agreement. There is further evidence for why this division is valid, and will be dealt with later in the sections describing the paradigms (see §6.2, §6.3, and §6.4).
### Table 5.1: Noun Suffixes

<table>
<thead>
<tr>
<th>Suffix</th>
<th>Gender</th>
<th>Constituent Morphs</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>-(a)mó</td>
<td>Mo</td>
<td>(a)m ó(M)</td>
<td>gasesmó ‘a black snake’</td>
</tr>
<tr>
<td>-ito’o</td>
<td>Fr</td>
<td>it o’(F)</td>
<td>makito’o ‘an animal’</td>
</tr>
<tr>
<td>-imo</td>
<td>Mo</td>
<td>iim o(M)</td>
<td>nanahumo ‘a skull’</td>
</tr>
<tr>
<td>-iimi</td>
<td>Fr</td>
<td>iim i(Fr)</td>
<td>se’eemi ‘a strand of hair’</td>
</tr>
<tr>
<td>-aaC₂i</td>
<td>Fr</td>
<td>aaC₂ i(Fr)</td>
<td>balaali ‘a grain of millet’</td>
</tr>
<tr>
<td>-o</td>
<td>Mo</td>
<td></td>
<td>aako ‘a grandfather’</td>
</tr>
<tr>
<td>-í</td>
<td>Fr</td>
<td></td>
<td>fuufí ‘a weasel’</td>
</tr>
<tr>
<td>-í</td>
<td>Ft</td>
<td></td>
<td>hhinhhini ‘pumpkins’</td>
</tr>
<tr>
<td>-ó</td>
<td>Mo</td>
<td></td>
<td>boohoontó ‘a hole’</td>
</tr>
<tr>
<td>-a</td>
<td>Mk</td>
<td></td>
<td>dawa ‘a hand’</td>
</tr>
<tr>
<td>-a</td>
<td>Mo</td>
<td></td>
<td>niinga ‘a drum’</td>
</tr>
<tr>
<td>-i</td>
<td>Ft</td>
<td></td>
<td>luki ‘a reed mat’</td>
</tr>
<tr>
<td>-i</td>
<td>Fr</td>
<td></td>
<td>ba’aari ‘bees’</td>
</tr>
<tr>
<td>-Ø</td>
<td>Mo</td>
<td></td>
<td>gumbayaya ‘a kidney’</td>
</tr>
<tr>
<td>-ay</td>
<td>N∅</td>
<td></td>
<td>fu’unay ‘meat’</td>
</tr>
<tr>
<td>-ú</td>
<td>Mo</td>
<td></td>
<td>/aamú ‘fruit’</td>
</tr>
<tr>
<td>-oo</td>
<td>Fr</td>
<td></td>
<td>tsir/oo ‘birds’</td>
</tr>
<tr>
<td>-a</td>
<td>Ft</td>
<td></td>
<td>asla ‘fire’</td>
</tr>
<tr>
<td>-aa</td>
<td>Fr</td>
<td></td>
<td>/ameenaa ‘women’</td>
</tr>
<tr>
<td>-ee</td>
<td>Fr</td>
<td></td>
<td>yaa’ee ‘a river’</td>
</tr>
<tr>
<td>-á</td>
<td>Mo</td>
<td></td>
<td>niingá ‘green pigeons’</td>
</tr>
<tr>
<td>-ay</td>
<td>Mo</td>
<td></td>
<td>na/ay ‘a child’</td>
</tr>
<tr>
<td>-u</td>
<td>Mo</td>
<td></td>
<td>daawu ‘an elephant’</td>
</tr>
<tr>
<td>-aangw</td>
<td>Mo</td>
<td></td>
<td>kwu/uungw ‘a wall’</td>
</tr>
<tr>
<td>-oo</td>
<td>N∅</td>
<td></td>
<td>daqoo ‘herds’</td>
</tr>
<tr>
<td>-áy</td>
<td>Mo</td>
<td></td>
<td>fiitsáy ‘brooms’</td>
</tr>
<tr>
<td>-u!</td>
<td>N∅</td>
<td></td>
<td>gamu ‘an underside’</td>
</tr>
<tr>
<td>-a!(l)</td>
<td>N∅</td>
<td></td>
<td>gongoaxa ‘elbows’</td>
</tr>
<tr>
<td>-a’i</td>
<td>N∅</td>
<td></td>
<td>tsatti’i ‘knives’</td>
</tr>
<tr>
<td>-(a)y</td>
<td>Mo</td>
<td>(a)m áy(M)</td>
<td>ga/atanáy ‘fevers’</td>
</tr>
<tr>
<td>-iya’</td>
<td>N∅</td>
<td>iy a’i(N)</td>
<td>tsi/iya ‘shins’</td>
</tr>
<tr>
<td>-(a)ma’</td>
<td>N∅</td>
<td>(a)m a’!(l)(N)</td>
<td>tla/ama’ ‘ditches’</td>
</tr>
<tr>
<td>-iyoo</td>
<td>N∅</td>
<td>iy oo(N)</td>
<td>kuriyoo ‘anus’</td>
</tr>
<tr>
<td>-aC₃i’</td>
<td>N∅</td>
<td>(a)C₃ a’i(N)</td>
<td>aamaami’i ‘grandmothers’</td>
</tr>
<tr>
<td>-&lt;ee&gt;-aC₂u</td>
<td>N∅</td>
<td>ee(t,m,r)+aC₂ u!(N)</td>
<td>tla/eeefufu ‘living quarters’</td>
</tr>
<tr>
<td>-eemoo or</td>
<td>N∅</td>
<td>ee(t,m,r) oo(N) oo(N)</td>
<td>hhafeetoo ‘large reed mats’</td>
</tr>
<tr>
<td>-&lt;ee&gt;-oo</td>
<td>N∅</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-aawee</td>
<td>Fr</td>
<td>aw ee(F)</td>
<td>hitmawee ‘owls’</td>
</tr>
<tr>
<td>-eeri</td>
<td>N∅</td>
<td>eer (a)’i(N)</td>
<td>kwa/eeri ‘hares’</td>
</tr>
<tr>
<td>-eema’</td>
<td>N∅</td>
<td>eem a’!(l)(N)</td>
<td>murungeema’ ‘bellybuttons’</td>
</tr>
<tr>
<td>-(a)du</td>
<td>N∅</td>
<td>(a)d u!(N)</td>
<td>laydu ‘branding irons’</td>
</tr>
<tr>
<td>-aC₂ee</td>
<td>Fr</td>
<td>(a)C₂ ee(F)</td>
<td>hitmtee ‘metal necklace’</td>
</tr>
<tr>
<td>-aC₂u</td>
<td>N∅</td>
<td>(a)C₂ u!(N)</td>
<td>/ampupu ‘platforms’</td>
</tr>
</tbody>
</table>
5. The suffix 1: the regular phenomena

5.3.1 Sg

As the label implies, this group of suffixes form nouns which only occur with\(^2\) other forms showing Sg agreement. Put differently, these suffixes never occur with Pl agreement on the adjective (5.26). Note that, crucially, this is not the case with other groups of suffixes (5.27).

(5.26) **SG SUFFIX -(A)MÓ MAY OCCUR ONLY WITH OTHER FORMS SHOWING SG AGREEMENT**

a. \textit{gasesmó tleér}
gases- -(a)m -ó -ó \hspace{1cm} \textit{tleér} 
STM- -Sfx1 -Sfx2 -L \hspace{1cm} \textit{long.M}  
\begin{tabular}{l}
black\_snake \\
\end{tabular}

'a long black snake'

b. \textit{*gasesmó tlét}
gases- -(a)m -ó -ó \hspace{1cm} \textit{tlét} 
STM- -Sfx1 -Sfx2 -L \hspace{1cm} \textit{long.M.Pl}  
\begin{tabular}{l}
black\_snake \\
\end{tabular}

(intended meaning) 'long black snakes'

c. \textit{gasesima’tlét}
gases- -(a)m -a’(l) \hspace{1cm} \textit{tlét} 
STM- -Sfx1 -Sfx2 -L \hspace{1cm} \textit{long.N.Pl}  
\begin{tabular}{l}
black\_snakes \\
\end{tabular}

'long black snakes'

(5.27) **GEN SUFFIX -Ú MAY OCCUR WITH OTHER FORMS SHOWING EITHER SG OR PL AGREEMENT**

a. \textit{slanú tleér}
slan- -ú -ó \hspace{1cm} \textit{tleér} 
STM- -Sfx2 -L \hspace{1cm} \textit{long.M}  
\begin{tabular}{l}
python \\
\end{tabular}

'a long python'

b. \textit{slanú tlét}
slan- -ú -ó \hspace{1cm} \textit{tlét} 
STM- -Sfx2 -L \hspace{1cm} \textit{long.M.Pl}  
\begin{tabular}{l}
python \\
\end{tabular}

'long python' (i.e. as a species, versus short kinds of python)

\(^2\) The choice of the term 'occur with' rather than 'trigger' is used advisedly, as it seems as if number agreement (seen on the adjective) consistently comes from an element other than the noun. Number agreement (as well as cases of gender agreement 'mismatch') will be examined fully in Chapter 7.
5. The suffix 1: the regular phenomena

This group may also be distinguished by its ‘composed’ suffixes. That is, all the suffixes of this group may be broken down into two smaller subcomponents. The first subcomponent is one of a series of morphemes readily identifiable as ‘derivational’ when used with verb stems (c.f. §2.3.2.4). The second subcomponent is always a number suffix from the ‘general’ group.

Each member of the ‘Sg’ group is further examined below.

5.3.1.1 -(a)mó (Mo)

-(a)mó is one of the most common suffixes, with approximately 190 tokens identified. The initial vowel is epenthetic, and thus its surface form may vary.

(5.28) The suffix -(a)mó (Mo)

a. gasesmó
gases- -(a)mó -ó -ó
STM- Sfx1 Sfx2 L
black snake
‘a black snake’

b. bee/amó
bee/- -(a)mó -ó -ó
STM- Sfx1 Sfx2 L
flycatcher
‘a flycatcher’

c. piindimó
piind- -(a)mó -ó -ó
STM- Sfx1 Sfx2 L
door plank
‘a door plank’

The primary difference between the suffixes -(a)mó and -imo is in the presence of rising pitch accent.
5. The suffix 1: the regular phenomena

A similar form -- -mo -- exists in Iraqw (Mous 1993: 63), which is probably cognate, but does not have rising pitch accent. No such suffix is reported in Alagwa (Mous 2016).

The suffix may be decomposed into two parts: (a)m SFX1, and ó SFX2. Note that SFX1 is recognizable in the -VVm of the durative verbal suffix (§2.3.2.4). SFX2 is the general suffix -ó.

5.3.1.2 -{i}to'o (Fr)

-{i}to'o occurs only 7 times in the sample.

(5.29) THE SUFFIX -{i}to'o (Fr)

\[
\text{makito'o} \\
\text{STM-} \quad \text{SFX1} \quad \text{SFX2} \quad \text{-L}
\]

\[\text{'an animal}\]

Kießling (2000:8) noted that a masculine suffix is typically used to refer to one specimen of a tree or shrub, whereas a feminine suffix is used to refer to its flower or fruit. Where it is the suffix -(a)mó accomplishes the former, it is the suffix -{i}to'o which is often used for the latter.

(5.30) SUFFIX -(A)mó (Mo) USED TO DENOTE A PLANT, SUFFIX -{i}to'o (Fr) USED TO DENOTE A FLOWER OR FRUIT

a. \[\text{maangwaré'}\] \\

\[\text{STM-} \quad \text{SFX2} \quad \text{-L} \]

\[\text{k.o.sorghum} \]

\[\text{'sorghum'}\]
5. The suffix 1: the regular phenomena

b.  
\textit{maangware’umó}  
maangware’- \(\text{(a)m} \) -ó -ó  
\begin{tabular}{c}
STM-  
\hline
- SFX1 & - SFX2 & - L \\
\hline
\end{tabular}  
\begin{tabular}{c}
\text{k.o.sorghum.plant} \\
\end{tabular}  
\text{‘a sorghum plant’}

c.  
\textit{maangware’ito’o}  
maangware’- \(\text{-it} \) -o’o -r~´~  
\begin{tabular}{c}
STM-  
\hline
- SFX1 & - SFX2 & - L \\
\hline
\end{tabular}  
\begin{tabular}{c}
\text{k.o.sorghum.head} \\
\end{tabular}  
\text{‘a head of sorghum’}

The Iraqw cognate is identical (Mous 1993: 67). No equivalent exists in Alagwa.

The suffix may be decomposed into two parts: \(\text{it SFX1, and o’o SFX2} \). SFX1 is isomorphic with the verbal middle voice suffix \(-\text{VVt} (\S 2.3.2.4)\). SFX2 is not immediately identifiable with a current suffix of Gorwaa, but Iraqw has a feminine nominal suffix \(-\text{o’o} \) (Mous 1993:67), cognate with the current Gorwaa general suffix \(-\text{oo} \) \(\text{(F)}\).

5.3.1.3 \text{-imo (Mo)}

\text{-imo} is rare, with just 2 occurrences in the sample. 

\text{(5.31) The suffix -imo (Mo)}

a.  
\textit{bambarimo}  
bambar- \(\text{-iim} \) -o -ó  
\begin{tabular}{c}
STM-  
\hline
- SFX1 & - SFX2 & - L \\
\hline
\end{tabular}  
\begin{tabular}{c}
\text{millet.grain} \\
\end{tabular}  
\text{‘a grain of bulrush millet’}

b.  
\textit{nanahhumo}  
nanahh- \(\text{-iim} \) -o -ó  
\begin{tabular}{c}
STM-  
\hline
- SFX1 & - SFX2 & - L \\
\hline
\end{tabular}  
\begin{tabular}{c}
\text{skull} \\
\end{tabular}  
\text{‘a skull’}
5. The suffix 1: the regular phenomena

In Iraqw, the form may have been subsumed into the more widespread -mo. In Alagwa, the cognate -imoo (Mous 2016: 98) can be identified.

The suffix may be decomposed into -im for SFX1 (once again, recognizable as the durative), and the general suffix -o for SFX2.

5.3.1.4 -iimi (Fr)

-iimi occurs 10 times in the sample.

(5.32) The suffix -iimi (Fr)

a. se’eemi
   se’- -im -i -r~’~
   STM- -Sfx1 -Sfx2 -L
   ‘a strand of hair’

b. ya’eemi
   ya’- -im -i -r~’~
   STM- -Sfx1 -Sfx2 -L
   ‘a stream’

c. gitsiimi
   gits- -im -i -r~’~
   STM- -Sfx1 -Sfx2 -L
   ‘a single leaf’

There is no recorded cognate in Iraqw. In Alagwa, the cognate is identical, but only has 1 form (Mous 2016: 96).

The suffix may be decomposed into -iim for SFX1 (isomorphic with the durative), and the general suffix -i (Fr) for SFX2.
5. The suffix 1: the regular phenomena

5.3.1.5 -aaC_zi (Fr)

The suffix -aaC_zi (where the C_z is a consonant reduplicated from the last in the stem) occurs on a single noun in the sample.

(5.33) The suffix -AA_C_zi (Fr)

\[ \text{balaali} \]
\[ \text{bal-} \quad \text{-aaC}_z \quad \text{-i} \quad \text{-r~r~} \]
\[ \text{STM-} \quad \text{-Sfx1} \quad \text{-Sfx2} \quad \text{-L} \]
\[ \text{sorghum, grain} \]

‘a grain of millet’

The cognate is identical in Iraqw (Mous 1993: 69), as well as in Alagwa (Mous 2016: 96).

The suffix may be decomposed into -aaC_z for SFX1, and -i for SFX2. -aaC_z is recognizable in the pluractional suffix for verbs (§2.3.2.4), and -i is the -i (Fr) general suffix below.

5.3.2 General (Sg-leaning) (Gen_{SG})

This group of suffixes are general in number, but are often used with nouns to denote Sg entities. Nouns formed with these suffixes usually occur with Sg agreement only (5.34), but when they exist in a pair with a noun formed with a Sg suffix (5.35), or a noun formed with a Pl suffix (5.36), they may occur with either Sg or Pl agreement.

(5.34) The gen suffix -i (Fr) is usually Sg

a. \[ \text{fuufir} \text{ leer} \]
\[ \text{fuuf-} \quad \text{-i} \quad \text{-r~r~} \quad \text{tleer} \]
\[ \text{STM-} \quad \text{-Sfx2} \quad \text{-L} \]
\[ \text{weasel} \]

‘a long weasel’
5. The suffix 1: the regular phenomena

b. *fuufír tlet

\[
\begin{array}{c}
\text{fuuf} \quad \text{-í} \quad \text{-r~}~ \text{tlet} \\
\text{STM-} \quad \text{-Sfx2} \quad \text{-L} \\
\hline
\text{weasel}
\end{array}
\]

(intended meaning) 'long weasels'

c. fuufeemoó tlet

\[
\begin{array}{c}
\text{fuuf} \quad \text{-eem} \quad \text{-oo} \quad \text{~}~ \text{tlet} \\
\text{STM-} \quad \text{-Sfx1} \quad \text{-Sfx2} \quad \text{-L} \\
\hline
\text{weasels}
\end{array}
\]

'long weasels'

(5.35) \text{SG AND GENSG}

<table>
<thead>
<tr>
<th>siyumó</th>
<th>'fish'</th>
<th>siyó</th>
</tr>
</thead>
<tbody>
<tr>
<td>siy-úr</td>
<td></td>
<td>siy-úr</td>
</tr>
<tr>
<td>STM-</td>
<td>-Sfx1</td>
<td>-Sfx2</td>
</tr>
<tr>
<td>'a big fish'</td>
<td>fish</td>
<td>'a big (species of) fish'</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>siyumó</th>
<th>'fish'</th>
<th>siyó</th>
</tr>
</thead>
<tbody>
<tr>
<td>siy-(a)m-ó-ó úr</td>
<td></td>
<td>siy-ó-ó úr</td>
</tr>
<tr>
<td>STM-</td>
<td>-Sfx1</td>
<td>-Sfx2</td>
</tr>
<tr>
<td>'a big (species of) fish'</td>
<td>'big fishes'</td>
<td></td>
</tr>
</tbody>
</table>

(5.36) \text{GENSG AND PL}

<table>
<thead>
<tr>
<th>piiró</th>
<th>'dragonfly'</th>
<th>piireema</th>
<th>'dragonfly'</th>
</tr>
</thead>
<tbody>
<tr>
<td>piir-úr</td>
<td>piiró urén</td>
<td>piireemá'uren</td>
<td>'big dragonflies'</td>
</tr>
<tr>
<td>STM-</td>
<td>-Sfx2-L</td>
<td>big.M</td>
<td></td>
</tr>
<tr>
<td>'a big dragonfly'</td>
<td>'a big (group of) dragonflies'</td>
<td>'big dragonflies'</td>
<td></td>
</tr>
</tbody>
</table>

None of the suffixes in this group may be broken down into smaller constituent parts. Indeed one of the forms (the suffix -ó), forms part of the Sg suffix -(a)mó.

Each member of the 'general (Sg-leaning) group is examined below.

5.3.2.1 -o (Mo)

Nouns formed in the suffix -o are found only twice in the sample.
5. The suffix 1: the regular phenomena

(5.37) The suffix -o (Mo)

a.

<table>
<thead>
<tr>
<th>aako</th>
<th>aak-</th>
<th>-o</th>
<th>-ó</th>
</tr>
</thead>
<tbody>
<tr>
<td>STM-</td>
<td>SFX2 -L</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>grandfather</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>'a grandfather'</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

b.

<table>
<thead>
<tr>
<th>tsyo</th>
<th>tsyo-</th>
<th>-o</th>
<th>-ó</th>
</tr>
</thead>
<tbody>
<tr>
<td>STM-</td>
<td>SFX2 -L</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>dikdik</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>'a dikdik'</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This suffix is slightly different from the rest in this group, in that, though there are recorded cases of it in nouns which may occur with either Sg or Pl agreement (as the examples in (5.37)) there are no recorded cases of it occurring within only Sg agreement. This trait makes it more similar to the general suffixes (to be discussed below). In addition to this, there exists little evidence for formally differentiating this suffix from -u. No cognates are identified in either Iraqw or Alagwa. Ultimately, this morpheme is not well-represented in the sample, and because of this, it is hard to classify it exactly based on its behavior.

The suffix -o is recognizable as the SFX2 of the Sg suffix -imo.

5.3.2.2 -í (Fr)

There are 23 occurrences of nouns taking the suffix -í (Fr) in the sample.

(5.38) The suffix -í (Fr)

a.

<table>
<thead>
<tr>
<th>bi/iní</th>
<th>bi/in-</th>
<th>-í</th>
<th>-r~´~</th>
</tr>
</thead>
<tbody>
<tr>
<td>STM-</td>
<td>SFX2 -L</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>silky.blesmol</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>'a silky blesmol'</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The suffix -í (Fr) and the suffix -í (Ft) may be distinguished chiefly based on the subgender they display in the gender linker. This seems a legitimate basis for making the division, in that there are no general patterns by which to predict which -í suffix will be Fr and which will be Ft.

\[(5.39)\] **The Suffix -í (Fr) vs. The Suffix -í (Ft)**

**a.** *loosí* uren

\[
\begin{array}{c}
\text{loos}- & \text{í} & \text{-í} & \text{-í} \\
\text{STM}- & \text{-SFX2} & \text{-L} \\
\hline
\text{beans} & \text{big.F.Pl}
\end{array}
\]

‘big beans’

**b.** *babítá* uren

\[
\begin{array}{c}
\text{bab}- & \text{í} & \text{-tá} \\
\text{STM}- & \text{-SFX2} & \text{-L} \\
\hline
\text{k.o.insect} & \text{big.F.Pl}
\end{array}
\]

‘big insects’

The suffix -í (Fr) and -í (Fr) are different based solely on their pitch accent. Morphological ramifications of pitch accent can be seen most clearly in ‘topic’ morphology, which (among other environments), occurs obligatorily after umó ‘every’. If a noun has rising pitch accent, the form will be -ee, if a noun has level pitch accent, the form will be -oo.
5. The suffix 1: the regular phenomena

(5.40) The suffix -í (Fr) vs. the suffix -í (Fr)

a. umó bi/inihee
   umó   bi/in- -í   -r~´~ -oo
   every STM- -Sfx2 -L -Top
   ‘every silky blesmol’

b. umó ba’aariroo
   umó  ba’aar-í -r~´~ -oo
   every STM- -Sfx2 -L -Top
   ‘every bee’

Kießling describes high tone suffixes as lexicalizations of high tone used for deriving onomastica from existing, level-toned, suffixes. As such, the common noun siigan(d) ‘grasshopper’ derives the proper name Siígán. The mechanism is extended from deriving proper nouns from common nouns, to deriving common nouns from an associated common noun, thus: xir’ima ‘swelling’ and xir’imá ‘catarrh’ (Kießling 2004: 10). This then explains why every high-toned suffix has a level-toned counterpart, as well as why many of the nouns with high-toned suffixes are for plant and animal names (5.41). This pattern is not absolute, however, and many exceptions occur (5.42), thus requiring the (synchronous) division of what, historically may have been only one suffix into two.

(5.41) High-Toned Suffixes for Plants and Animals

a. -í (Fr) bi/ini
   bi/in- -í -r~´~
   STM- -Sfx2 -L
   ‘a silky blesmol’

b. -í (Ft) hhinhhini
   hhinhhin- -í -tá
   STM- -Sfx2 -L
   ‘pumpkin’
5. The suffix 1: the regular phenomena

c. -ó (Mo) *mootó*
   *moot-* -ó -ó
   STM- -Sfx2 -L
   `Swahili sparrow`
   `Swahili sparrow`

d. -ú (Mo) *puundú*
   *puund-* -ú -ó
   STM- -Sfx2 -L
   `a plant`
   `plant sp.

e. -áy (Mo) */aráy*
   */ar-* -áy -ó
   STM--Sfx2 -L
   `white-galled acacias`
   `white-galled acacias`

(5.42) a. High-Toned Suffixes for Non-Plants and Animals

i. /eetíi
   /eeti- -í -r'~`
   STM- -Sfx2 -L
   `a pimple`
   `a pimple`

ii. *duutsú*
   duut- -ú -ó
   STM- -Sfx2 -L
   `soup`
   `soup`

iii. *naqáy*
    naq- -áy -ó
    STM- -Sfx2 -L
    `canoe`
    `canoe`

b. Level Pitch Accent Suffixes for Plants and Animals

i. *tsoyo*
   tsoy- -o -ó
   STM- -Sfx2 -L
   `a dikdik`
   `a dikdik`
5. The suffix 1: the regular phenomena

ii.  

<table>
<thead>
<tr>
<th>tsarma’i</th>
</tr>
</thead>
<tbody>
<tr>
<td>tsarma’-</td>
</tr>
<tr>
<td>-i</td>
</tr>
<tr>
<td>-r~’~</td>
</tr>
<tr>
<td>STM-</td>
</tr>
<tr>
<td>Sfx2</td>
</tr>
<tr>
<td>-L</td>
</tr>
</tbody>
</table>

plant.sp.

‘plants’

iii.  

<table>
<thead>
<tr>
<th>daawu</th>
</tr>
</thead>
<tbody>
<tr>
<td>daaw-</td>
</tr>
<tr>
<td>-u</td>
</tr>
<tr>
<td>-ó</td>
</tr>
<tr>
<td>STM-</td>
</tr>
<tr>
<td>Sfx2</td>
</tr>
<tr>
<td>-L</td>
</tr>
</tbody>
</table>

elephant

‘elephant’

-í (Fr) does not seem to be separated from the larger -i (Fr) suffix in Mous’ (1993) grammar, but in the dictionary (Mous, Qorro, Kießling: 2002), many forms appear with the suffix: awkí (p.17), busí (p.23), and qulmí (probably cognate with the Gorwaa qaalmí) (p.88). No such cognate is evident for Alagwa.

5.3.2.3 -í (Ft)

4 nouns take the suffix í (Ft) in the sample.

(5.43) The suffix -í (Ft)

a.  

<table>
<thead>
<tr>
<th>naanagí</th>
</tr>
</thead>
<tbody>
<tr>
<td>naanag-</td>
</tr>
<tr>
<td>-í</td>
</tr>
<tr>
<td>-tá</td>
</tr>
<tr>
<td>STM-</td>
</tr>
<tr>
<td>Sfx2</td>
</tr>
<tr>
<td>-L</td>
</tr>
</tbody>
</table>

larvae

‘larvae’

b.  

<table>
<thead>
<tr>
<th>ma/a/ayí</th>
</tr>
</thead>
<tbody>
<tr>
<td>ma/a/ay-</td>
</tr>
<tr>
<td>-í</td>
</tr>
<tr>
<td>-tá</td>
</tr>
<tr>
<td>STM-</td>
</tr>
<tr>
<td>Sfx2</td>
</tr>
<tr>
<td>-L</td>
</tr>
</tbody>
</table>
insect.sp.

‘insects’

c.  

<table>
<thead>
<tr>
<th>hhinhhiní</th>
</tr>
</thead>
<tbody>
<tr>
<td>hhinhhin-</td>
</tr>
<tr>
<td>-í</td>
</tr>
<tr>
<td>-tá</td>
</tr>
<tr>
<td>STM-</td>
</tr>
<tr>
<td>Sfx2</td>
</tr>
<tr>
<td>-L</td>
</tr>
</tbody>
</table>
pumpkin

‘pumpkin’
5. The suffix 1: the regular phenomena

As detailed above, the suffix is distinct from -í (Fr) in the subgender it takes, and is distinct from -í (Ft) in its tone.

The forms -í (Fr), -í (Fr), -í (Ft) and -í(Ft) are not differentiated in the Iraqw grammar. A cursory look through the Iraqw dictionary do not yield any -í (Ft) forms. No cognate is evident for Alagwa.

5.3.2.4 -ó (Mo)

The suffix -ó occurs with 11 nouns in the sample.

(5.44) The suffix -ó (Mo)
   a. *piiró*
      piir- -ó -ó
      STM- [-Sfx2 -L]
      dragonfly
      ‘a dragonfly’

   b. *loomó*
      loom- -ó -ó
      STM- [-Sfx2 -L]
      plant.sp.
      ‘a plant’

   c. *amayó*
      amay- -ó -ó
      STM- [-Sfx2 -L]
      plant.sp.
      ‘plants’

-ó is differentiated from -o in tone. As for -o vs. -u, there exists little evidence for formally differentiating -ó from -ú. No cognates are identified in either Iraqw or Alagwa.

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5. The suffix 1: the regular phenomena

-ó is present as the SFX2 of the common Sg suffix -(a)mó.

5.3.3 General

The general suffixes consist of forms which may occur with other forms showing either Sg or Pl morphology (5.45).

(5.45) THE GEN SUFFIX -OO (FR) MAY OCCUR WITH OTHER FORMS SHOWING EITHER SG OR PL AGREEMENT

a. tsir/oór hatlee
   tsir/- -oo -r~´~ hatlee
   STM- SFX2 -L other.F.Pl
   ‘other birds’

b. tsir/oór hatlá’a milá [...] [20151021c.354]
   tsir/- -oo -r~´~ hatlá’ a milá
   STM- SFX2 -L other.F.Pl CopN what
   ‘what is another bird (species)’

As a general pattern (and excluding the suffixes -i (Fr) and -i (Ft)), these suffixes do not commonly form pairs with each other. As an exhaustive list, the general suffixes -ú and -aa pair once, and -a (Ft) and -oo (N) pair nine times (5.46).

(5.46) a. THE SINGLE -Ú (MO) AND -AA (FR) PAIR
   i. puundú
      puund- -ú -ó
      STM- SFX2 -L
      ‘a plant’

   ii. puundaa
      puund- -aa -r~´~
      STM- SFX2 -L
      ‘plants’
5. The suffix 1: the regular phenomena

b. Example of an -a (FT) and -oo (N) pair

i. asla
   asl-    -a    -tá
   STM-    -Sfx2 -L
   \_fire
   ‘fire’

ii. asloo
    asl-    -oo ~\~
    STM-    -Sfx2 -L
    \_fires
    ‘fires’

Common to all general forms is that they have at least one noun which has no other form. Whether such forms are mass, singularia tantum or pluralia tantum is unclear. The other group that shares this pattern are the ‘general (Pl-leaning)’ suffixes.

(5.47) Examples of ‘One Form Nouns’ with general suffixes

a. bahhi
   bahh-   -i    -r~\~
   STM-    -Sfx2 -L
   \_excessive.noise
   ‘excessive noise’

b. tsoobú
   tsoob-  -ú    -ó
   STM-    -Sfx2 -L
   \_liquid.honey
   ‘liquid honey’

c. boohhaa
   boohh-   -aa   -r~\~
   STM-     -Sfx2 -L
   \_firewood.bundle
   ‘bundle of firewood’

d. ageengw
   ag-    -aangw    -ó
   STM-    -Sfx2    -L
   \_dry.season
   ‘the dry season’
5. The suffix 1: the regular phenomena

e. \( \text{siigan(d)} \)
\[
\text{siigand}- \quad \emptyset \quad \text{\textendash} \quad \text{\textendash}L
\]
\[
\begin{array}{c}
\text{STM-} \\
\text{grasshopper}
\end{array}
\]

None of the suffixes in this group may be broken down into smaller constituent parts. Several forms: \( -i \) (Fr), \( -oo \) (N∅), and \( -ee \) are used to form composed suffixes.

5.3.3.1 -a (Mk)

The suffix -a (Mk) occurs 4 times in the sample.

(5.48) The suffix -a (Mk)

a. \( \text{dawa} \)
\[
\text{daw-} \quad \text{-a} \quad \text{-kú}
\]
\[
\begin{array}{c}
\text{STM-} \\
\text{hand}
\end{array}
\]

b. \( \text{qara} \)
\[
\text{qar-} \quad \text{-a} \quad \text{-kú}
\]
\[
\begin{array}{c}
\text{STM-} \\
\text{gall}
\end{array}
\]

c. \( \text{afá} \)
\[
\text{af-} \quad \text{-a} \quad \text{-kú}
\]
\[
\begin{array}{c}
\text{STM-} \\
\text{mouth}
\end{array}
\]

In an examination of nouns elicited in verbal contexts, the -a (Mk) affix is somewhat commoner (5.49). I am hesitant to call these forms 'nominalisations', because it is not at all clear what the entire range of syntactic properties of these forms are.

Suffice it to say that, though there is significant overlap between noun suffixes and
5. The suffix 1: the regular phenomena

the set of suffixes used for this type of noun, many of the suffixes are entirely
different to those presented here.

(5.49) The -a (Mk) SUFFIX FOR NOUNS ELICITED IN VERBAL CONTEXTS

\[
\begin{align*}
\text{tsu'}a & \quad \text{(c.f. tsuui‘be sweet’)} \\
\text{tsu'-} & \quad \text{a} \quad \text{-kú} \\
\text{STM-} & \quad \text{Sfx2} \quad \text{-L} \\
\text{sweetness} & \quad \text{‘sweetness’}
\end{align*}
\]

The suffixes -a (Mk), -a (Mo), and -a (Ft) all take different gender linkers, and can
therefore be established as separate suffixes.

(5.50) -A (Mk), -A (Mo) AND -A (Ft) ARE DIFFERENT SUFFIXES

a. \textit{afkú úr}

\[
\begin{align*}
\text{af-} & \quad \text{a} \quad \text{-kú} \quad \text{úr} \\
\text{STM-} & \quad \text{Sfx2} \quad \text{-L} \\
\text{mouth} & \quad \text{big.M}
\end{align*}
\]

‘a big mouth’

b. \textit{niingó úr}

\[
\begin{align*}
\text{niing-} & \quad \text{a} \quad \text{-ó} \quad \text{úr} \\
\text{STM-} & \quad \text{Sfx2} \quad \text{-L} \\
\text{drum} & \quad \text{big.M}
\end{align*}
\]

‘a big drum’

c. \textit{asltá ur}

\[
\begin{align*}
\text{asl-} & \quad \text{a} \quad \text{-tá} \quad \text{ur} \\
\text{STM-} & \quad \text{Sfx2} \quad \text{-L} \\
\text{fire} & \quad \text{big.F}
\end{align*}
\]

‘a big fire’

The suffix -a (Mk) is not listed as a separate suffix in the Iraqw grammar, but is
attested on several forms (Mous 1993: 84), all of which have identical cognates in
Gorwaa. -k is identified as one of the gender linkers in Alagwa (Mous 2016: 49).

5.3.3.2 -a (Mo)

The suffix -a (Mo) occurs on 19 nouns in the sample.
5. The suffix 1: the regular phenomena

(5.51) The suffix -a (Mo)

a. yaqamba
   yaqamb- -a -ó
   STM- -Sfx2 -L
   'a buck'

b. goranga
   gorang- -a -ó
   STM- -Sfx2 -L
   hero's song
   'hero's song'

c. hima
   him- -a -ó
   STM- -Sfx2 -L
   rope
   'rope'

The suffix -a (Mo) is different from the suffixes -a (Mk) and -a (Ft) because each realize separate gender linkers. The suffix -a (Mo) is different from the suffix -á (Mo) because of pitch accent.

(5.52) A minimal pair for the suffixes -a (Mo) and -á (Mo)

a. niinga
   niing- -a -ó
   STM- -Sfx2 -L
   drum
   'a drum'

b. niingá
   niing- -á -ó
   STM- -Sfx2 -L
   green, pigeons
   'green, pigeons'

-a (Mo) is not recognized as a separate suffix in Iraqw, but cursory examination of the Iraqw dictionary (Mous, Qorro, and Kießling 2002) produces forms such as bela (p.21), daanda (p.26), and musa (p.75), all of which seem to be good evidence of a
5. The suffix 1: the regular phenomena

cognate -a (Mo) in this language. bi/ina (p.275), muuna (p.301), and uma (p.321) are possible cognates from the Alagwa grammar (Mous 2016).

5.3.3.3 -i (Ft)

The suffix -i (Ft) occurs on a total of 58 nouns in the sample.

(5.53) The suffix -i (Ft)

a. bu’i

\[
\begin{array}{c}
\text{STM:} \\
\text{S\text{Fx2}:} \\
\text{L:}
\end{array}
\]

\[
\begin{array}{c}
\text{cosmetic.burn.mark} \\
\text{a cosmetic burn mark}
\end{array}
\]

b. iingigi

\[
\begin{array}{c}
\text{STM:} \\
\text{S\text{Fx2}:} \\
\text{L:}
\end{array}
\]

\[
\begin{array}{c}
\text{locust} \\
\text{locusts}
\end{array}
\]

c. deli

\[
\begin{array}{c}
\text{STM:} \\
\text{S\text{Fx2}:} \\
\text{L:}
\end{array}
\]

\[
\begin{array}{c}
\text{mushroom} \\
\text{a mushroom}
\end{array}
\]

This suffix is different from the other general suffixes in that it freely pairs with other suffixes of this group.

(5.54) a. The general suffixes -i (Ft) and -oo (Fr) as a pair

i. tsi\text{i}

\[
\begin{array}{c}
\text{STM:} \\
\text{S\text{Fx2}:} \\
\text{L:}
\end{array}
\]

\[
\begin{array}{c}
\text{spark} \\
\text{a spark}
\end{array}
\]

ii. tsi\text{oo}

\[
\begin{array}{c}
\text{STM:} \\
\text{S\text{Fx2}:} \\
\text{L:}
\end{array}
\]

\[
\begin{array}{c}
\text{sparks} \\
\text{sparks}
\end{array}
\]
5. The suffix 1: the regular phenomena

b. The general suffixes -i (Ft) and -aa (Fr) as a pair

i. \textit{kuti}

\begin{array}{c}
\text{kut-} \\
\text{STM-} \\
\hline
\text{-i} \\
\text{-Sfx2} \\
\text{-L} \\
\hline
\text{mole}
\end{array}

\text{STM-}

\begin{array}{c}
\text{-i} \\
\text{-Sfx2} \\
\text{-L} \\
\hline
\text{mole}
\end{array}

‘a mole’ (i.e. the rodent)

ii. \textit{kutaa}

\begin{array}{c}
\text{kut-} \\
\text{STM-} \\
\hline
\text{-aa} \\
\text{-Sfx2} \\
\text{-L} \\
\hline
\text{moles}
\end{array}

‘moles’ (i.e. the rodents)

As mentioned above, the suffix -i (Ft) differs from the suffix -i (Ft) in pitch accent. The suffix -i (Ft) differs from the suffix -i (Fr) in the form of the gender linker it takes.

The suffix -i (Ft) is included in the suffix -i in the Iraqw grammar, which includes both the -i (Ft) and the -i (Fr) suffixes (Mous 1993: 68). There is no cognate in Alagwa.

5.3.3.4 -i (Fr)

The suffix -i (Fr) occurs on a total of 194 nouns in the sample.

(5.55) The suffix -i (Fr)

a. \textit{fiitsi}

\begin{array}{c}
\text{fiits-} \\
\text{STM-} \\
\hline
\text{-i} \\
\text{-Sfx2} \\
\text{-L} \\
\hline
\text{broom}
\end{array}

‘a broom’

b. \textit{ba’aari}

\begin{array}{c}
\text{ba’aar-} \\
\text{STM-} \\
\hline
\text{-i} \\
\text{-Sfx2} \\
\text{-L} \\
\hline
\text{bees}
\end{array}

‘bees’
5. The suffix 1: the regular phenomena

c.  
\[ \text{wa’am} \]
\[ \text{wa’am-i-i-r~’~} \]
\[ \text{STM-Sfx2-L} \]
\[ \text{‘bone marrow’} \]

This suffix is different from the other general suffixes in that it freely pairs with other suffixes of general suffix group.

(5.56) a. The general suffixes -i (Fr) and -∅ (Mo) as a pair

i.  
\[ \text{sakweel} \]
\[ \text{sakweel-i-i-r~’~} \]
\[ \text{STM-Sfx2-L} \]
\[ \text{‘an ostrich’} \]

ii.  
\[ \text{sakwél} \]
\[ \text{sakweel-∅-∅} \]
\[ \text{STM-Sfx2-L} \]
\[ \text{‘ostriches’} \]

b. The general suffixes -i (Fr) and -aa (Fr) as a pair

i.  
\[ \text{/urf} \]
\[ \text{/urf-i-i-r~’~} \]
\[ \text{STM-Sfx2-L} \]
\[ \text{‘a skink’} \]

ii.  
\[ \text{/urf} \]
\[ \text{/urf-aa-aa} \]
\[ \text{STM-Sfx2-L} \]
\[ \text{‘skinks’} \]

As mentioned above, the suffix -i (Fr) is included in the suffix -i in the Iraqw grammar (Mous 1993: 68).

The suffix -i (Fr) is present as SFX2 in the Sg suffixes -iimi and -aaCi.
5. The suffix 1: the regular phenomena

5.3.3.5 -∅ (Mo)

The suffix -∅ (Mo) occurs on 71 nouns in the sample.

(5.57) **The suffix -∅ (Mo)**

a. *magá’*
   
   maga’-∅ -ó
   
   ŠTM-[Sfx2 -L] _leech_
   
   leech’

b. *tlangás*
   
   tlangoas- -∅ -ó
   
   ŠTM-[Sfx2 -L] _quivers_
   
   quivers’

c. *poohám*
   
   pooham- -∅ -ó
   
   ŠTM-[Sfx2 -L] _baboon_
   
   baboon’

Together with a zero suffix -∅, this suffix has the associated suprasegmental effects of shortening long vowels and adding high tone. The fact that these suprasegmental features are *not* present in the stem can be seen in examining the other member of a pair (5.58). In most every case, the long vowel and level pitch accent seem to indicate that it is the suffix -∅ (Mo) which is adding these effects.

(5.58) **Long vowel, level pitch accent in the mate of -∅ (Mo)**

a. *sakweeli*
   
   sakweel- -i -r~’~
   
   ŠTM-[Sfx2 -L] _ostrich_
   
   ‘an ostrich’

b. *sakwél*
   
   sakwél- -∅ -ó
   
   ŠTM-[Sfx2 -L] _ostriches_
   
   ‘ostriches’
5. The suffix 1: the regular phenomena

Kießling (2000: 11) describes the suffix -∅ (Mo) as a historical process of regressive high tone spreading and apocope, an example is given below:

\[(5.55) \text{Tone spreading and apocope resulting in -∅ (Mo)}\]

<table>
<thead>
<tr>
<th>Proto West Rift</th>
<th>Proto-Iraqwoid</th>
<th>Gorwaa</th>
</tr>
</thead>
<tbody>
<tr>
<td>*masladú</td>
<td>*maslárú</td>
<td>*maslá́r maslá́r</td>
</tr>
</tbody>
</table>

‘fruit trees’

Adapted from Kießling (2000: 11)

This form is not mentioned in the Iraqw grammar, but is clearly present, in both the grammar and dictionary.

5.3.3.6 -ay (N∅)

The suffix -ay (N∅) occurs on three nouns in the sample.

\[(5.59) \text{The suffix -ay (N∅)}\]

a. \textit{fu’unay}  
\[\text{fu’un- -ay} \sim \sim \]  
\[\text{STM - Srx2 -L} \]  
\['meat'\]

b. \textit{makay}  
\[\text{mak- -ay} \sim \sim \]  
\[\text{STM - Srx2 -L} \]  
\['animals'\]

c. \textit{maa’ay}  
\[\text{maa’- -ay} \sim \sim \]  
\[\text{STM - Srx2 -L} \]  
\['water'\]

It is difficult to see the difference between the suffix -ay (N∅) and the suffixes -ay (Mo), and the suffix -āy (Mo) because the gender linker, due to vowel coalescence, will often appear the same (i.e. a rising pitch accent on the final vowel). As shown in
5. The suffix 1: the regular phenomena

(5.60), when comparing *fu’unay* (-ay (N∅) suffix), *sookitáy* (-áy (Mo) suffix), and
*tsa/atay* (-ay (Mo) suffix), the gender agreement on the adjective provides the most
salient difference.

(5.60) The suffixes *-ay* (N∅), *-ay* (Mo), and *-áy* (Mo) appearing the same in surface form

a. *fu’unáy naá/
   
   fu’un- *-ay* ~ *-ay*
   
   STM- *Sfx2* -L
   
   meat

   ‘fresh meat’

b. *sookitáy naá/
   
   sookit-- *-ay* -ó naá/
   
   STM- *Sfx2* -L
   
   green.vegetable

   ‘fresh greens’

c. *tsa/atáy naá/
   
   tsa/at-- *-áy* -ó naá/
   
   STM- *Sfx2* -L
   
   egg.yolk

   ‘fresh egg yolk’

The *-ay* (N∅) suffix is not identified as a suffix in the Iraqw grammar, but is clearly
present in cognates of the three forms given above.

5.3.3.7 *-ú* (Mo)

The suffix *-ú* (Mo) occurs on 34 nouns in the sample.

(5.61) The suffix *-ú* (Mo)

a. */aamú/
   
   /aam- *-ú* -ó
   
   STM- *Sfx2* -L
   
   fruit

   ‘fruit’
5. The suffix 1: the regular phenomena

b. \(/\text{awtû}/ \\text{awt-} -\ú -ó
\begin{array}{c}
\text{STM-} -\text{Sfx2} -\text{L} \\
\text{butterfly}
\end{array}
\text{‘butterfly’}

c. \(\text{du/ú}/ \text{du/-} -\ú -ó
\begin{array}{c}
\text{STM-} -\text{Sfx2} -\text{L} \\
\text{fat}
\end{array}
\text{‘fat’}

As mentioned above, the suffix -ú (Mo) can be differentiated from the suffix -u (Mo) on the basis of pitch accent. What is less certain is that the suffix -ú (Mo) and the suffix -ó (Mo) are different.

The Iraqw dictionary (Mous, Qorro, Kießling 2002) records several forms with this ending, including \(/\text{awtû}/ \text{p.17}, \text{danú} \text{p.27}, \text{and tsamû} \text{p.107}, \text{all of whose suffixes are cognate with the one at hand.}

5.3.3.8 -oo (Fr)

The suffix -oo (Fr) occurs on 51 nouns in the sample.

(5.62) THE SUFFIX -oo (Fr)

a. \(\text{tsir/oo}/ \text{tsir/-} -\text{oo} -\text{r~’}~
\begin{array}{c}
\text{STM-} -\text{Sfx2} -\text{L} \\
\text{birds}
\end{array}
\text{‘birds’}

b. \(\text{daka’oo}/ \text{daka’-} -\text{oo} -\text{r~’}~
\begin{array}{c}
\text{STM-} -\text{Sfx2} -\text{L} \\
\text{baobab trees}
\end{array}
\text{‘baobab trees’}
5. The suffix 1: the regular phenomena

c. \( hho'oo \)
   \[ hho' - oo - r~' ~ \]
   \[ STM - Sfx2 - L \]
   \('sister'\)

This suffix can be differentiated from the suffix \(-oo\) (NØ) based on the gender agreement it triggers.

(5.63) The suffix \(-oo\) (Fr) vs. the suffix \(-oo\) (NØ)
   a. \( tsir/oór tsár \)
      \[ tsir/- - oo - r~' ~ tsár \]
      \[ STM - Sfx2 - L \]
      \('two birds'\)
   b. \( dageenoó tsár \)
      \[ dageen- - oo ~ tésár \]
      \[ STM - Sfx2 - L \]
      \('two young women'\)

The cognate of the suffix \(-oo\) (Fr) is identified in Iraqw as \(-o\) (Mous 1993: 60), and in Alagwa as \(-oo\) (Mous 2016: 87).

5.3.3.9 -a (Ft)

The suffix -a (Ft) occurs on 15 nouns in the sample.

(5.64) The suffix -a (Ft)
   a. \( asla \)
      \[ asl- - a - tá \]
      \[ STM - Sfx2 - L \]
      \('fire'\)
   b. \( hhafa \)
      \[ hhaf- - a - tá \]
      \[ STM - Sfx2 - L \]
      \('ceiling poles'\)
5. The suffix 1: the regular phenomena

c.  *fara*  
   far-   -a       -tá  
   STM-   -Sfx2   -L  
   (STM)  bone  
   ‘bone’  

In an examination of nouns elicited in verbal contexts, the -a (Mk) affix is somewhat commoner (5.65).

(5.65) THE -A (Fr) SUFFIX FOR NOUNS ELICITED IN VERBAL CONTEXTS  
a.  *ara*  
   ar-   -a       -tá  
   STM-   -Sfx2   -L  
   (STM) seeing  
   ‘seeing’  

b.  *da/a*  
   da/-   -a       -tá  
   STM-   -Sfx2   -L  
   (STM) burning  
   ‘burning’  

c.  *kwahha*  
   kwahh-   -a       -tá  
   STM-   -Sfx2   -L  
   (STM) throwing  
   ‘throwing’  

In Iraqw, the suffix -a (Fr) is grouped together with the suffix -a (Fr) as a productive ‘nominalizing suffix’ (Mous 1993: 76). In Alagwa, an identical suffix is also identified as a nominalizer (Mous 2016: 107). Its nominalizing status forces one to review the stems of what were considered in (5.64) to be entirely ‘nominal’, and draw some interesting associations: in (5.64).b), the stem *hhaf-* seems to be the same as the verb *hhaáf* ’to lay out’; in (5.64).c), the stem *far-* and the verb *faár* ‘to count’ are also temptingly similar. No such parallel could be found between *asl-* the stem in (5.64).a) and any other verb.
5. The suffix 1: the regular phenomena

5.3.3.10 -aa (Fr)

The suffix -aa (Fr) occurs on 132 nouns in the sample.

(5.66) The suffix -aa (Fr)

a.  

\[ \text{hhansl}^{\text{a}} -\text{aa} -\text{r}^{\text{r}} \]

\[ \text{S}^{\text{TM}} - \text{Sfx2} - \text{L} \]

The suffix -aa (Fr) is grouped with the -a suffix in Iraqw, discussed above in its

'nominalizing' function, and discussed in its function as noun suffix in (Mous 1993: 60). The only comparable suffix in Alagwa is once again the 'nominalizer' (Mous 2016: 107).

5.3.3.11 -ee (Fr)

The suffix -ee (Fr) occurs 19 times in the sample.

(5.67) The suffix -ee (Fr)

a.  

\[ \text{bambar}^{\text{a}} -\text{ee} -\text{r}^{\text{r}} \]

\[ \text{S}^{\text{TM}} - \text{Sfx2} - \text{L} \]

The suffix -aa (Fr) is grouped with the -a suffix in Iraqw, discussed above in its

'nominalizing' function, and discussed in its function as noun suffix in (Mous 1993: 60). The only comparable suffix in Alagwa is once again the 'nominalizer' (Mous 2016: 107).
5. The suffix 1: the regular phenomena

b. *tseereee*
   
tseer- -ee -r~\~
STM- _-Sfx2_ -L

'blood'

c. *impee*
   
imp- -ee -r~\~
STM- _-Sfx2_ -L

'trough'

The suffix -ee (Fr) is the same as what Mous identified as -e in Iraqw (1993: 50), and as -ee in Alagwa (2016: 82).

The suffix -ee (Fr) is visible as SFX2 in the Pl composed suffixes -aawee and -aCee.

5.3.3.12 -á (Mo)

The suffix -á (Mo) occurs on 11 nouns in the sample.

(5.68) The suffix -á (Mo)

a. *niingá*
   
niing- -á -ó
STM- _-Sfx2_ -L

green, pigeons
‘green pigeons’

b. *filá*
   
fil- -á -ó
STM- _-Sfx2_ -L

anteater
‘anteater’

c. *kuumbá*
   
kuumb- -á -ó
STM- _-Sfx2_ -L

brother - in - law
‘brother-in-law’
5. The suffix 1: the regular phenomena

The Iraqw grammar does not list -á (Mo) as a separate suffix, but a cursory look through the Iraqw dictionary (Mous, Qorro, and Kießling 2002) yields forms such as aará (p.15) and il/ará (p.55).

5.3.3.13 -ay (Mo)

The suffix -ay (Mo) occurs on 34 nouns in the sample.

(5.69) THE SUFFIX -AY (Mo)

a. na/ay
   na/-   -ay   -ó
   STM-   -Sfx2   -L
   ‘child’

b. tsaxw/ay
   tsaxw- -ay   -ó
   STM-   -Sfx2   -L
   ‘a grasshopper’

c. tsuh/ay
   tsuh- -ay   -ó
   STM-   -Sfx2   -L
   ‘lower back’

The suffix -ay (Mo) is identified in Iraqw as the suffix -aay (Mous 1993: 48). No such suffix is identified for Alagwa.

5.3.3.14 -u (Mo)

The suffix -u (Mo) occurs on 24 nouns in the sample.
5. The suffix 1: the regular phenomena

(5.70) The suffix -u (Mo)

a. daawu
daaw- -u -ó
STM- Sfx2 -L

‘elephant’

b. desu
des- -u -ó
STM- Sfx2 -L

‘girls’

c. musu
mus- -u -ó
STM- Sfx2 -L

‘a pestle’

The Iraqw dictionary (Mous, Qorro, Kießling 2002) records several forms with this ending, including awu (p.17), qaytsu (p.86), and yuundu (p.122).

5.3.3.15 -aangw (Mo)

The suffix -aangw (Mo) occurs on 36 nouns in the sample.

(5.71) The suffix -aangw (Mo)

a. se’eengw
se’- -aangw -ó
STM- Sfx2 -L

‘hair’

b. diraangw
dir- -aangw -ó
STM- Sfx2 -L

‘a lion’
5. The suffix 1: the regular phenomena

c. \textit{kwu/uungw}

\begin{align*}
\text{kwu/} & \text{-uungw} \quad \text{-ó} \\
\text{STM-} & \text{-Sfx2} \quad \text{-L} \\
\text{wall} & \\
\end{align*}

The suffix -\textit{aangw} (Mo) is identified in Iraqw as -\textit{angw} (Mous 1993: p.49). No similar suffix exists in Alagwa.

5.3.3.16 -\textit{oo} (N∅)

The suffix -\textit{oo} (N∅) occurs on 23 nouns in the sample.

(5.72) \textsc{The suffix -oo (N∅)}

a. \textit{dageenoo}

\begin{align*}
\text{dageen-} & \text{-oo} \quad \text{~`~} \\
\text{STM-} & \text{-Sfx2} \quad \text{-L} \\
\text{young women} & \\
\end{align*}

'b\text{young women}'

b. \textit{daqoo}

\begin{align*}
\text{daq-} & \text{-oo} \quad \text{~`~} \\
\text{STM-} & \text{-Sfx2} \quad \text{-L} \\
\text{herds} & \\
\end{align*}

'\text{herds}'

c. \textit{gwe'edoo}

\begin{align*}
\text{gwe'ed-} & \text{-oo} \quad \text{~`~} \\
\text{STM-} & \text{-Sfx2} \quad \text{-L} \\
\text{buttock} & \\
\end{align*}

'a\text{ buttock}'

The suffix -\textit{oo} (N∅) is identified as -\textit{o} in Iraqw (Mous 1993: 57), and as -\textit{oo} in Alagwa (p.87).

The suffix -\textit{oo} (N∅) is present as SFX2 in the Pl composed suffixes -\textit{iyoo} and -\textit{eemoo} or -\textit{<ee>-oo}.
5. The suffix 1: the regular phenomena

5.3.4 General (Pl-leaning) (Gen\textsubscript{PL})

This group of suffixes is general number, but are usually used to form nouns which denote Pl entities (5.73), but when they exist in a pair with a noun formed with a Sg suffix (5.74), or a noun formed with a Pl suffix (5.75), they may occur with other forms showing either Sg or Pl agreement.

(5.73) \textit{Gen}_{PL} suffix -\textit{ay} may only occur with other forms showing Pl agreement

\begin{itemize}
\item[a.] \textit{purus\textsubscript{ay} tlét}
  \begin{align*}
  \text{purus-} \text{-ay} & \quad \text{-ó} & \quad \text{tlét} \\
  \text{STM-} \text{-Sfx2} & \quad \text{-L} & \quad \text{long.M.Pl}
  \end{align*}
  \text{insect.sp}
  \text{‘long insects’}
\item[b.] *\textit{purus\textsubscript{ay} tleér}
  \begin{align*}
  \text{purus-} \text{-ay} & \quad \text{-ó} & \quad \text{tleér} \\
  \text{STM-} \text{-Sfx2} & \quad \text{-L} & \quad \text{long.M}
  \end{align*}
  \text{insect.sp}
  \text{(intended meaning) ‘a long insect’}
\item[c.] \textit{puruse\textsubscript{ér} tleer}
  \begin{align*}
  \text{purus-} \text{-ee} & \quad \text{-r~\~} & \quad \text{tleer} \\
  \text{STM-} \text{-Sfx2} & \quad \text{-L} & \quad \text{long.F}
  \end{align*}
  \text{insect.sp}
  \text{‘a long insect’}
\end{itemize}

(5.74) S\text{G and Gen}_{PL}

\begin{center}
\begin{tabular}{|l|l|l|}
\hline
\textit{panimó} & \textit{panáy} & \textit{panáy urén} \\
\textit{panimó ur} & \textit{panáy ur} & \textit{panáy urén} \\
\text{pan-} \text{(a)m} & \text{-áy} & \text{-ó} & \text{úr} & \text{-ó} & \text{úrén} & \text{úrén} \\
\text{STM-} \text{-Sfx1} & \text{-Sfx2} & \text{-L} & \text{big.M} & \text{big.M} & \text{big.M.Pl} & \text{big.M.Pl} \\
\text{orphan} & \text{orphan} & \text{orphans} & \text{orphans} \\
\text{‘a big orphan’} & \text{‘a big (group of) orphans’} & \text{‘big orphans’} \\
\hline
\end{tabular}
\end{center}
5. The suffix 1: the regular phenomena

None of the suffixes in this group may be broken down into smaller constituent parts. In fact, all of these forms are used to form the composed ‘Pl’ suffixes, to be discussed below.

5.3.4.1 -áy (Mo)

The suffix -áy (Mo) occurs on 121 nouns in the sample.

(5.76) The suffix -áy (Mo)

a. deeláy
   deel- -áy -ó
   STM- -Sfx2 -L
   kids
   ‘kids’ (i.e. baby goats)

b. fiitsáy
   fiits- -áy -ó
   STM- -Sfx2 -L
   ‘brooms’

c. yaaháy
   yaah- -áy -ó
   STM- -Sfx2 -L
   ‘soft rain’

3 The noun in the example xweera ‘evening’ is, on the surface, a noun ending in -a. However, because of the NO agreement it triggers, it is assumed that the suffix is -a’(!), and that the final glottal stop has undergone apocope.
5. The suffix 1: the regular phenomena

The suffix -áy (Mo) is identified in Iraqw as the suffix -aay, following a tone-spreading operation. This signals a significant difference in the classification of suffixes to that undertaken in this work, and will be expanded upon.

Mous (1993: 49) notes that the suffix identified here as -áy (Mo) is actually the suffix -ay (Mo) (discussed above), and is realized with rising pitch accent (RPA) because of tone spreading from high tone on the lexical root (modeled in (5.77)). The argument seems valid for two primary reasons: i) a high-toned suffix may be paired with other high-toned suffixes (5.78), which creates the appearance of a common high-toned stem spreading RPA to the suffix underlingly, and ii) when a high-toned suffix is paired with the suffix -∅ Mo (5.79), which could be interpreted as a bare root rather than a suffixed form.

(5.77) Progressive tone spread to the suffix (Mous 1993: 49)

<table>
<thead>
<tr>
<th>Surface Suffix</th>
<th>Stem + Suffix</th>
<th>Surface Form Following High Tone Spread</th>
</tr>
</thead>
<tbody>
<tr>
<td>-ay (Mo)</td>
<td>na/ + ay (Mo)</td>
<td>na/ay ‘a child’</td>
</tr>
<tr>
<td>-áy (Mo)</td>
<td>deél + ay (Mo)</td>
<td>deéláy ‘kids’ (i.e. baby goats)</td>
</tr>
</tbody>
</table>

(5.78) High-toned pairs, creating the impression of a high-toned stem (Mous 1993: 49)

\[
\text{xuúntl-} + \text{-ay } = \text{xuúnláy ‘unusual protuberances’}
\]

(5.79) High-toned suffix paired with suffix -∅ (Mo), creating the impression of a high-toned stem (Mous 1993: 49)

\[
\text{tsaxweél-} + \text{-i } = \text{tsaxweelí ‘spring trap’}
\]

\[
\text{tsaxwél } = \text{tsaxwelí ‘spring traps’}
\]
5. The suffix 1: the regular phenomena

In both of these configurations, the rising pitch accent could be viewed as inherent to the stem, and undergoing progressive tone spread to the suffix.

It is argued in this work, contra Mous (1993) that tone is, in fact, not a property of the stem, but a property of the suffixes.

Though the 'high tone on the stem' (demonstrated in (5.77)-(5.79)) argument holds well for pairs in which tone is the same on both members (as above), it fares less well for pairs in which tone is different (5.80). This is rendered especially problematic when in some cases, the suffix can bear RPA, and in other cases, it does not (5.81).

(5.80) Pair with differing tone value

\[
\text{bi/ín}. + \text{-i} = \text{bi/iní (RPA)} \quad \text{‘silky blesmol’}
\]

\[
\text{-aa} = \text{bi/inaa (LPA)} \quad \text{‘silky blesmols’}
\]

(5.81) One suffix, two tonal realizations

a. -i of fiitsi: Level Pitch Accent

\[
\text{fiitsi} \quad \text{fiitsi (LPA)} \quad \text{‘spring trap’}
\]

\[
\text{-ay} = \text{fiitsáy (RPA)} \quad \text{‘spring traps’}
\]

b. -i of do/í: Rising Pitch Accent

\[
\text{do/í} \quad \text{do/í (RPA)} \quad \text{‘cane rat’}
\]

\[
\text{-ay} = \text{do/áy (RPA)} \quad \text{‘cane rats’}
\]

The progressive tone spreading argument could be saved by positing that, in some cases, tone spreading is blocked, as it must be in cases such as -aa in (5.80), but this is a harder argument to make when the suffix is phonologically the same, as in the -i of fiitsi and the -i of bi/iní. Essentially, one would have to posit two different kinds of -i suffix, one that allows tone spreading, and one that does not. This yields the same number of suffixes as proposed in the current work, but has the additional
5. The suffix 1: the regular phenomena

complexity of either i) having to store information on tone in the root/stem (e.g. to achieve the correct surface forms, the (otherwise identical) niinga 'drum' and niingá 'green pigeon', would have to exist as two separate underlying stems, niing- and niíng-, respectively); or ii) having to store one noun of an otherwise identical pair as a lexicalized entry (e.g. niinga 'drum' and niingá ‘green pigeon’, would have to exist as two separate underlying stems, niing- and niingá, respectively). The system envisaged in the current work proposes that tonal information is stored neither on the root, nor in its spell-out rules in List 2, but that this work is carried out by the suffix in a principled, regular way. In addition to this, lexical entries (including many proper names) are minimized, and left to be derived constructionally (c.f. §4.4.3). As such, suffice it to say at this point that the difference between -áy (Mo) and -ay (Mo) (and of other high-tone, low-tone suffix pairs) is not due to progressive tone spreading, but is because the suffixes themselves are different, and their tone pattern is inherent to them.

No equivalent to the suffix -áy (Mo) is identified in Alagwa.

The suffix -áy is present as SFX2 in the Pl composed suffix -náy.

5.3.4.2 -u! (N∅)

The suffix -u! (N∅) occurs on 34 nouns in the sample.

(5.82) **The suffix -u! (N∅)**

a. gamu
   
   gam-  -u! ~´~
   
   STM-  -SFX2  -L
   
   underside  ‘underside’
5. The suffix 1: the regular phenomena

b.  

\textit{bolu}  
\begin{array}{l}
\text{bool-}  \\
\text{STM-}  \\
\text{days}
\end{array}  
\begin{array}{l}
-u! \\
\text{-Sfx2}  \\
\text{-L}
\end{array}  
\sim \sim

\text{‘days’}

c.  

\textit{manu}  
\begin{array}{l}
\text{maan-}  \\
\text{STM-}  \\
\text{zombies}
\end{array}  
\begin{array}{l}
-u! \\
\text{-Sfx2}  \\
\text{-L}
\end{array}  
\sim \sim
\text{‘zombies’}

Together with a -\textit{u}, this suffix has the suprasegmental effect in the preceding syllable of shortening a long vowel (5.83), eliminating a glide (5.84) as well as changing [w] to [b] and [r] to [d] in a process of fortition (5.85). Following a convention begun by Kießling (1994), this effect is represented by the symbol !. The fact that this suprasegmental effect is \textit{not} present in the stem can be seen by examining the other member of a pair.

(5.83) Shortening effect of -\textit{u!} (N∅)

a.  

i.  

\textit{boolu}  
\begin{array}{l}
\text{bool-}  \\
\text{STM-}  \\
\text{day}
\end{array}  
\begin{array}{l}
\text{-oo}  \\
\text{-Sfx2}  \\
\text{-L}
\end{array}  
\text{‘a day’}

ii.  

\textit{bolu}  
\begin{array}{l}
\text{bool-}  \\
\text{STM-}  \\
\text{days}
\end{array}  
\begin{array}{l}
-u! \\
\text{-Sfx2}  \\
\text{-L}
\end{array}  
\sim \sim
\text{‘days’}

b.  

i.  

\textit{yaa’ee}  
\begin{array}{l}
\text{yaa’-}  \\
\text{STM-}  \\
\text{river}
\end{array}  
\begin{array}{l}
\text{-ee}  \\
\text{-Sfx2}  \\
\text{-L}
\end{array}  
\text{‘a river’}
5. The suffix 1: the regular phenomena

ii. ya’u
yaa- -u! ~’~
STM- \( -S_{fx2} -L \)
\( \text{rivers} \)
‘rivers’

(5.84) Glide-Elimination effect of \( -u! (N\emptyset) \)

a. qaymoo
qaym- -oo ~’~
STM- \( -S_{fx2} -L \)
\( \text{field} \)
‘field’

b. qamu
qaym- -u! ~’~
STM- \( -S_{fx2} -L \)
\( \text{fields} \)
‘fields’

(5.85) Fortition effect of \( -u! (N\emptyset) \)

a. i. siiwaa
siiw--aa ~’~
STM- \( -S_{fx2} -L \)
\( \text{protocol} \)
‘protocol’

ii. sibu
siiw- -u! ~’~
STM- \( -S_{fx2} -L \)
\( \text{protocols} \)
‘protocols’

b. i. fara
far- -a -tá
STM- \( -S_{fx2} -L \)
\( \text{bone} \)
‘a bone’

ii. fadu
far- -u! ~’~
STM- \( -S_{fx2} -L \)
\( \text{bones} \)
‘bones’
5. The suffix 1: the regular phenomena

The suffix -u! (N∅) is identical in Iraqw (Mous 1993: 55), as well as in Alagwa (Mous 2016: 92).

The suffix -u! (N∅) is present as SFX2 in the Pl composed suffixes -aC_u, -(a)du, and -<ee>-aC_u.

5.3.4.3 -a'(!) (N∅)

The suffix -a'(!) (N∅) occurs on 37 nouns in the sample.

(5.86) The suffix -a'(!) (N∅)

a. laqee(a')
   laqee!-a'(!) ~ ~
   STM- -SFX2 -L
   'thorns'

b. gongox(a')
   gongox- -a'(!) ~ ~
   STM- -SFX2 -L
   'elbows'

c. giitsee/a'
   giitsee/- -a'(!) ~ ~
   STM- -SFX2 -L
   'a face'

The group of suprasegmental effects ! that accompany the suffix -a' do not consistently apply, and are therefore represented as (!). Effects can be seen when comparing members of a pair (5.87).
5. The suffix 1: the regular phenomena

(5.87) Suprasegmental effects of -a’(!) (N∅)

a. Effects observed
   i. gongooxi
      gongoox- -i - r~~
      STM- -Sfx2 -L
      ‘an elbow’
   
      gongoox- -a’(!) ~~
      STM- -Sfx2 -L  
      ‘elbows’

b. Effects unobserved
   i. akeesi
      akees- -i -r~~
      STM- -Sfx2 -L
      ‘a cooking stone’
   
      akeesa’
      akees- -a’(!) ~~
      STM- -Sfx2 -L
      ‘cooking stones’

Sometimes, the final glottal stop is not present. This is due to word-final apocope.

(5.88) Word-final apocope of glottal stop

a. /ayla
   /ayl- -a’(!) ~~
   STM- -Sfx2 -L
   ‘wedding song’

b. xweera
   xweer- -a’(!) ~~
   STM- -Sfx2 -L
   ‘an evening’
5. The suffix 1: the regular phenomena

The suffix -a’(!) is identified in these forms, as opposed to other -a suffixes (-a (Ft), -a (Mk) or -a (Mo)) because of agreement patterns present on the gender linker as well as adjective (5.89).

(5.89) Agreement patterns differentiate -a(!) (N∅) with word-final apocope, -a(Mk), -a(Mo), and A (Ft)

a. dungá ur (suffix: -a'(!), with word-final apocope)
   
   
   StM- Sfx2 -L big.N
   nose
   'a big nose'

b. akú úr (suffix: -a (Mk))
   af- -a -úr
   StM- Sfx2 -L big.M
   mouth
   'a big mouth'

c. niingó úr (suffix: -a (Mo))
   niing- -a -úr
   StM- Sfx2 -L big.M
   drum
   'a big drum'

d. asitá ur (suffix: -a (Ft))
   asl- -a -ur
   StM- Sfx2 -L big.F
   fire
   'a big fire'

The suffix -a’(!) is identical in Iraqw (Mous 1993: 57), and -a in Alagwa (Mous 2016: 94).

The suffix -a’(!) (N∅) is present as SFX2 in the Pl composed suffixes -(a)ma', and eema'.
5. The suffix 1: the regular phenomena

5.3.4.4 -a’i (N∅)

The suffix -a’i (N∅) occurs on 33 nouns in the sample.

(5.90) The suffix -a’i (N∅)

a. *tloomi’i*
   
   tloom- -a’i  ~’~
   
   STM-  -Sfx2 -L
   
   ‘mountains’

b. *na/i’i*
   
   na/- -a’i  ~’~
   
   STM-  -Sfx2 -L
   
   ‘children’

c. *him/i’i*
   
   him- -a’i  ~’~
   
   STM-  -Sfx2 -L
   
   ‘ropes’

In virtually all cases, the [a] of the suffix has undergone regressive assimilation across the glottal consonant, thus resulting in a suffix whose form is typically -i’i.

In some cases, the final vowel and the glottal consonant are not present. This is due to word-final apocope.

(5.91) Word-final apocope of glottal stop and [i]

a. *bihhi*
   
   bihh- -a’i  ~’~
   
   STM-  -Sfx2 -L
   
   ‘side’ (i.e. of the body)

b. *amsi*
   
   ams- -a’i  ~’~
   
   STM-  -Sfx2 -L
   
   ‘night’
5. The suffix 1: the regular phenomena

The suffix -a’i is identified in these forms, as opposed to other -i suffixes (-i (Fr), or -a (Ft)) because of agreement patterns present on the linker as well as adjective (5.92).

(5.92) Agreement patterns differentiate -a’i (N∅) with word-final apocope, -i (Fr), and -i (Ft)

a.  
   amsf tleer  
   amsi- -a’i ~ long.N  
   STM- - Sfx2 -L  

   ‘a long night’

b.  
   mulkir tleer  
   mulk- -i -r long.F  
   STM- - Sfx2 -L  

   ‘a long scar’

c.  
   lukitá tleer  
   luk- -i -tá long.F  
   STM- - Sfx2 -L  

   ‘a long reed mat’

The suffix -a’i (N∅) is identical in Iraqw (Mous 1993: 52), and -(a)a’i in Alagwa (Mous 2016: 83).

The suffix -a’i (N∅) is present as SFX2 in the Pl composed suffixes -iya’, -eerI, and -aCz’i’i.

5.3.5 Pl

This group of suffixes form nouns which only occur with Pl agreement. These suffixes never show Sg agreement on the adjective (5.93). This is a crucial difference from all other groups of suffixes (5.94).
5. The suffix 1: the regular phenomena

(5.93) PL. suffix -eema’(N∅) may occur only with other forms showing PL agreement

a. \textit{tlapteemá’tlet}
   \begin{align*}
   \text{tlapt-} & \text{-eem} \quad \text{-a(‘)l} \quad \text{~} \quad \text{tlet} \\
   \text{STM-} & \text{-SFX1} \quad \text{-SFX2} \quad \text{-L} \quad \text{long.N.Pl}
   \end{align*}
   falcons
   ‘tall falcons’

b. *\textit{tlapteemá’tleer}
   \begin{align*}
   \text{tlapt-} & \text{-eem} \quad \text{-a(‘)l} \quad \text{~} \quad \text{tleer} \\
   \text{STM-} & \text{-SFX1} \quad \text{-SFX2} \quad \text{-L} \quad \text{long.N}
   \end{align*}
   falcons
   (intended meanings) ‘tall falcons’, ‘a group of tall falcons’

c. \textit{tlaptumó tleér}
   \begin{align*}
   \text{tlapt-} & \text{-m} \quad \text{-ó} \quad \text{-ó} \quad \text{tleér} \\
   \text{STM-} & \text{-SFX1} \quad \text{-SFX2} \quad \text{-L} \quad \text{long.M}
   \end{align*}
   falcon
   ‘a tall falcon’

(5.94) General suffix -aa (Fr) may occur only with other forms showing either Sg or Pl agreement

a. \textit{sirooraár tleer}
   \begin{align*}
   \text{siroor--aa} & \quad \text{-r~} \quad \text{~} \quad \text{tleer} \\
   \text{STM-} & \text{-SFX2} \quad \text{-L} \quad \text{tall.F}
   \end{align*}
   canaries
   ‘tall canary’ (i.e. as a species, versus short kinds of canary)

b. \textit{sirooraár tlet}
   \begin{align*}
   \text{siroor--aa} & \quad \text{-r~} \quad \text{~} \quad \text{tlet} \\
   \text{STM-} & \text{-SFX2} \quad \text{-L} \quad \text{long.F.Pl}
   \end{align*}
   falcons
   ‘tall canaries’

This group may also be distinguished by its ‘composed’ suffixes. This is, all the
suffixes of this group may be broken down into two smaller subcomponents. As for
the Sg suffixes, the subcomponents of this group of Pl suffixes show the same sort of
composition. The first subcomponent is one of a series morphemes readily
identifiable as ‘derivational’ when used with verb stems [CROSS REFERENCE], and
which will be further discussed below. The second subcomponent is always a suffix
from the general group.

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5. The suffix 1: the regular phenomena

(5.95) **Subdivision of ‘composed suffixes’ into SFX1 and SFX2**

murungeema
murung- -eem -a’(l) ~ ~
STM- -Sfx1 - Sfx2 -L

‘bellybuttons’

Each of the suffixes of the Pl group will be examined in detail below.

5.3.5.1 -náy (Mo)

The suffix -náy (Mo) occurs on six nouns in the sample.

(5.96) **The suffix -náy (Mo)**

a. ga/at-anáy
   ga/at- -(a)m -áy -ó
   STM- -Sfx1 - Sfx2 -L

   ‘fevers’

b. tsetse/imáy
   tsetse/- -(a)m -áy -ó
   STM- -Sfx1 - Sfx2 -L

   ‘open places’

c. afurtlumáy
   afurtl- -(a)m -áy -ó
   STM- -Sfx1 - Sfx2 -L

   ‘simple knots’

As can be seen from (5.96).b) and (5.96).c), the suffix is often realized with an [m] instead of an [n].

The suffix -náy (Mo) has no identified equivalent in either Iraqw or Alagwa.

The suffix -áy may be further decomposed into two parts: (a)m SFX1, and áy SFX2.

Note that SFX1 is recognizable in the -VVm of the durative verbal suffix (see §2.3.2.4). SFX2 is the GenPL suffix -áy (Mo).
5. The suffix 1: the regular phenomena

5.3.5.2 -iya’ (N∅)

The suffix -iya’ (N∅) occurs on four nouns in the sample.

(5.97) The suffix -iya’ (N∅)

a.  
slufiya’
sluf- iy a’(!)  ~
STM- SFX1 SFX2 L
\(\text{lips}\)

b.  
\(\text{tsi/iya’}\)

\(\text{tsi/- iy a’(!) } \sim\sim\)
STM- SFX1 SFX2 L
\(\text{shins}\)

c.  
\(\text{tsiniya’}\)

\(\text{tsin/- iy a’(!) } \sim\sim\)
STM- SFX1 SFX2 L
\(\text{ends}\)

The fourth occurrence of the suffix -iya’ (N∅) involves word-final apocope of the glottal stop.

(5.98) Word-final apocope of the glottal stop of the suffix -iya’ (N∅)

laqayiya
laqay- iy a’(!)  ~
STM- SFX1 SFX2 L
\(\text{thorns}\)

The equivalent of the suffix -iya’ (N∅) in Iraqw is identical (Mous 1993: 57). No similar form is identified in Alagwa.

Mous (1993: 57) notes that this form is identical to the verbal third person plural suffix -iya’. Decomposition is possible, but slightly less satisfying than the other decompositions, in that the first element (SFX1) is not identifiable with an
5. The suffix 1: the regular phenomena

independent morpheme. Nevertheless, the two parts are as follows: iy SFX1, and a’(!) SFX2. SFX2 is the \text{Gen}_{PL} suffix -a’(!)(N∅).

5.3.5.3 -(a)ma’ (N∅)

The suffix -(a)ma’(N∅) occurs on 61 nouns in the sample.

(5.99) \text{THE SUFFIX -(A)MA’(N∅)}

a. \text{ tla/ama’}
\text{ tla/ - (a)m -a’(!) \ ~\ ~}
\text{STM- - SFX1 - SFX2 - L}
\text{ditches}
\text{‘ditches’}

b. \text{ kitangeerima’}
\text{ kitangeer- - (a)m -a’(!) \ ~\ ~}
\text{STM- - SFX1 - SFX2 - L}
\text{drying racks}
\text{‘drying racks’}

c. \text{ kiintima’}
\text{ kiint- - (a)m -a’(!) \ ~\ ~}
\text{STM- - SFX1 - SFX2 - L}
\text{thickets}
\text{‘thickets’}

The suffix -(a)ma’ is identified as -ma’ in Iraqw (Mous 1993: 52). There is no equivalent form in Alagwa.

The suffix -(a)ma’ may be further decomposed into two parts: (a)m SFX1, and a’(!) SFX2. Note that SFX1 is recognizable in the -VVm of the durative verbal suffix (see §2.3.2.4). SFX2 is the \text{Gen}_{PL} suffix -a’(!)(N∅).

5.3.5.4 -iyoo (N∅)

The suffix -iyoo (N∅) occurs on two nouns in the sample.
5. The suffix 1: the regular phenomena

(5.100) The suffix -iyoo (N∅)

a. kuriyoo
   kur- -iy -oo ~~
   STM- -Sfx1 -Sfx2 -L
   ‘anuses’

b. tsariyoo
   tsar- -iy -oo ~~
   STM- -Sfx1 -Sfx2 -L
   ‘clitorises’

Equivalents to the suffix -iyoo (N∅) have been identified neither in Iraqw, nor in Alagwa.

Decomposition of the suffix -iyoo (N∅) yields: iy for SFX1 (discussed above), and oo for SFX2. SFX2 is the general suffix -oo (N∅).

5.3.5.5 -aCz'i (N∅)

The suffix -aCz'i (N∅) (where the Cz is a consonant reduplicated from the last in the stem) occurs on two nouns in the sample.

(5.101) The suffix -aCz'i (N∅)

a. akoki'i
   ako- -aCz -a'i ~~
   STM- -Sfx1 -Sfx2 -L
   ‘grandfathers’

b. aamami'i
   aama- -aCz -a'i ~~
   STM- -Sfx1 -Sfx2 -L
   ‘grandmothers’

No similar form is identified in Iraqw or Alagwa.
The suffix may be decomposed into \( aC_z \) for SFX1, and \( a'i \) for SFX2. \( aC_z \) is recognizable in the pluractional suffix for verbs, and \( a'i \) is the -\( a'i \) Gen\(_{PL} \) suffix, described above.

5.3.5.6 -<ee>-\( aC_z \)u (N∅)

The suffix -<ee>-\( aC_z \)u (N∅) (where the \( C_z \) is a consonant reduplicated from the last in the stem) occurs on four nouns in the sample.

(5.102)  

**a. tlaqeesusu**  

<table>
<thead>
<tr>
<th>STM- -SFX1 -SFX1 -SFX2 -L</th>
</tr>
</thead>
<tbody>
<tr>
<td>'sorghum mashes'</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STM- -SFX1 -SFX1 -SFX2 -L</th>
</tr>
</thead>
<tbody>
<tr>
<td>'reed mats'</td>
</tr>
</tbody>
</table>

c. **tsa/eetutu**  

<table>
<thead>
<tr>
<th>STM- -SFX1 -SFX1 -SFX2 -L</th>
</tr>
</thead>
<tbody>
<tr>
<td>'yolks'</td>
</tr>
</tbody>
</table>
5. The suffix 1: the regular phenomena

(1993: 190) observes the ability of certain operations to reanalyze the content of their bases, several operations seeming to treat the consonants t, m, s or r as if they were indeed the derivational morphemes. For example, the verb lakiit 'to wait' has no underived form (therefore *lak), but the iit of the stem seems to be reanalyzed and treated as the middle suffix -iit in the reduplicative durative construction (hence lakmaamiiit 'to be waiting'). Perhaps the same operation is taking place in this nominal operation, thus the stem of (5.102).c) tsat/at is reanalyzed as tsa/-t.

No similar suffix is identified for Iraqw or Alagwa.

The suffix -<ee>-aC₃u (N∅) is unique in that it may be decomposed into three subcomponents, rather than two. The first, as discussed above, is the reanalysis of a stem-final t, m, s, or r into -eet, -eem, -ees, or eer. The second is aC₃. Both of these are labeled SFX1. The third element, SFX2 is -u. As stated above, -eet, -eem, -ees, and -aar are all similar to verbal derivational suffixes, as is -aC₃, which also serves as a durative suffix. The element -u is the GenPL suffix -u!, discussed above.

### 5.3.5.7 -eemoo or -<ee>-oo (N)

The suffix -eemoo (N) or its allomorph -<ee>-oo (N) occur 21 times in the sample.

(5.103) a. **THE SUFFIX -EEMOO (N∅)**

<table>
<thead>
<tr>
<th>uun</th>
<th>eem</th>
<th>oo</th>
</tr>
</thead>
<tbody>
<tr>
<td>STM</td>
<td>-SFX1</td>
<td>-SFX2</td>
</tr>
</tbody>
</table>

'laws'
5. The suffix 1: the regular phenomena

b. \textit{fuuf}eemoo
   \begin{tabular}{c}
   fuuf- & \text{-eem} & \text{-oo} & \sim\sim \\
   STM- & -Sfx_1 & -Sfx_2 & -L \\
   \end{tabular}
   \hline
   \text{weasels} \\
   \text{‘weasels’}

c. \textit{slar}eemoo
   \begin{tabular}{c}
   slar- & \text{-eem} & \text{-oo} & \sim\sim \\
   STM- & -Sfx_1 & -Sfx_2 & -L \\
   \end{tabular}
   \hline
   \text{armpits} \\
   \text{‘armpits’}

The allomorph -\textit{<ee>-oo} (N) occurs only when the final consonant of the stem is \textit{t}, \textit{m}, or \textit{r}. It is predicted that -\textit{s} would also behave the same, but this is not recorded in the sample. Reminiscent of the pattern discussed above, this may represent the same operation of reanalysis.

(5.104) THE SUFFIX -\textit{<ee>-oo} (N\text{Ø})

a. \textit{ya}eeto
   \begin{tabular}{c}
   ya/at- & -\text{<ee>} & \text{-oo} & \sim\sim \\
   STM- & -Sfx_1 & -Sfx_2 & -L \\
   \end{tabular}
   \hline
   \text{shoes} \\
   \text{‘shoes’}

b. \textit{wa}eemoo
   \begin{tabular}{c}
   wa’am- & -\text{<ee>} & \text{-oo} & \sim\sim \\
   STM- & -Sfx_1 & -Sfx_2 & -L \\
   \end{tabular}
   \hline
   \text{bone, marrow} \\
   \text{‘bone marrow’}

c. \textit{anxeer}oo
   \begin{tabular}{c}
   anxar- & -\text{<ee>} & \text{-oo} & \sim\sim \\
   STM- & -Sfx_1 & -Sfx_2 & -L \\
   \end{tabular}
   \hline
   \text{phlegm} \\
   \text{‘phlegm’}

This operation does not occur for every case of a stem-final \textit{t}, \textit{m}, or \textit{r}, however.
5. The suffix 1: the regular phenomena

(5.105) \[ [t] \text{ OF } /aanteemoo \text{ IS NOT REANALYSED} \]
\[ /aanteemoo \]
\[ /aant- \text{-eem} \text{ -oo } \sim \sim \]
\[ \text{STM- -SFX1 -SFX2 -L} \]
\[ \text{termite mounds} \]

An identical suffix is identified in both Iraqw (Mous 1993: 58) and Alagwa (Mous 2016: 85).

The suffix -eemoo (N) can be broken into two subparts, eem as SFX1, and oo as SFX2. Similarly, its allomorph -<ee>-oo can be subdivided into a reanalysis of a stem-final \( t, m, s, \text{ or } r \) into -eet, -eem, -ees, or aar as SFX1, and oo as SFX2. Both SFX1 elements are similar to verbal derivational suffixes. The final element oo, however, is slightly problematic. In many cases, the gender-linker realized by this form is rising pitch accent \( \sim \sim \), this makes the suffix identical with -oo (N∅), the general suffix identified above (see §5.3.3.16). However, in some cases, the linker realized by this form is -á, making the suffix Na subgender. This subgender is not common, and the suffix -oo as identified above is consistently N∅ in subgender. As such, it may be necessary to posit a new morpheme -oo (Na) to account for this pattern.

(5.106) \text{TWO DIFFERENT SUBGENDERS FOR -EEMOO OR -<EE>-OO} 
\text{a. N∅ SUBGENDER} 
\[ fiufeemoö \text{ uren} \]
\[ fuuf- \text{-eem} \text{ -oo } \sim \sim \text{ uren} \]
\[ \text{STM- -SFX1 -SFX2 -L} \]
\[ \text{big.N.Pl} \]
\[ \text{weasels} \]
\[ \text{‘big weasels’} \]
5. The suffix 1: the regular phenomena

b. **Nasubgender**

\[
\text{ayeemá uren} \\
\text{ay- } \text{-eem } \text{-oo } \text{-á } \text{uren} \\
\text{STM- } \text{-SFX1 } \text{-SFX2 } \text{-L } \text{(big.N.Pl lands)}
\]

‘big lands’

5.3.5.8 -aawee (Fr)

The suffix -aawee (Fr) occurs on 16 nouns in the sample.

(5.107) **The suffix -aawee (Fr)**

a. **himtaawee**

\[
\text{himg- } \text{-aw } \text{-ee } \text{-r~r~} \\
\text{STM- } \text{-SFX1 } \text{-SFX2 } \text{-L } \text{owls}
\]

‘owls’

b. **tsuhaawee**

\[
\text{tsuh- } \text{-aw } \text{-ee } \text{-r~r~} \\
\text{STM- } \text{-SFX1 } \text{-SFX2 } \text{-L } \text{lower backs}
\]

‘lower backs’

c. **xeeraawee**

\[
\text{xeer- } \text{-aw } \text{-ee } \text{-r~r~} \\
\text{STM- } \text{-SFX1 } \text{-SFX2 } \text{-L } \text{scorpions}
\]

‘scorpions’

Identical suffixes exist in Iraqw (Mous 1993: 51) and Alagwa (Mous 2016: 82).

The suffix -aawee (Fr) may be decomposed into aaw for SFX1, and ee for SFX2. aaw is recognizable in the inchoative suffix for verbs -uw (see §2.3.2.4), and ee is the -ee general suffix, described above.

5.3.5.9 -eeri (N∅)

The suffix -eeri (N∅) occurs on 25 nouns in the sample.
5. The suffix 1: the regular phenomena

5.3.5.10 -eema’ (N∅)

The suffix -eema’ (N∅) occurs on 35 nouns in the sample.

Identical suffixes exist in Iraqw (Mous 1993: 53) and Alagwa (Mous 2016: 80).

The suffix -eeri (N∅) may be decomposed into eer for SFX1, and ’i for SFX2, where the glottal stop undergoes deletion in phonological cluster simplification. eer is recognizable in the durative infix for verbs -<ar> (see §2.3.2.4), and ’i is the -(a)’i GenPL suffix, described above.
5. The suffix 1: the regular phenomena

b. poohameema'
pooham- -eem -a'(!) ~~
STM- -Sfx1 -Sfx2 -L
baboons

c. tlapteema'
tlap- -eem -a'(!) ~~
STM- -Sfx1 -Sfx2 -L
falcon

An identical suffix exists in Alagwa (Mous 2016: 81). No such suffix is recorded for Iraqw.

The suffix -eema'(N∅) may be decomposed into eem for SFX1, and a' for SFX2. eem is recognizable in the durative suffix for verbs -iim (see §2.3.2.4), and a' is the -a'(!) GenPL suffix, described above.

5.3.5.11 -(a)du (N∅)

The suffix -(a)du (N∅) occurs on 55 nouns in the sample.

\[(5.110) \text{ THE SUFFIX -(a)DU (N∅)}\]
\[\begin{align*}
a. \quad baqaydu \\
baqay- -(a)d -u! ~~ \\
STM- -Sfx1 -Sfx2 -L \\
\text{chambers} \end{align*}\]

b. laydu
lay- -(a)d -u! ~~
STM- -Sfx1 -Sfx2 -L
branding irons

‘chambers’

‘branding irons’
5. The suffix 1: the regular phenomena

c. \textit{ga/aledu} \\
\textit{ga/ale-} \quad \textit{-(a)d u!} \quad \doteq \doteq \\
\text{STM-} \quad \text{SFX1} \quad \text{SFX2} \quad \text{L} \\
\text{shields} \\
\text{‘shields’}

The suffix -(a)du (N∅) has identical forms in Iraqw (Mous 1993: 53) and in Alagwa (Mous 2016: 89).

The suffix -(a)du (N∅) may be decomposed into (a)d for SFX1, and u for SFX2. It is argued that (a)d represents a historical change from the suffix -aCz (Kießling and Mous 2003: 11), which is recognizable as a durative suffix for verbs (see §2.3.2.4), and u is the -u! Gen\_PL suffix, described above.

5.3.5.12 -aCz\_ee (Fr)

The suffix -aCz\_ee (Fr) occurs on 23 nouns in the sample, where Cz represents a reduplication of the final consonant of the stem.

(5.111) \textbf{THE SUFFIX -aCz\_ee (Fr)} \\
\textbf{a. himtetee} \\
himt- \quad \text{-aCz ee} \quad \text{-r~ or} \\
\text{STM-} \quad \text{SFX1} \quad \text{SFX2} \quad \text{L} \\
\text{metal necklaces} \\
\text{‘metal necklaces’} \\
\textbf{b. tluwe/e/ee} \\
tluwa/- \quad \text{-aCz ee} \quad \text{-r~ or} \\
\text{STM-} \quad \text{SFX1} \quad \text{SFX2} \quad \text{L} \\
\text{upper arms} \\
\text{‘upper arms’}
5. The suffix 1: the regular phenomena

c. *tuumbebee

\[
\begin{array}{c}
\text{tuumb-} & -aC_z & -\text{ee} & -r\text{~}~ \\
\text{STM-} & -\text{Sfx1} & -\text{Sfx2} & -\text{L} \\
\end{array}
\]

‘pools’

A process of vowel assimilation of the [a] of the suffix allows a process of haplological syncope to take place (V → ∅ / C₁ Cᵢ). This results in many of these reduplicated forms reducing to feature geminate consonants.

(5.112) Geminate consonants formed from the suffix -ACₙEE (Fr)

a. *fureree

\[
\begin{array}{c}
\text{fur-} & -aC_z & -\text{ee} & -r\text{~}~ \\
\text{STM-} & -\text{Sfx1} & -\text{Sfx2} & -\text{L} \\
\end{array}
\]

*fureree

*fureree → furreee

‘twigs’

b. *ufebee

\[
\begin{array}{c}
\text{uf-} & -aC_z & -\text{ee} & -r\text{~}~ \\
\text{STM-} & -\text{Sfx1} & -\text{Sfx2} & -\text{L} \\
\end{array}
\]

*ufebee

*ufebee → ufbee

‘piles’

c. *kanenee

\[
\begin{array}{c}
\text{kan-} & -aC_z & -\text{ee} & -r\text{~}~ \\
\text{STM-} & -\text{Sfx1} & -\text{Sfx2} & -\text{L} \\
\end{array}
\]

*kanenee

*kanenee → kannee

‘tendons’

One interesting piece of evidence that this is indeed the path to geminates in Gorwaa exists in a Gorwaa text recorded by Martin Heepe in 1930. Kießling (2002:54) was the first to point out that, in this source, there are reduplicated forms where present-day Gorwaa has gemination.
5. The suffix 1: the regular phenomena

(5.113) REDUPLICATED FORMS IN HEEPE (1930), GEMINATE FORMS IN CURRENT GORWAA

a. muunane[e] → muunnee ‘anger’

b. ’alalee → alle ‘house posts’

The suffix -ac_ee (Fr) has an identical form in Alagwa (Mous 2016: 79). No such form exists in Iraqw.

The suffix -ac_ee (Fr) may be decomposed into ac_z for SFX1, and ee for SFX2. ac_z is recognizable as a durative suffix for verbs -ac_z (see §2.3.2.4), and ee is the -ee general suffix described above.

5.3.5.13 -ac_zu (N∅)

The suffix -ac_zu (N∅) occurs on 22 nouns in the sample.

(5.114) THE SUFFIX -ac_zu (N∅)

a. /aampupu
   /aamp-   -ac_z   -u!   ~~
   STM-     -SFX1  -SFX2 -L
   ‘bird-watching platforms’

b. yandudu
   yand-   -ac_z   -u!   ~~
   STM-     -SFX1  -SFX2 -L
   ‘hammers’

c. afeetlatlu
   afeet-   -ac_z   -u!   ~~
   STM-     -SFX1  -SFX2 -L
   waists
   ‘waists’
5. The suffix 1: the regular phenomena

As for the suffix \(-aC_zu\) above, a process of vowel assimilation of the [a] of the suffix allows a process of haplo logical syncope to take place \((V \rightarrow \emptyset / C_i \_ C_j)\). This results in at least two of these reduplicated forms reducing to feature geminate consonants.

\[(5.115)\]

**Geminate consonants formed from the suffix \(-aC_zu (N\emptyset)\)**

\(a.\) \(kinnu\)

\[
\begin{array}{c}
\text{kin} - \quad \text{-aC}_z \quad \text{-u} \quad \sim \sim \\
\text{STM} - \quad -\text{SFX}_1 \quad -\text{SFX}_2 \quad \text{-L}
\end{array}
\]

\(\text{kinunu} \rightarrow \text{kinnu}\)

'\text{small clay water pots}'

\(b.\) \(kunnu\)

\[
\begin{array}{c}
\text{kun} - \quad \text{-aC}_z \quad \text{-u} \quad \sim \sim \\
\text{STM} - \quad -\text{SFX}_1 \quad -\text{SFX}_2 \quad \text{-L}
\end{array}
\]

\(\text{kununu} \rightarrow \text{kunnu}\)

'\text{mortars}'

The suffix \(-aC_zu (N\emptyset)\) has an identical form in Alagwa (Mous 2016: 92). No such form exists in Iraqw.

The suffix \(-aC_zu (N\emptyset)\) may be decomposed into \(aC_z\) for SFX1, and \(u\) for SFX2. \(aC_z\) is recognizable as a durative suffix for verbs \(-aC_z\) (see §2.3.2.4), and \(u\) is the \(-u!\) GenPL suffix described above.

5.3.6 A note on loans

5.3.6.1 Loans from Datooga

17 nouns in the sample have been identified as loans from Datooga, identifiable by their pattern of ending in a stop and possessing RPA. Nouns of this group can be either Mo or Fr in gender.
5. The suffix 1: the regular phenomena

(5.116) Loans from Datooga
a. *gewoö*(d) ‘disease’
b. *qereē*(g) ‘infant’
c. *kiinsoróró*(q) ‘snail’

5.3.6.2 Loans from Swahili (and possibly English)

This second group of loans is numerous, and is distributed throughout the sample. These loans tend to exist on a continuum, from those whose endings have been completely reanalyzed into suffixes (nativized loans) (5.117), to those whose endings are sometimes analyzed as suffixes, and sometime analyzed as part of the stem (unnativized loans) (5.118).

(5.117) Nativized Loans

a. DAAWA
   Sw. *dawa* ‘medicine’ → *daaw-*
   daawa suffix: -aa ‘medicine’
   daawudu suffix: -(a)du ‘medicines’

b. BAMIYA
   Sw. *bamia* ‘okra’ → *bamiy-*
   bamiyito’oo suffix: -(i)to’oo ‘okra fruit’
   bamiya suffix: -aa ‘okra’

(5.118) Unnativized Loans

a. SULEE
   Sw. *shule* ‘school’ → *sule-*
   sule suffix: -ee ‘school’
   suledu suffix: -(a)du ‘schools’
   BUT: [e] still present on stem

b. KATAANI
   Sw. *katani* ‘sisal’ → *kataani-*
   kataanimó suffix: -(a)mó ‘sisal plant’
   kataani suffix: -(Fr) ‘sisal’
5. The suffix 1: the regular phenomena

This concludes the presentation of the suffixes. What follows is a syntactic analysis to account for these regular phenomena.

5.4 Analysis

Following the data presentation above, Gorwaa nominal suffixes can be characterized as a set of 42 forms. Morphologically, of the 42 suffixes, 24 are ‘simple’ (formed of only one identifiable morpheme), and 18 are ‘composed’ (formed of one of the simple suffixes (labeled SFX2) and a second morpheme analogous to the verbal ‘derivational suffixes’ (labeled SFX1)). Syntactically, there are 2 number values: Sg and Pl. The 18 ‘composed’ suffixes may only ever occur with one of these number values, hence, of this ‘composed’ group there are 5 Sg suffixes, and 13 Pl suffixes. The 24 ‘simple’ suffixes are unvalued for number (i.e. general number), and may occur with either Sg agreement or Pl agreement. Restrictions on how freely general suffixes may associate with either number value is largely dependent on the paradigm into which these suffixes enter, and will be discussed in the following chapter.

This general-singular-plural distinction translates into the minimalist framework by positing three different features: [individuation], [singular], and [plural]. Following the morphosyntactic feature geometry proposed by Harley and Ritter (2002), in order for a form to bear the [singular] or [plural] feature, it must first bear the [individuation] feature.
5. The suffix 1: the regular phenomena

Returning to the morphology of the Gorwaa noun, if nouns which consistently occur with Sg agreement and nouns which consistently occur with Pl agreement (e.g. qoonqalumó ‘a crowned crane’ and qoonqalama ‘crowned cranes’) are always marked by a composed suffix, and if composed suffixes are different from simple suffixes by their containing a SFX1, I propose that SFX1 corresponds to a head carrying the [individuation] feature (5.119). Furthermore, given that SFX1 occurs closer to the stem than SFX2, it is this head which projects directly above the root (√) (5.120).

(5.119) FEATURE STRUCTURE FOR THE LEXICAL ELEMENT SFX1 (VERSION 1)

SFX1
\{ 
\text{categorial} [\text{SFX1, Indiv}] \}
\text{inflectional} [\emptyset] 
\text{selectional} [\sqrt{\cdot}]

(5.120) QOONQALUM- (VERSION 1)
Merge of SFX1 (syntactic object α) and √qoonqal (syntactic object β).

\text{SFX1P}
\sqrt{\text{qoonqal}}-\text{(a)m}
[\text{cat} [\text{SFX1, Indiv}]]
\sqrt{\text{qoonqal}}
[\text{cat} [\sqrt{\cdot}]]
[\text{sel} [\cdot]]
\text{(a)m}
[\text{cat} [\text{SFX1, Indiv}]]
[\text{infl} [\emptyset]]
[\text{sel} [\sqrt{\cdot}]]

Having been valued for [individuation], the form qoonqalum- will go on to be valued for either [singular] or [plural], most likely through merger with another functional head.
Looking at the morphology, it is tempting to assume that it is this head which hosts the SFX2 material. However, it should be noted that SFX2 occurs on forms both specified and unspecified for number. Consider (5.121) below, where the SFX2 is shared on a singular noun with a consistently singular suffix *qoonqalumó*, and a general number noun with a suffix *siyó*.

(5.121) SFX2 OCCURS ON NOUNS BOTH SPECIFIED AND UNSPECIFIED FOR NUMBER

a. *qoonqalumó wák*
   qoonqál- -(a)m -ó -ó wák
   STM- -Sfx1 -Sfx2 -L one
   "one crowned crane"

b. *siyó wák*
   siy- -ó -ó wák
   STM- -Sfx2 -L one
   "one type of fish"

c. *siyó tsár*
   siy- -ó -ó tsár
   STM- -Sfx2 -L two
   "two types of fish, two fish’"

SFX2 morphology being unrelated to expression of singular or plural number, it cannot be associated with a head bearing a [singular] or [plural] feature. However, forms such as *qoonqalumó* and *qoonqalama’* are valued for singular and plural number, respectively. As such, it is posited that a head which possesses these features [singular] or [plural] must exist, but that the head of this projection (labeled F for now) is phonologically null. This head immediately dominates the head hosting the [individuation] feature.
5. The suffix 1: the regular phenomena

(5.122) Feature structure for the lexical element F (version 1)
\[
\begin{align*}
\text{categorial } [F, Sg] \\
F &\quad \text{inflectional } [\emptyset] \\
&\quad \text{selectional } [\text{SFX1}]
\end{align*}
\]

(5.123) Qoonqalum-(Sg.) (version 1)
Merge of F (syntactic object α) and SFX1 $\sqrt{qoonqal-(a)m}$ (syntactic object β).

\[
\begin{align*}
\text{FP} &\quad \sqrt{qoonqal-(a)m-F} \\
&\quad [\text{cat } [F, Sg]] \\
\text{SFX1P} &\quad \sqrt{qoonqal-(a)m} \\
&\quad [\text{cat } [\text{SFX1, Indiv}]] \\
&\quad \begin{bmatrix}
\text{cat } [F, Sg] \\
\text{infl } [\emptyset] \\
\text{sel } [\text{< SFX1 >}]
\end{bmatrix}
\end{align*}
\]

Up to this point, the structure and mechanics of the analysis largely match that of Borer (2005a), as such, the labels applied therein may be adopted. SFX1 becomes a classifier head (Cl), whose feature is responsible for dividing stuff. F becomes a quantity head (#), whose feature is responsible for assigning quantity to stuff or to divisions of it (p.96). As such, the structure in (5.123) can be rewritten as follows.

(5.124) Qoonqalum-(Sg.) (version 2)

\[
\begin{align*}
\#P &\quad \sqrt{qoonqal-(a)m-#} \\
&\quad [\text{cat } [#\text{, } Sg]] \\
\text{ClP} &\quad \sqrt{qoonqal-(a)m} \\
&\quad [\text{cat } [\text{Cl, Indiv}]] \\
&\quad \begin{bmatrix}
\text{cat } [#\text{, } Sg] \\
\text{infl } [\emptyset] \\
\text{sel } [\text{< Cl >}]
\end{bmatrix}
\end{align*}
\]
5. The suffix 1: the regular phenomena

Under Borer’s (2005a) model, the projection immediately dominating $\#P$ is the determiner D. Perhaps, then, SFX2 morphology is the instantiation of the syntactic head D. This, however, seems unlikely: SFX2 has nothing to do with definiteness, indefiniteness, or reference, features held by Borer to be intrinsic to the head D$^4$. Rather than markers of definiteness and/or indefiniteness, SFX2 has the same role as Harris’ (1991:30) word-markers, which “mark[ ] a derivationally and inflectionally complete word”. Indeed, a noun only attains its full lexical meaning when merged with a SFX2.

(5.125) STM $tsifir$- ATTAINS FULL LEXICAL MEANING WHEN MERGED WITH A SFX2

a. $tsifir$aangw
   $tsifir-$aangw $-\acute{o}$
   Stm- -Sfx2 -L
tongue
   ‘a tongue’

b. $tsifiri$
   $tsifir-$i $-\hat{\mathring{r}}$~
   Stm- -Sfx2 -L
language
   ‘a language’

Additionally, a noun may be inserted into larger units of discourse only once it is merged with an SFX2. Most nouns also contain a linker morpheme, but this is not essential to the syntactic identity of the noun. As will be argued in Chapter 7, linkers are not present in incorporation constructions, making them, to some degree, non-essential to the categorial identity of the noun. SFX2, however, must be present in order for a noun to be a noun.

$^4$ For details on how definiteness/indefiniteness is expressed in Gorwaa, see §2.4.1.2, §2.4.1.3, and §2.4.3.
5. The suffix 1: the regular phenomena

(5.126) Noun incorporation constructions: linker is absent, but SFX2 is present

a. *uga slee-gás*  
   [20161119f.34]  
   0- u- 0 -(g)a sl- -ee gás  
   A.2- P.M- Aux -PRF STM- SFX2 kill.2sg.pst  
   "You(M) killed a cow on him." (lit. 'You cow-killed him.')

b. *nguna saga-taáhh* [...]  
   [20131108b_20150725j.89]  
   ng- u- 0 -na sag- a taáhh  
   A.3- P.M- Aux -Imprf STM- SFX2 hit.M.pst  
   "[...] he smashed him on the head [...]" (lit. 'he head-hit him')

In light of this evidence, SFX2 may be posited as the instantiation of some projection, dominating #, and, in turn, dominated by D. Let us call this projection n⁵.

(5.127) Feature structure for the lexical element n (version 1)

\[
\begin{align*}
\text{n} & \left\{ \begin{array}{c}
\text{categorial} [n] \\
\text{inflectional} [0] \\
\text{selectional} [N; #]
\end{array} \right.
\end{align*}
\]

⁵ The choice of label for this projection is a conscious one. For more on the motivation behind this, see §6.6.1.
5. The suffix 1: the regular phenomena

(5.128) \textit{Qoonqalumó (version 1)}

Merge of n (syntactic object $\alpha$) and $\sqrt{\text{qoonqal}}(a)m$-# (syntactic object $\beta$).

\[
\begin{array}{c}
\text{nP} \\
\sqrt{\text{qoonqal}}(a)m-\#-\hat{o} \\
[\text{cat [n]}] \\
\hline
\text{nP} \\
\sqrt{\text{qoonqal}}(a)m-\# \\
[\text{cat [#}, \text{Sg}]] \\
\hline
\text{nP} \\
\sqrt{\text{qoonqal}}(a)m \\
[\text{cat [Cl, Indiv]}] \\
\hline
\text{nP} \\
\sqrt{\text{qoonqal}} - (a)m \\
\end{array}
\]

As described above, forms expressing general number are neither classified nor quantified. As such, in these structures the Cl and # heads are absent. In addition to this, there must be a slight difference in the selectional features of the n head: a $n_{\text{gen}}$ (n of general number) must select for $\sqrt{}$, whereas a $n_{\text{num}}$ (n of number) selects for #.\footnote{Note that the feature structure for both lexical elements $n_{\text{gen}}$ and $n_{\text{num}}$ also posit a category N in their selectional features. This will be important in Chapter 7, but may be left aside for now.}

(5.129) \textit{Feature structure for the lexical element $n_{\text{gen}}$ versus that of $n_{\text{num}}$}

\[
\begin{aligned}
\text{n}_{\text{gen}} & \{ \text{categorial [n]} \\
& \text{inflectional [Ø]} \\
& \text{selectional [$\sqrt{}$; N]} \} \\
\text{n}_{\text{num}} & \{ \text{categorial [n]} \\
& \text{inflectional [Ø]} \\
& \text{selectional [#; N]} \} \\
\end{aligned}
\]
5. The suffix 1: the regular phenomena

(5.130) **The general number form qoonqal (version 1)**

Merge of $n_{\text{gen}}$ (syntactic object $\alpha$) and $\sqrt{\text{qoonqal}}$ (syntactic object $\beta$).

Thus far, this proposal is promising in that it manages to account for the ordering and distribution of the morphemes. That is, Sg and Pl forms always feature a SFX1 because this morpheme is involved in classification and quantification. General forms are not classified or quantified, and therefore lack the heads Cl and #, and thus SFX1. Their underspecification for number allows a number value to be introduced from elsewhere, a process which is discussed in (§7.4.3).

### 5.5 Remarks and summary

The central aim of this chapter was to provide a description and explanation of the so-called ‘regular’ characteristics of the Gorwaa suffix. Repeated from (5.3) above, they are given in (5.131) here.

(5.131) **The regular morphosyntactic characteristics of the Gorwaa suffix**

a. Many suffixes (identified thus far as SFX) may be divided into separate morphemes: SFX1 and SFX2. All suffixes feature the SFX2 morpheme, not all suffixes feature the SFX1 morpheme.

b. Suffixes with a SFX1 morpheme are either Sg or Pl in number, and can therefore occur with external elements (e.g. adjectives) only if they show matching agreement.
5. The suffix 1: the regular phenomena

c. Suffixes without a SFX1 morpheme are unvalued for number, and can therefore occur with external elements (e.g. adjectives) which show both Sg or Pl agreement. (though see II.d. for exceptions.)

As mentioned above, these characteristics were interpreted as regular in that they represent stable correspondences which can largely be explained as products of feature bundles (i.e. material from List 1) being manipulated in the syntax (i.e. the syntactic operations).

Subsection 5.5.1 examines the possibility of multiple suffixing, and subsection 5.5.2 summarizes.

5.5.1 Remarks on multiple suffixing

The account above conceptualizes suffixing as the merger of the root with a series of heads -- Cl, #, and n -- each of which occurs maximally once during the course of the derivation. The phenomenon of multiple suffixing, in which a kind of head (specifically n) may merge more than once during the course of the derivation, conceptualizes suffixing in a slightly different way, and will be examined for Gorwaa below.

Described in Lecarme (2002: 121-122) for Somali (som: e.g. Somalia) as plural of plural, and in Kramer (2014: 12) for Amharic (amh: Ethiopia) as double plural, multiple suffixing sees a second suffix attaching to a form which already contains a suffix. This first form is capable of functioning as a full noun on its own, and the second suffix may or may not result in a change in meaning.
5. The suffix 1: the regular phenomena

(5.132) Multiple suffixing
a. In Somali (from Lecarme 2002: 121)
\( \text{nín} \) \( \rightarrow \) \( \text{nim-áñ} \) \( \rightarrow \) \( \text{niman-yaá\(\ddot{\text{l}}\)} \) ‘(groups of) men’

b. In Amharic (from Kramer 2014:
\( \text{náfs} \) \( \rightarrow \) \( \text{náfs-at} \) \( \rightarrow \) \( \text{náfsat-ott} \) ‘souls’

Though not executed in exactly the same fashion in the above works, the resulting structure would resemble something like that of Error! Reference source not found..

(5.133) The multiple suffix form \( \text{nimanyaá\(\ddot{\text{l}}\)} \) ‘(groups of) men’ (Somali)

\[
\begin{array}{c}
\text{nP} \\
\tilde{n} \\
\text{v} \\
\text{nín} \\
\tilde{n} \\
\text{-yaá\(\ddot{\text{l}}\)} \\
\text{-án}
\end{array}
\]

In addition to Somali and Amharic, Mous, in identifying forms described as a plural derived from a singular derived from a base (2016: 70-72), evokes a similar mechanism in Alagwa. As such, a general number ‘base’ form receives a singular suffix, which then receives a plural suffix. The phenomenon is exemplified in (5.134).

(5.134) Multiple suffixing in Alagwa (from Mous 2016: 70-72)
\( /\text{aantsáá} / \) ‘(a group of) figs’ \( \rightarrow /\text{aantsimoo} / \) ‘a fig’ \( \rightarrow /\text{aantsima’i} / \) ‘figs’
\( [/\text{aants-áá}] [/\text{aantsaa-imoo}] [/\text{aantsaaimoo-á’i}] \)

Immediately, the argument is less transparent in Alagwa than in either Somali or Amharic, in that vowel-deletion eliminates evidence for the presence of may suffixes. But assuming an underlying form (given in square brackets in (5.134)), the structure in (5.135) may be posited.
5. The suffix 1: the regular phenomena

5.135  The multiple suffix form /aantsima’t ‘figs’ in Alagwa (Version 1)

A second difference between the multiple suffix form in Alagwa and the multiple suffix forms in Somali and Amharic is that forms in Alagwa are built of suffixes with differing number values. Whereas the forms in Somali and Amharic are built of a root and two plural suffixes, the form in Alagwa is built of a root, a general number suffix, a singular suffix, and a plural suffix. Given what has been established in this chapter, the structure would occur as something akin to (5.136).

5.136  The multiple suffix form /aantsima’t ‘figs’ in Alagwa (Version 2)
5. The suffix 1: the regular phenomena

The most immediately objectionable characteristic of a structure such as this is that it has been quantified twice, with two different values, Sg, and Pl. Because number is always an interpretable feature, this will cause the derivation to crash.\(^7\)

The proposal could, however, be saved by adopting a slightly different approach to the final n (an approach which will be established in Chapter 6), in which the final suffix is not two separate heads, but one, realized as -oo in the presence of a Sg feature, and as -a’i in the presence of a Pl feature. The structure would therefore occur as in (5.137).

(5.137) **THE multiple suffix form /aantsima’i ‘figs’ in Alagwa (Revised)**

![Diagram]

The structure is, in itself, licit: because the lower n is of general number, no number value is imposed on the root until that of the higher Cl-# projections.

This is significant in that Gorwaa may be argued to possess the same kind of patterns. As such, the form *qoonqalama* ‘crowned cranes’, under the multiple suffix proposal, would appear as in (5.138).

---

\(^7\) It will be proposed in §7.4.2 that DPs may contain more than one gender feature, with only the highest able to affect agreement operations. Number, however, is always an interpretable feature, whereas gender is only interpretable when reflecting the biological gender of the referent (i.e. its sex). It is due to this difference in interpretability that a DP may contain more than one gender feature, but only ever one number feature.
5. The suffix 1: the regular phenomena

(5.138) \textit{Qoonqalama’ ‘crowned cranes’ in Gorwaa (under the multiple suffix proposal)}

\[
\text{NP} \rightarrow \text{CJP} \rightarrow \text{Cl} \rightarrow \text{nP} \rightarrow \text{n} \rightarrow \text{-qoonqal}
\]

Ultimately, it is the synchronic data which complicate this proposal for South Cushitic. As mentioned above, because of extensive vowel-deletion, it is often impossible to determine if a suffix is present in a form or not. As such, under a multiple suffix analysis, the Alagwa noun /aantsima’i could be decomposed as /aants -aa -iim -a’i, it may just as satisfactorily be decomposed under a non-multiple suffix analysis as /aants -iim -a’i. Indeed, for the Gorwaa noun qoonqalama’, the positing of a null suffix n of general number between the root and the classifier head seems difficult to justify, as it is not syntactically necessary.

More serious, however, are Gorwaa cases in which the pattern is somehow ‘broken’, that is, where plural forms show morphology from a singular form that doesn’t exist\(^8\).

(5.139) \textit{‘Broken’ patterns: Pl forms show morphology from a sg form that does not exist (Gorwaa)}

a. kalambeetú ‘honey badger’ | kalambeetama’ ‘honey badgers’
b. /aanta’ ‘termite mound’ | /aanteemo ‘termite mounds’
c. iitsaangw ‘jackal’ | iitseema’ ‘jackals’

\(^8\) ‘Broken’ patterns appear much less common in Alagwa, the only example I could find outside of the examples given being tsuuruu ‘nest (i.e. for birds)’ | tsuruma’i ‘nests’.
5. The suffix 1: the regular phenomena

The obvious argument here is that, historically, the forms *kalambeetamó*, */aantamó*, and *iitsamó* all once existed and that, for whatever reason, are no longer in use. This is, in fact, Mous' argument in Alagwa for pairs of number-valued forms which lack a base form, such as */antl-imoo* ‘molar tooth’ | */antilim-ay* ‘molar teeth’. The problem is, however, that for a synchronic description to account for these phenomena in a comprehensive way, a great deal of underlying structure would need to be assumed - very little of which could be gleaned from surface structure. Therefore, while multiple suffixing is a regular, productive process in both Somali and Amharic, and while, at one point, this appears to have been the case in South Cushitic, the current data (for both Alagwa and Gorwaa) point to a system that is no longer productive, and whose remnants have been re-analysed into a system in which the only syntactically permissible structures are those involving unique suffixation. This suffix system will be further examined in the next chapter.

5.5.2 Summary

This chapter took pains to establish a detailed description of the suffixes before attempting a more abstract level of analysis. As such, 42 different suffixes were identified and divided into two broad groups: those which are individuated and therefore impose a number value (Sg or Pl), and those which are unindividuated and may therefore occur with either Sg or Pl agreement (general number). The choice of the term ‘occur with’ rather than ‘trigger’ is used advisedly, as it seems as if number agreement (seen on the adjective) comes from an element other than the noun. This will be further discussed in Chapter 7.
5. The suffix 1: the regular phenomena

Theoretically, the suffix was deconstructed into three morphosyntactic subcomponents: the classifier head (Cl), the quantity head (#), and the ‘little-n’ head (n). Suffixes valued for number (i.e. those which may only occur with Sg agreement and those which may only occur with Pl agreement) feature both a Cl and a #. Suffixes unvalued for number (i.e. those which may occur with Sg or Pl agreement), do not feature a Cl or a #. SFX2 was shown not to be instantiated on either # or a higher D projection, but on ‘little n’, a projection intermediate between # and D.

Subsection 5.5.1 examined an alternate analysis provoked by some more complicated data, and decided to reject multiple suffixing in favour of a simple suffixing model.

As such, the regular characteristics of the Gorwaa suffix have been dealt with using the tools for description of regular phenomena: that is, the manipulation of feature bundles in the syntax. The next chapter addresses the listed characteristics, and will therefore see greater appeal to post-Spellout operations.
6. The suffix 2: the listed phenomena

6.1 Introduction

Once again, the current chapter is concerned with the suffix, the constituent morphemes of which are bolded in (6.1) below.

(6.1) The suffix (SFX): composed of subparts SFX1 and SFX2

a. \( wa / \ddag a \ddag ng w \ddag \text{wák} \)
   \( \text{STM} - \ddag Sfx2 \quad -L \quad \text{one} \)
   “one arroyo”

b. \( \text{we} / \ddag e \ddag \ddag r \ddag \text{tsár} \)
   \( \text{STM} - \ddag Sfx1 - Sfx2 \quad -L \quad \text{two} \)
   “two arroyos”

To review, the most relevant patterns of Gorwaa suffixes are as follows in (6.2).

(6.2) Morphosyntactic characteristics of the Gorwaa suffix

I. Regular Phenomena:
   a. Many suffixes (identified thus far as SFX) may be divided into separate morphemes: SFX1 and SFX2. All suffixes feature the SFX2 morpheme, not all suffixes feature the SFX1 morpheme.
   b. Suffixes with a SFX1 morpheme are either Sg or Pl in number, and can therefore occur with external elements (e.g. adjectives) only if they show matching agreement.
   c. Suffixes without a SFX1 morpheme are unvalued for number, and can therefore occur with external elements (e.g. adjectives) which show both Sg or Pl agreement. (though see II.d. for exceptions.)

II. Listed Phenomena
   a. A given noun stem takes a set of suffixes, known as a paradigm. Paradigms may be monads, pairs, or triads.
   b. The paradigm taken by any given noun is unpredictable.
   c. A given noun stem may have more than one paradigm. Selection of paradigm may or may not affect the semantic interpretation of the resultant noun.
   d. Suffixes unvalued for number may have the kinds of agreement with which they may occur restricted by the composition of their paradigm.
   e. The grammatical gender (i.e. M, F, or N) of a noun is determined by the SFX2 morpheme, which has a stable
6. The suffix 2: the listed phenomena

association with gender. If a noun is changed for number, its gender may also change.

The previous chapter accounted for those phenomena listed as regular: stable correspondences which can largely be explained as products of feature bundles (i.e. material from List 1) being manipulated in the syntax (i.e. the syntactic operations). Each of the 42 SFXs of Gorwaa were presented and subdivided into two types: those which are not specified for number, and only consist of a SFX2, and those which are specified for number, and consist of a SFX1 and a SFX2. SFX1 was described syntactically as a classifier head (Cl), whose role it is to individuate, (i.e. divide stuff). Having been classified, nouns may then be quantified. This is accomplished in Gorwaa through a null quantity head (#), which dominates the classifier head. It was argued that this quantification head cannot be the locus of the SFX2 morpheme, which must be located at a higher point in the structure. It was also noted that the SFX2 morpheme could also not be located at D. Instead, it was posited that SFX2 was an instantiation of the syntactic head 'little n', directly dominating #, and itself dominated by D. The structures arrived at thus far is given in (6.3) below, (6.3)a) for a number-valued (in this case Sg) form, and (6.3)b) for a general number form.
This chapter addresses those patterns of Gorwaa suffixes which are 'listed': requiring recourse to more detailed explanations of realization rules post-Spellout (i.e. material from List 2 and List 3). Embick (2003) notes that "all approaches to grammar must assume that some information is simply listed" (144). Essentially, in English, the difference in grammaticality between two men and *two man can be explained by recourse to the same sort of syntactic structures as discussed in Chapter 5. However, the difference in grammaticality between men and *mans is of a different nature. That is, it is not the expression
of number value [plural] on the noun which is illicit (as men is a valid plural form), but rather the manner in which it is expressed for this particular noun. Whereas singular-plural pairs such as ban | bans, can | cans, fan | fans are licit, man | mans is not. The man | mans error is not one of feature bundles being manipulated by syntactic operations (ban | bans illustrates that such a configuration is syntactically licit), rather, it is an error of how that structured set of feature bundles comes to be realized for that particular form. In order to recognize the ungrammaticality of man | *mans, and the grammaticality of man | men, one must simply know that this is the way this particular word works. Knowledge is not of the syntax, but of the particular lexical item: it is listed. Embick goes on to state that "[h]ow this information is listed, and whether or not listedness correlates with grammatical phenomena in a systematic fashion, is a significant research question" (2003: 144).

Gorwaa noun suffixes are an appropriate subject in this regard, both in that listedness is extensive, and in that listed material has significant morphosyntactic ramifications. Following this introduction, §6.2 provides an introduction to concept of the paradigm: a tool central to much of the following discussion. §6.3 gives an overview of each of the listed phenomena included in (6.2). §6.4 is a detailed presentation and description of the empirical basis of this chapter: the paradigm. §6.5 provides an analysis in the Distributed Morphology architecture to account for listed phenomena. §6.6 gives a final remark, and summarizes.
6. The suffix 2: the listed phenomena

6.2. The paradigm

As may be observed in (6.2) the majority of the listed phenomena associated with the Gorwaa suffix make reference to the concept of the paradigm. Given the high degree of unpredictability associated with the paradigms -- how much relating to their identity must ‘simply be learned’ and how much is therefore post-syntactic -- wondering if they are worth any sort of analysis at all does not seem an entirely flippant proposition.

However, even if paradigms are predominantly post-syntactic in their content, they are not external to the grammar. Asking questions of how the paradigms come to realize the information they encode is important for understanding grammar post-Spellout. More intriguingly, it will be seen that a proper understanding of paradigms allows for novel approaches to nominal structure, as well as common phenomena such as gender and agreement.

Firstly, in this work, ‘paradigm’ will be used to mean the instructions for suffix realization taken by a given noun stem. For example, the form for ‘rooster’ in Gorwaa is kookumó, and the form for ‘roosters’ is kookuma’. Put crudely, the noun stem kook- is given the instructions: for singular, realize the suffix as -(a)mó (Mo); for plural, realize the suffix as -(a)ma’ (N∅). This specific set of instructions is referred to in this work as the paradigm -(a)mó (Mo) | -(a)ma’ (N∅).

Paradigms are abstract: the noun kookumó ‘rooster’, on its own, gives no overt indication that it is of the paradigm -(a)mó (Mo) | -(a)ma’ (N∅). It is only by observing the plural form kookuma’ ‘roosters’ (as well as by learning that a form
6. The suffix 2: the listed phenomena

In general number is non existent) that the paradigm -(a)mó (Mo) | -(a)ma’ (N∅) may finally be discerned.

Furthermore, this particular paradigm is not very enlightening: as a suffix of the Sg type, -(a)mó (Mo) could never mean something like ‘roosters’ or ‘group of roosters’, and, as a suffix of the Pl type, -(a)ma’ (N∅) could never mean something like ‘a rooster’ or ‘group of roosters’. All the information necessary is present in the suffixes.

However, the relationship between -(a)mó (Mo) to -(a)má (N∅) is not one-to-one. The noun /itsimó ‘intestinal worm’ has the plural form /itseemi ‘intestinal worms’, and the noun mahhatimó ‘shadow’ has the plural form mahhestitu ‘shadows’. It is, therefore necessary to stipulate that, while the noun stem kook-pluralizes in -(a)ma’ (N∅), the noun stem /its- pluralizes in -<ee>-i (N∅), and the noun stem mahhat- pluralizes in -<ee>-aC₂u (N∅).

The lack of one-to-one relationships between singular and plural suffixes operates in the other direction as well. While the noun kookuma’ ‘roosters’ has the singular form kookumó ‘rooster’, the noun ya’eema’ ‘streams’ has the singular form ya’eemi ‘stream’. It is therefore equally necessary to stipulate that, while the noun stem kook- singularizes in -(a)mó (Mo), the noun stem ya’- singularizes in -iimi (Fr).

The fact that more than one suffix may participate in marking the Sg and the Pl, and that there is no principled way of predicting when each suffix may or may
6. The suffix 2: the listed phenomena

not apply (see §6.3.2) means that every noun stem must come with instructions for what suffix it will be realized with, in both Sg and Pl. The paradigm is therefore grammatically indispensible.

Furthermore, a given suffix may encode different number values. For example, when the suffix -í (Fr) occurs on the noun stem fuuf-, the resultant noun fuufí can mean 'a weasel'. When the same suffix -í (Fr) occurs on the noun stem loos-, the resultant noun loosí can mean 'beans'. On its own, the suffix -í (Fr) has no inherent valuation for number: only in paradigmatic combination with other suffixes can it come to semantically convey either singular or plural. In the case of fuufí 'a weasel', -í (Fr) is in a paradigm with a Pl type suffix: -í (Fr) | -eemoo (N∅). In the case of loosí 'beans', -í (Fr) is in a paradigm with a Sg type suffix: -(a)mó (Mo) | -í (Fr).

One response to patterns such as this is the paradigm approach. Articulated in works such as Cobbinah 2013 and Watson 2015, and usefully applied to several West African languages, the paradigm approach proposes that the noun suffixes of Gorwaa are not independent formatives per se, but achieve their function compositionally as part of paradigms. The suffixes are therefore morphological primitives, entering into any number of structured patterns and expressing features based not entirely on their form, but on the position they occupy within a paradigmatic structure. In his discussion of the noun class prefixes of Bainounk Gubêeher (mis; Senegal), (similar to the suffixes herein) Cobbinah provides a useful metaphor for this concept.
"Just as atoms are the building blocks of matter, bonding in various fashions to form complex molecules, the noun class prefixes combine to form paradigms. Stretching the metaphor a little further, it is of little explanatory value if one tries to explain the properties of matter, to know that a substance contains for example hydrogen and carbon atoms – an information [sic] that pertains to thousands of substances with widely differing properties – without knowing which kind of bonds and molecules are formed by these atoms."

6.3 Overview of the listed phenomena

This section expands on each of the listed phenomena associated with the Gorwaa suffix. These are repeated in (6.4) below.

(6.4) The listed morphosyntactic characteristics of the Gorwaa suffix

a. A given noun stem takes a set of suffixes, known as a paradigm. Paradigms may occur in three different shapes: monads, pairs, or triads. Paradigms may be composed of different types of suffixes.

b. The paradigm taken by any given noun stem is unpredictable.

c. A given noun stem may have more than one paradigm. Selection of paradigm may or may not affect the semantic interpretation of the resultant noun.

d. Suffixes unvalued for number may have the kinds of agreement with which they may occur restricted by the shape and composition of their paradigm.

e. The grammatical gender (i.e. M, F, or N) of a noun is determined by the SFX2 morpheme, which has a stable association with gender. If a noun is changed for number, its gender may also change.

Each characteristic will be discussed in its own subsection below. Subsection 6.2.1 treats characteristic (a): the paradigm: content, shape, and texture.

Subsection 6.2.2 treats characteristic (b): the unpredictability of the paradigm.

Subsection 6.2.3 treats characteristic (c): multiple paradigms for a given stem.

Subsection 6.2.4 treats characteristic (d): paradigmatic effects on number value.

Subsection 6.2.5 treats characteristic (e): gender ‘polarity’.
6. The suffix 2: the listed phenomena

6.3.1 Characteristic (a): the paradigm: content, shape, and texture

As mentioned above, a paradigm is the set of instructions for suffix realization taken by a given noun stem. Paradigms may be identified according to their shape, content, and texture. For example, the stem \( kook \) takes the suffixes \(-(a)mó (Mo)\) and \(-(a)ma' (N∅)\), forming \( kookumó \) 'rooster' and \( kookuma' \) 'roosters', respectively. The shape of the paradigm discussed above is a pair, its content is \(-(a)mó (Mo)\); \-(a)ma' (N∅)\), and its texture is Sg. | Pl.

The specific suffixes featured in a given paradigm will be referred to as its content. As mentioned above, the content of the paradigm into which the noun stem \( kook \)- enters is \-(a)mó (Mo)\) and \-(a)ma' (N∅)\). Among the three criteria of content, shape, and texture, the criterion of content is most salient to the identity of the paradigm. For example, the noun stem \( ga/at \)- takes the suffixes \-imi (Fr)\) and \-náy (Mo)\), forming \( ga/atimi \) 'high fever' and \( ga.atanáy \) 'high fevers', respectively. This paradigm \-imi (Fr) | -náy (Mo)\) has both the same shape (i.e. a pair) and the same texture (i.e. Sg. | Pl.) as the paradigm into which \( kook \)- enters above, but is different because of its content.

A given noun stem may take a paradigm of one (a monad), two (a pair), or three (a triad). These are referred to the ‘shape’ of the paradigm. As mentioned above, the stem \( kook \)- takes the suffixes \-(a)mó (Mo)\) and \-(a)ma’ (N∅)\), forming \( kookumó \) 'rooster', and \( kookuma' \) 'roosters', respectively. The paradigm for the noun stem \( kook \)- is therefore \-(a)mó (Mo) | -eema’ (N∅)\): a paradigmatic pair. The stem \( qoonqaal \)- takes the suffixes \-(a)mó (Mo)\), \-∅ (Mo)\), and \-(a)ma’ (N∅)\), forming \( qoonqalumó \) ‘a crowned crane’, \( qoonqál \) ’crowned crane (as a group or species)’,
6. The suffix 2: the listed phenomena

and qoonqalima’’crowned cranes’, respectively. The paradigm for the noun stem qoonqaal- is therefore -(a)mó (Mo) | -Ø (Mo) | -(a)ma’ (NØ): a paradigmatic triad. The stem maa’- takes the suffix -ay (NØ), forming maa’ay ‘water’. The paradigm for the noun stem maa’- is therefore -ay (NØ): a paradigmatic monad.

Paradigm texture refers to the type of suffixes with which a given paradigm is composed. In §5.3, the 42 nominal suffixes of Gorwaa were divided into 5 types: singular, general (Sg--leaning), general, general (Pl-leaning), and plural. Therefore, the paradigm -(a)mó (Mo) | -(a)ma’ (NØ) -- composed of the singular suffix -(a)mó (Mo) and the plural suffix -(a)ma’ (NØ) -- is of the texture Sg. | Pl. The paradigm -í (Fr) | -aa (Fr) (of the noun stem bi/in-, forming bi/iní ‘silky blesmol’ and bi/inaa ‘silky blesmols’) is composed of the general (Sg-leaning) suffix -í (Fr) and the general suffix -aa (Fr), and is therefore of the texture general-Sg. | general.

6.3.2 Characteristic (b): the unpredictability of the paradigm

The paradigm taken by any given noun is largely unpredictable. This refers equally to the identity criteria of paradigm content, paradigm shape, and paradigm texture.

6.3.2.1 Paradigm content is unpredictable

Firstly, it is impossible to determine the suffixes a noun stem will take (i.e. paradigm content).

Paradigm content is unpredictable based the phonological shape of its stem (6.5).
6. The suffix 2: the listed phenomena

(6.5) **Shape of the stem does not predict the paradigm content**

a. **CV:C (where V: is a mid-vowel)**

<table>
<thead>
<tr>
<th>see/</th>
<th>see/i ‘plant sp.’ (one of a group)</th>
</tr>
</thead>
<tbody>
<tr>
<td>see/aa</td>
<td>‘plant sp.’</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>gee/</th>
<th>gee/áy ‘slope’</th>
</tr>
</thead>
<tbody>
<tr>
<td>gee/aawee</td>
<td>‘slopes’</td>
</tr>
</tbody>
</table>

b. **CVCVC (where the V is the same)**

<table>
<thead>
<tr>
<th>ma/al</th>
<th>ma/ali ‘a sheep’s dewlap’</th>
</tr>
</thead>
<tbody>
<tr>
<td>ma/aláy</td>
<td>‘sheep’s dwlaps’</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>pa/al</th>
<th>pa/alimó ‘wickerwork’ (one piece)</th>
</tr>
</thead>
<tbody>
<tr>
<td>pa/ali</td>
<td>‘wickerwork’</td>
</tr>
<tr>
<td>pa/alaa</td>
<td>‘wickerworks’</td>
</tr>
</tbody>
</table>

Second, though weak patterns exist, the suffix a noun takes for any one number value is not predictive of the suffix that noun will take for any other number value (6.6).

(6.6) **One number suffix does not predict another number suffix**

a. **-AANGW does not predict -EERI (or vice-versa)**

<table>
<thead>
<tr>
<th>diraangw</th>
<th>‘lion’</th>
</tr>
</thead>
<tbody>
<tr>
<td>direeri</td>
<td>‘lions’</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>mahaangw</th>
<th>‘hare’</th>
</tr>
</thead>
<tbody>
<tr>
<td>meheeri</td>
<td>‘hares’</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>slehheengw</th>
<th>‘month’</th>
</tr>
</thead>
<tbody>
<tr>
<td>sleheeri</td>
<td>‘months’</td>
</tr>
</tbody>
</table>

But:

<table>
<thead>
<tr>
<th>xooyaangw</th>
<th>‘francolin’</th>
</tr>
</thead>
<tbody>
<tr>
<td>xooyaawee</td>
<td>‘francolins’</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>kwu/uungw</th>
<th>‘wall’</th>
</tr>
</thead>
<tbody>
<tr>
<td>kwu/u/ee</td>
<td>‘walls’</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>bohoongw</th>
<th>‘hole’</th>
</tr>
</thead>
<tbody>
<tr>
<td>bohi’i</td>
<td>‘holes’</td>
</tr>
</tbody>
</table>

And vice-versa:

<table>
<thead>
<tr>
<th>/arumó</th>
<th>‘a tobacco ball’</th>
</tr>
</thead>
<tbody>
<tr>
<td>/areeri</td>
<td>‘tobacco balls’</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>afqurmó</th>
<th>‘a warthog’</th>
</tr>
</thead>
<tbody>
<tr>
<td>afqureeri</td>
<td>‘warthogs’</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>tsifiri</th>
<th>‘a language’</th>
</tr>
</thead>
<tbody>
<tr>
<td>tsifireeri</td>
<td>‘languages’</td>
</tr>
</tbody>
</table>
b. -AA DOES NOT PREDICT -U! (OR VICE VERSA)\(^1\)

<table>
<thead>
<tr>
<th>doofaa ‘rhinoceros’</th>
<th>dofu ‘rhinoceroses’</th>
</tr>
</thead>
<tbody>
<tr>
<td>/oonaa ‘darkness’</td>
<td>/onu ‘darknesses’</td>
</tr>
<tr>
<td>fa/aa ‘ugali’</td>
<td>fa/o ‘ugali’ (in different places)</td>
</tr>
</tbody>
</table>

But:

<table>
<thead>
<tr>
<th>gixsaa ‘town, city’</th>
<th>gixsadu ‘towns, cities’</th>
</tr>
</thead>
<tbody>
<tr>
<td>tloomaa ‘hill’</td>
<td>tloomi ‘hills’</td>
</tr>
<tr>
<td>slinxaa ‘bridge of nose’</td>
<td>slinxuxu ‘bridges of noses’</td>
</tr>
</tbody>
</table>

And vice-versa:

<table>
<thead>
<tr>
<th>xooslumó ‘vessel, tool’</th>
<th>xoolu ‘vessels, tools’</th>
</tr>
</thead>
<tbody>
<tr>
<td>waqaasi ‘a ceiling beam’</td>
<td>waqasu ‘ceiling beams’</td>
</tr>
<tr>
<td>sweetsoo ‘wrinkle’</td>
<td>qwetsu ‘wrinkles’</td>
</tr>
</tbody>
</table>

### 6.3.2.2 Paradigm shape is unpredictable

Second, it is impossible to determine how many suffixes the noun stem will take (i.e. paradigm shape).

For example, many nouns referring to plants and animals are part of paradigmatic triads. The noun stem qoonqaal- enters into the paradigm -(a)mó (Mo) | -Ø (Mo) | -(a)ma’ (NØ), yielding the resultant nouns qoonqalumó ‘a crowned crane’, qoonqál ‘(a group, species, or kind of) crowned cranes’, and qoonqalima’ ‘crowned cranes’. However, many other nouns referring to plants and animals may be part of paradigmatic pairs. As mentioned above, the noun stem kook- enters into the paradigm -(a)mó (Mo) | -(a)ma’ (NØ), yielding the resultant nouns kookumó ‘rooster’, and kookuma’ ‘roosters’. Furthermore, nouns which do not refer to plants and animals may also participate in paradigmatic triads. The noun stem qutur- enters into the paradigm -(a)mó (Mo) | -Ø (Mo) | -(a)ma’ (NØ), yielding the resultant nouns quturmó ‘a wedding bracelet’, qutúr ‘(a group or kind of) wedding bracelets’, and quturma’ ‘wedding bracelets’.

---

\(^1\) The ! of the -u! suffix represents a phonological operation which accompanies the suffix, one effect of which is vowel shortening. This is explained in §5.3.4.2.
6. The suffix 2: the listed phenomena

6.3.2.3 Paradigm texture is unpredictable

In addition to paradigm content and shape, the type of suffixes a noun stem will take is also unpredictable.

Repeating a well-worn example, the noun stem *kook-* enters into the paradigm -(a)mó (Mo) | -(a)ma’ (N∅), yielding the resultant nouns *kookumó* ‘rooster’, and *kookuma’*roosters’. The texture of the paradigm is Sg | Pl. The noun stem *sakar-* enters into the paradigm -i (Fr) | -oo (Fr), yielding the resultant nouns *sakari* ‘guineafowl’, and *sakaroo* ‘group of guineafowl’, ‘guineafowls’. The texture of the paradigm is GenSG | Gen. As such, two stems which produce what are semantically very similar nouns, are formed of paradigms with entirely different textures.

6.3.3 Characteristic (c): multiple paradigms for a given stem

Associated with the last characteristic is characteristic (c): a given noun stem may have more than one paradigm.

In cases, such as those given in (6.7) below, the choice of paradigm has no effect on the semantic interpretation of the resultant noun. In fact, one speaker may use these different paradigms of a given stem interchangeably, with no seeming difference in meaning, register, etc.
Conversely, in cases such as those given in (6.8) below, the choice of paradigm does affect the semantic interpretation of the resultant noun.

### (6.8) Noun stems with more than one paradigm: observed semantic effects

<table>
<thead>
<tr>
<th>STEM</th>
<th>PARADIGM</th>
<th>RESULTANT NOUNS</th>
</tr>
</thead>
<tbody>
<tr>
<td>/iliw-</td>
<td>-i (Fr)</td>
<td>-oo (Fr)</td>
</tr>
<tr>
<td></td>
<td>-i (Fr)</td>
<td>-áy (Mo)</td>
</tr>
<tr>
<td>goof-</td>
<td>-aangw (Mo)</td>
<td>-eeri (N∅)</td>
</tr>
<tr>
<td></td>
<td>-aangw (Mo)</td>
<td>-aawee (Fr)</td>
</tr>
<tr>
<td>hhalhal-</td>
<td>-i (Fr)</td>
<td>-a’(l) (N∅)</td>
</tr>
<tr>
<td></td>
<td>-i (Fr)</td>
<td>-áy (Mo)</td>
</tr>
<tr>
<td>see’</td>
<td>-iimi (Fr)</td>
<td>-aangw (Mo)</td>
</tr>
<tr>
<td></td>
<td>-ay (Mo)</td>
<td>-aawee (Fr)</td>
</tr>
<tr>
<td>yaa’</td>
<td>-ee (Fr)</td>
<td>-ul (N∅)</td>
</tr>
<tr>
<td></td>
<td>-eemi (Fr)</td>
<td>-eema’ (N∅)</td>
</tr>
<tr>
<td>tsifir-</td>
<td>-aangw (Mo)</td>
<td>-eeri (N∅)</td>
</tr>
<tr>
<td></td>
<td>-i (Fr)</td>
<td>-eeri (N∅)</td>
</tr>
</tbody>
</table>

### 6.3.4 Characteristic (d): paradigmatic effects on number value

Suffixes unvalued for number (i.e. general) may have the kinds of agreement with which they may occur restricted by the shape and texture of their paradigm. This restriction may be characterized as a kind of collapse which may occur in one of two ways: i) the general and singular distinction collapses, leaving a two-
6. The suffix 2: the listed phenomena

way opposition of general/singular - plural (as in Figure 5.2), or ii) the general and plural distinction collapses, leaving a two-way opposition of singular -
general/plural (as in Figure 5.3). Each will be discussed below in detail.

Figure 6.1: 'General/singular' versus plural (from Corbett 2000: 13)

This pattern of collapse is present in paradigms such as -í (Fr) | -aa (Fr), a paradigmatic pair of the texture general-Sg. | general.

The first detail to note is that the suffix -í (Fr) is general (Sg-leaning), and may usually occur with external elements showing both Sg or Pl agreement.

(6.9) **The suffix -í (Fr) may typically occur with external elements showing both Sg or Pl agreement**

a. **Noun fuufí (paradigm -í (Fr) | -eemoo (N∅)) may occur with both Sg or Pl agreement**

i. fuufír ur
   fuuf-í -r~’ ur
   STM- SFX2 -L big.F
   weasel
   'a big weasel', 'a big kind of weasel'

ii. fuufír uren
   fuuf-í -r~’ uren
   STM- SFX2 -L big.F.Pl
   weasel
   'big kinds of weasels'

---

2 This phenomenon of 'general number collapse' is described in Corbett (2000) for two Cushitic languages, Arbore (arv; Ethiopia), and Borana Oromo (gax; Ethiopia, Kenya).
6. *The suffix 2: the listed phenomena*

b. **Noun *loosí* (Paradigm - *(A)Mó (Mo) | -/(Fr)* ) may occur with both Pl or Sg agreement**

i. *loosír uren*

\[
\begin{align*}
\text{loos} & \- \text{-í} \quad \text{-r~’} \quad \text{uren} \\
\text{STM} & \- \text{-SFX2 \ -L} \quad \text{big.F.Pl}
\end{align*}
\]

'big beans', 'big kinds of beans'

ii. *loosír ur*

\[
\begin{align*}
\text{loos} & \- \text{-í} \quad \text{-r~’} \quad \text{ur} \\
\text{STM} & \- \text{-SFX2 \ -L} \quad \text{big.F}
\end{align*}
\]

'a big kind of bean'

However, when the suffix *-í (Fr)* in a paradigmatic pair with the general suffix *-aa (Fr)*, it may no longer occur with elements showing Pl agreement. Its function as a suffix of general number has been restricted, and it is now capable of only expressing singular number.

*(6.10) Noun *bi/iní* (Paradigm - í (Fr) | -aa (Fr)) may occur with external elements showing Sg agreement only* 

a. *bi/inír tleer*

\[
\begin{align*}
\text{bi/in} & \- \text{-í} \quad \text{-r~’} \quad \text{tleer} \\
\text{STM} & \- \text{-SFX2 \ -L} \quad \text{tall.F}
\end{align*}
\]

"a long silky blesmol"

b. **bi/inír tlet**

\[
\begin{align*}
\text{bi/in} & \- \text{-í} \quad \text{-r~’} \quad \text{tlet} \\
\text{STM} & \- \text{-SFX2 \ -L} \quad \text{tall.F.Pl}
\end{align*}
\]

(intended meaning) "a long (kind of) silky blesmol"

c. *bi/inaár tlet*

\[
\begin{align*}
\text{bi/in} & \- \text{-aa} \quad \text{-r~’} \quad \text{tlet} \\
\text{STM} & \- \text{-SFX2 \ -L} \quad \text{tall.F.Pl}
\end{align*}
\]

"long silky blesmols", "long kinds of silky blesmols"
6. The suffix 2: the listed phenomena

Figure 6.2: singular versus 'general/plural' (from Corbett 2000: 16)

This pattern of collapse is present in paradigms such as -aa (Fr) | -a’i (N∅), a paradigmatic pair of the texture general | general-Pl.

Note that the suffix -a’i (N∅) is general (Pl-leaning), and may usually occur with external elements showing both Sg or Pl agreement.

(6.11) NOUN BIHHI (PARADIGM -A’I (N∅) | -AC’EE (FR)) MAY OCCUR EXTERNAL ELEMENTS SHOWING BOTH SG OR PL AGREEMENT

a. bihhí tleer
   bihh- -a’i ~’ ~ tleer
   STM- -SFX2 -L tall.N
   "a long flank", "a long kind of flank"

b. bihhí tlet
   bihh- -a’i ~’ ~ tlet
   STM- -SFX2 -L tall.N.Pl
   "long kinds of flanks"

However, when the suffix -a’i (N∅) is in a paradigmatic pair with the suffix -aa (Fr), it may no longer occur with elements showing Sg agreement. Its function as a suffix of general number has been restricted, and it is now capable of only expressing plural number.

(6.12) NOUN TLOOMI’I (PARADIGM -AA (FR) | -A’I (N∅)) MAY OCCUR EXTERNAL ELEMENTS SHOWING PL AGREEMENT ONLY

a. tloomi’í tlet
   tloom- -a’i ~’ ~ tlet
   STM- -SFX2 -L tall.N.Pl
   "tall mountains"
6. The suffix 2: the listed phenomena

b. *tloomí tleer
tloom- -a’i ~ ~ tleer
STM- -SFX2 -L tall.N

(mountain)
(intended meaning) “tall kinds of mountains”

c. tloomaár tleer
tloom- -aa r~ ~ tleer
STM- -SFX2 -L tall.F

“a tall mountain”, “a tall kind of mountain”

Note that both of these restriction patterns occur only in paradigmatic pairs either of the texture general-Sg | general or of the texture general | general-Pl. The paradigm -í (Fr) | -aa (Fr) of (6.10) above and the paradigm -aa (Fr) | -a’i (N∅) of (6.12) are examples of each texture, respectively. Note further that the suffix which loses its general value and collapses either into Sg or Pl is always the less prototypically general suffix. Of the paradigm -í (Fr) | -aa (Fr), it is the suffix -í (Fr) which loses the general value. Similarly, of the paradigm -aa (Fr) | -a’i (N∅), it is the suffix -a’i (N∅) which loses the general value.

6.3.5 Characteristic (e): gender ‘polarity’

The grammatical gender of a noun (M, F, or N) is determined by the SFX2 component of the suffix. Each SFX2 has a fixed gender value. As can be seen below, the SFX2 -í consistently triggers F agreement (6.13), the SFX2 -ó consistently triggers M agreement (6.14), and the SFX2 -a’i consistently triggers N agreement (6.15).

---

3 It will be remembered that gender refers to a property of the noun which determines the form of elements beyond the noun itself. This is examined in detail in §7.2.
6. The suffix 2: the listed phenomena

(6.13) SFX2: -I TRIGGERS F AGREEMENT

a. *sakweelír tleér*
   
<table>
<thead>
<tr>
<th>sakweel-</th>
<th>-i</th>
<th>-r~`~</th>
<th>tleér</th>
</tr>
</thead>
<tbody>
<tr>
<td>STM-</td>
<td>-Sfx2</td>
<td>-L</td>
<td>long.F</td>
</tr>
</tbody>
</table>
   
   “a tall ostrich”

b. *se’emír tleér*
   
<table>
<thead>
<tr>
<th>see’-</th>
<th>-i</th>
<th>-r~`~</th>
<th>tleér</th>
</tr>
</thead>
<tbody>
<tr>
<td>STM-</td>
<td>-Sfx2</td>
<td>-L</td>
<td>long.F</td>
</tr>
</tbody>
</table>
   
   “a long hair”

c. *balaalír ur*
   
<table>
<thead>
<tr>
<th>bal-</th>
<th>-aaCz</th>
<th>-i</th>
<th>-r~`~</th>
<th>ur</th>
</tr>
</thead>
<tbody>
<tr>
<td>STM-</td>
<td>-Sfx1</td>
<td>-Sfx2</td>
<td>-L</td>
<td>long.F</td>
</tr>
</tbody>
</table>
   
   “a big grain of sorghum”

(6.14) SFX2: -O TRIGGERS M AGREEMENT

a. *loomó tleér*
   
<table>
<thead>
<tr>
<th>loom-</th>
<th>-ó</th>
<th>-ó</th>
<th>tleér</th>
</tr>
</thead>
<tbody>
<tr>
<td>STM-</td>
<td>-Sfx2</td>
<td>-L</td>
<td>long.M</td>
</tr>
</tbody>
</table>
   
   ‘a tall tree’ (*Trema orientalis*)

b. *siyumó tleér*
   
<table>
<thead>
<tr>
<th>siyo-</th>
<th>-(a)m</th>
<th>-ó</th>
<th>-ó</th>
<th>tleér</th>
</tr>
</thead>
<tbody>
<tr>
<td>STM-</td>
<td>-Sfx1</td>
<td>-Sfx2</td>
<td>-L</td>
<td>long.M</td>
</tr>
</tbody>
</table>
   
   ‘a long fish’

c. *sandukumó tleér*
   
<table>
<thead>
<tr>
<th>sanduku-</th>
<th>-(a)m</th>
<th>-ó</th>
<th>-ó</th>
<th>tleér</th>
</tr>
</thead>
<tbody>
<tr>
<td>STM-</td>
<td>-Sfx1</td>
<td>-Sfx2</td>
<td>-L</td>
<td>long.M</td>
</tr>
</tbody>
</table>
   
   ‘a long box’

(6.15) SFX2: -A’ TRIGGERS N AGREEMENT

a. *bihhi tleér*
   
<table>
<thead>
<tr>
<th>bihh-</th>
<th>-a’i</th>
<th><del>`</del></th>
<th>tleér</th>
</tr>
</thead>
<tbody>
<tr>
<td>STM-</td>
<td>-Sfx2</td>
<td>-L</td>
<td>tall.N</td>
</tr>
</tbody>
</table>
   
   “a long flank”

b. *tsi/iyá’tlet*
   
<table>
<thead>
<tr>
<th>tsi/-</th>
<th>-iy</th>
<th>-a’i</th>
<th><del>`</del></th>
<th>tlet</th>
</tr>
</thead>
<tbody>
<tr>
<td>STM-</td>
<td>-Sfx1</td>
<td>-Sfx2</td>
<td>-L</td>
<td>tall.N.Pl</td>
</tr>
</tbody>
</table>
   
   “shins”
6. The suffix 2: the listed phenomena

“long shins”

c. *kwa/eerí tlet*

\[
\begin{array}{c}
\text{kwa/-} & \text{-eer} & -\text{a’i} & \sim & \sim & \text{tlet} \\
\text{STM-} & \text{-Sfx1} & \text{-Sfx2} & \text{-L} & \text{tall.N.Pl} \\
\end{array}
\]

“tall hares”

As such, when a noun is changed for *number* (necessarily resulting in a change of suffix), the *gender* of the noun may change, depending on the identity of the new suffix (specifically, SFX2).

(6.16) *Sakweelí ‘ostrich’ is (F) gender, *sakwél ‘ostriches’ is (M) gender*

i. *sakweelír tleer*

\[
\begin{array}{c}
\text{sakweel-} & \text{-i} & \sim & \sim & \text{tleer} \\
\text{STM-} & \text{-Sfx2} & \text{-L} & \text{long.F} \\
\end{array}
\]

‘a tall ostrich’

ii. *sakweeló tlét*

\[
\begin{array}{c}
\text{sakweel-} & \text{-∅} & \sim & \sim & \text{tlét} \\
\text{STM-} & \text{-Sfx2} & \text{-L} & \text{long.M.Pl} \\
\end{array}
\]

‘tall ostriches’

b. *Digirmó ‘footprint’ is (M) gender, *digirma‘footprints’ is (N) gender*

i. *digirmó tleér*

\[
\begin{array}{c}
\text{digir-} & \text{-}(a)m & \sim & \sim & \text{tleér} \\
\text{STM-} & \text{-Sfx1} & \text{-Sfx2} & \text{-L} & \text{long.M} \\
\end{array}
\]

‘a long footprint’

ii. *digirmá’ tlet*

\[
\begin{array}{c}
\text{digir-} & \text{-}(a)m & \sim & \sim & \text{tlet} \\
\text{STM-} & \text{-Sfx1} & \text{-Sfx2} & \text{-L} & \text{long.N.Pl} \\
\end{array}
\]

‘a long footprint’

c. *Duukaa ‘shop’ is (F) gender, *duukanáy ‘shops’ is (M) gender*

i. *duukaár tleer*

\[
\begin{array}{c}
\text{duuk-} & \text{-aa} & \sim & \sim & \text{tleer} \\
\text{STM-} & \text{-Sfx2} & \text{-L} & \text{long.F} \\
\end{array}
\]

‘a long (or tall) shop’
6. The suffix 2: the listed phenomena

   ii.  *duukanáy tlét*
       duük- -a(m) -áy -ó tlét
       STM- -Sfx1 -Sfx2 -L  long, M.Pl
       'long (or tall) shops'

This section discussed each of the listed phenomena associated with the Gorwaa suffix, providing some discussion and examples.

6.4 The Paradigms

The most numerous and best-attested paradigm shape — the pair — will be examined first, followed by the triad. The monad will be examined last.

All paradigms are presented in Tables 3.2 and 3.3. When reading Table 3.2 the following should be kept in mind.

First, the vertical plane has been labeled “Sg” and the horizontal plane has been labeled “Pl”. This is a simplification because of space and the restrictions of twodimensional diagrams. As seen above, in many cases, either member of a pair could appear with either Sg or Pl agreement. What the notation is meant to signify is that, in a configuration whereby a member of a pair only occur with Sg, it will be from the column labeled Sg; in a configuration whereby a member of a pair only occur with Pl, it will be from the row labeled Pl. Therefore, taking the *-ay (M) | -a’(!)* paradigm, though members of this group suffixed in *-ay (M)* can occur with either Sg or Pl agreement, members of this group suffixed in *-a’(!)* can only occur with Pl agreement. As such, the suffix *-a’(!)* is located in the horizontal plane. It is a convention throughout this work to list paradigm pairs beginning with the suffix they take from the vertical plane, followed by the suffix they take
6. The suffix 2: the listed phenomena

from the horizontal plane. Thus, the noun $na/\text{ay} \mid na/\text{a'}$ is a member of the -$ay\,(\text{Mo}) \mid -a'(\!)$ paradigm.

Second, Pl suffixes have been left off of the vertical plane because they never enter into a paradigmatic relationship in which they can occur with Sg agreement. Sg suffixes have been left off the horizontal plane because they never enter into a paradigmatic relationship in which they can occur with Pl agreement.

Lines have been drawn which group the suffixes into their groups as discussed above: Sg, general (usually Sg), general, general (usually Pl), and Pl. Numbers in the intersect boxes represent the number of nouns identified in the sample which were found to enter into that paradigm. For example, for the paradigm pair $-ay\,(\text{M}) \mid -a'(\!)$, $N=3$. Intersect boxes are shaded increasingly darker as $N$ increases.

Intersect boxes whose vertical and horizontal values are different represent pair paradigms. Once again, the intersect box of $-ay\,(\text{M}) \mid -a'(\!)$ represents what was given in (5.120.b) above as ‘the pattern $-ay\,(\text{M}) \mid -a'(\!)$, repeated here as the paradigm $-ay\,(\text{M}) \mid -a'(\!)$. 
### Table 6.1 The pairs and the monads

<table>
<thead>
<tr>
<th>Sg</th>
<th>Sg/Pl</th>
<th>Pl</th>
<th>N</th>
<th>Sg</th>
<th>Sg/Pl</th>
<th>Pl</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>a(Mk)</td>
<td>a(M)</td>
<td>(Fr)</td>
<td>11</td>
<td>4</td>
<td>7</td>
<td>a(Mk)</td>
<td>a(M)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>a(Mk)</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>a(Mk)</td>
<td>a(M)</td>
</tr>
<tr>
<td>a(Mk)</td>
<td>a(M)</td>
<td>(Fr)</td>
<td>32</td>
<td>9</td>
<td>4</td>
<td>a(Mk)</td>
<td>a(M)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Fr)</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a(Mk)</td>
<td>a(M)</td>
<td>(Fr)</td>
<td>18</td>
<td>4</td>
<td>1</td>
<td>a(Mk)</td>
<td>a(M)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Fr)</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 6.2 The triads

<table>
<thead>
<tr>
<th>Sg</th>
<th>Sg/Pl</th>
<th>Pl</th>
<th>N</th>
<th>Sg</th>
<th>Sg/Pl</th>
<th>Pl</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>-(a)mó (Mo)</td>
<td>- oo (F)</td>
<td>- (a)du (N)</td>
<td>1</td>
<td>-(a)mó (Mo)</td>
<td>- ø (Mo)</td>
<td>- áy (Mo)</td>
<td>4</td>
</tr>
<tr>
<td>-(a)mó (Mo)</td>
<td>- i (Fr)</td>
<td>- áy (Mo)</td>
<td>4</td>
<td>-(a)mó (Mo)</td>
<td>- ø (Mo)</td>
<td>- eema’ (N)</td>
<td>6</td>
</tr>
<tr>
<td>-(a)mó (Mo)</td>
<td>- ø (Mo)</td>
<td>- (a)má’ (N)</td>
<td>8</td>
<td>-(a)mó (Mo)</td>
<td>- áy (Mo)</td>
<td>- eema’ (N)</td>
<td>1</td>
</tr>
<tr>
<td>- i (Fr)</td>
<td>- ø (Mo)</td>
<td>- áy (Mo)</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6. The suffix 2: the listed phenomena

(6.17) The paradigm -\textit{AY} (Mo) | -\textit{A’} (N∅)

<table>
<thead>
<tr>
<th>Stems (N=3)</th>
<th>-\textit{AY} (Mo)</th>
<th>-\textit{A’} (N∅)</th>
</tr>
</thead>
<tbody>
<tr>
<td>tsaxw-</td>
<td>tsaxwáy úr ‘a big grasshopper’</td>
<td>tsaxwáy urén ‘a big group of grasshoppers’</td>
</tr>
<tr>
<td>na/-</td>
<td>na/áy úr ‘a big child’</td>
<td>na/áy urén ‘a big group of children’</td>
</tr>
<tr>
<td>daqw-</td>
<td>daqwáy úr ‘a big donkey’</td>
<td>daqwáy urén ‘a big group of donkeys’</td>
</tr>
</tbody>
</table>

Intersect boxes whose vertical and horizontal values are the same represent monad paradigms. For example, the intersect box of -\textit{oo} (F) | -\textit{oo} (F) represents the paradigm below.

(6.18) The Paradigm -\textit{oo} (F)

<table>
<thead>
<tr>
<th>Stems (N=3)</th>
<th>-\textit{oo} (F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>am-</td>
<td>amoór ur ‘a big place’</td>
</tr>
<tr>
<td>heel-</td>
<td>heeloór ur ‘a big farming song’</td>
</tr>
<tr>
<td>kil-</td>
<td>kilóór ur ‘a big weight’</td>
</tr>
</tbody>
</table>

Unlike Table 3.7, the columns of Table 3.8 do correspond to the agreement with which a given suffix may appear. Thus, in the triad -(a)mó (Mo) | -\textit{oo} (F) | -(a)\textit{du} (N), the form suffixed with -(a)mó can occur with Sg agreement only, the form suffixed in -(a)\textit{du} can occur with Pl agreement only, and the form suffixed in -\textit{oo} can occur with both.
6. The suffix 2: the listed phenomena

6.4.1 Paradigms of two: the pair

In general, pairs may be characterized by 3 basic configurations. 1) One form which can only occur with Sg agreement, and the other form which can only occur with Pl agreement (this was named singular and plural above, and the paradigm is given in (6.19)). 2) One form which can occur with both Sg and Pl agreement, and the other form which can only occur with Pl agreement (this was named general and plural above, and the paradigm is given in (6.20)). 3) One form which can only occur with Sg agreement, and the other form which can occur with both Sg and Pl agreement (this was named singular and general above, and the paradigm is given in (6.21)).

(6.19) The paradigm \(-\langle A \rangle M Ø (Mo) \mid -\langle A \rangle M A' (NØ)\)

<table>
<thead>
<tr>
<th>Stems (N=52)</th>
<th>-\langle A \rangle M Ø (Mo)</th>
<th>-\langle A \rangle M A' (NØ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>kook-</td>
<td>kookumó úr 'a big rooster'</td>
<td>kookumá'uren 'big roosters'</td>
</tr>
<tr>
<td>gwehh-</td>
<td>gwehhimó úr 'a big rib'</td>
<td>gwehhimá'uren 'big ribs'</td>
</tr>
<tr>
<td>sweet-</td>
<td>sweetumó úr 'a big sweater'</td>
<td>sweetimá'uren 'big sweaters'</td>
</tr>
</tbody>
</table>

Note that the shape of the pair above is always the result of a Sg suffix pairing with a Pl suffix.

(6.20) The paradigm \(-\langle O \rangle (Mo) \mid -EEMA' (NØ)\)

<table>
<thead>
<tr>
<th>Stems (N=2)</th>
<th>-\langle O \rangle (Mo)</th>
<th>-EEMA' (NØ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>piir-</td>
<td>piiró úr 'a big dragonfly'</td>
<td>piiró urén 'a big (group of) dragonflies'</td>
</tr>
<tr>
<td>boohont-</td>
<td>boohontó úr 'a big hole'</td>
<td>boohontó urén 'a big group of holes'</td>
</tr>
</tbody>
</table>
6. The suffix 2: the listed phenomena

(6.21) The paradigm -t (Fr) | -oo (F)

<table>
<thead>
<tr>
<th>Stems (N=18)</th>
<th>-t (Fr)</th>
<th>-oo (F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>loo-</td>
<td>loo/ír ur</td>
<td>loo/oór ur</td>
</tr>
<tr>
<td></td>
<td>‘a big leaf’</td>
<td>‘a big group of leaves’</td>
</tr>
<tr>
<td>qan’-</td>
<td>qan’ír ur</td>
<td>qan’oór ur</td>
</tr>
<tr>
<td></td>
<td>‘a big egg’</td>
<td>‘a big group of eggs’</td>
</tr>
<tr>
<td>foo-</td>
<td>fooír ur</td>
<td>foooór ur</td>
</tr>
<tr>
<td></td>
<td>‘a big flute’</td>
<td>‘a big group of flutes’</td>
</tr>
</tbody>
</table>

A less common configuration for a pair is that of the mass noun being made count by the addition of a Pl suffix, such as the mass tseeree ‘blood’ becoming tseerdu ‘spots or pools of blood’. The operation occurring in the ‘opposite direction’ (i.e. a mass noun becoming count by the addition of a Sg suffix) doesn’t occur in the sample, but there does not seem to be any reason why it should not exist.

A handful of suppletive pairs exist. Their distribution is unsurprising: all are concepts of high frequency in everyday life.

(6.22) Suppletive pairs

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>hee</td>
<td>‘person’</td>
</tr>
<tr>
<td>b.</td>
<td>haree</td>
<td>‘woman’</td>
</tr>
<tr>
<td>c.</td>
<td>garma</td>
<td>‘boy’</td>
</tr>
<tr>
<td>d.</td>
<td>slee</td>
<td>‘cow’</td>
</tr>
<tr>
<td>e.</td>
<td>lee’i</td>
<td>‘goat’</td>
</tr>
<tr>
<td>f.</td>
<td>do’</td>
<td>‘house’</td>
</tr>
<tr>
<td>g.</td>
<td>gaa</td>
<td>‘thing’</td>
</tr>
</tbody>
</table>

151 different pairs were identified from the sample, with all 42 suffixes entering into paradigms of this shape.
6. The suffix 2: the listed phenomena

6.4.2 Paradigms of three: the triad

Unlike pairs, triads have a consistent ‘shape’, always made up of one form which can only occur with Sg agreement, one form which can occur with Sg and Pl agreement, and one form which can only (or can usually only) occur with Pl agreement (this was named singular, general, plural above, and a paradigm is given in (6.23) below.

(6.23) The paradigm -(A)mó (Mo) | -Ø (Mo) | -(A)ma’ (NØ)

<table>
<thead>
<tr>
<th>Stems (N=8)</th>
<th>-(A)mó (Mo)</th>
<th>-Ø (Mo)</th>
<th>-(A)ma’ (NØ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>qoonqal-</td>
<td>qoonqalumó úr ‘a big crowned crane’</td>
<td>qoonqaló úr ‘a big flock of crowned cranes’</td>
<td>qoonqaló urén ‘many flocks of crowned cranes’</td>
</tr>
<tr>
<td>malmaw-</td>
<td>malmawmó úr ‘a big lime tree’</td>
<td>malmáw úr ‘a big stand of lime trees’</td>
<td>malmáw urén ‘many stands of lime trees’</td>
</tr>
<tr>
<td>nee’ar-</td>
<td>nee’armó úr ‘a big thrush’</td>
<td>nee’ár úr ‘a big flock of thrushes’</td>
<td>nee’ár urén ‘many flocks of thrushes’</td>
</tr>
</tbody>
</table>

Seven different triads were identified from the sample, with a total number of 27 stems entering into this sort of paradigm. Because of the way in which much of the data was collected (i.e. eliciting with Swahili as the contact language), it is expected that many more triad paradigms exist than were recorded, and that many nouns (especially those referring to plants and animals) may be members of this sort of paradigm.

6.4.3 Paradigms of one: the monad

Monads are always made up of a form which can occur with Sg or Pl agreement (this was named mass above, and a paradigm is given in (6.24) below).
6. The suffix 2: the listed phenomena

(6.24) **The paradigm -AY (Mo)**

<table>
<thead>
<tr>
<th>Stems (N=4)</th>
<th>-AY (Mo)</th>
</tr>
</thead>
<tbody>
<tr>
<td>maa'-</td>
<td>maa’y yaariir</td>
</tr>
<tr>
<td></td>
<td>‘much water’</td>
</tr>
<tr>
<td>bo/-</td>
<td>bo/ýy ur</td>
</tr>
<tr>
<td></td>
<td>‘a big crowd’</td>
</tr>
<tr>
<td></td>
<td>bo/ýy urén</td>
</tr>
<tr>
<td></td>
<td>‘big crowds’</td>
</tr>
<tr>
<td>tluw-</td>
<td>tluwý yaariir</td>
</tr>
<tr>
<td></td>
<td>‘much rain’</td>
</tr>
</tbody>
</table>

It should be noted here that the stems which fall under this monad have two different structures: that of maa’ay and tluway (mass nouns which cannot be individuated), and that of bo/ay (a noun which is countable but takes no other suffix).

In fact, a third shape for monads also exists: for unique nouns (also known as singulare tantum) for which there is only one real world referent. This third shape is given in (6.25) for the stem dawr-.

(6.25) **The paradigm -I (Fr)**

<table>
<thead>
<tr>
<th>Stems (N=8)</th>
<th>-I (Fr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ba/-</td>
<td>ba/ýr yaariir</td>
</tr>
<tr>
<td></td>
<td>‘much mud’</td>
</tr>
<tr>
<td>dawr-</td>
<td>dawrír ur</td>
</tr>
<tr>
<td></td>
<td>‘the great sky’</td>
</tr>
<tr>
<td>kuunseel-</td>
<td>kuunseelýr ur</td>
</tr>
<tr>
<td></td>
<td>‘a big earthquake’</td>
</tr>
<tr>
<td></td>
<td>kuunseelýr uren</td>
</tr>
<tr>
<td></td>
<td>‘big earthquakes’</td>
</tr>
</tbody>
</table>

Once again, stems which fall under this monad show three different shapes.

This multiplicity of shapes internal to one paradigm is undesirable: a more detailed treatment would separate each of these shapes into their own monad (i.e. there would be one monad -i (Fr) for masses, one monad -i (Fr) for count nouns which take no other suffixes, and one monad -i (Fr) for singulare tantum). Because it has
yet to be fully determined which nouns in monads are mass, which are count, and which are singulare tantum, this division has not been fully implemented here. Twenty different monads were identified from the sample, with a total number of 50 stems entering into this sort of paradigm. Interestingly, all suffixes classed as general and general (Pl-leaning) have a monad (resulting in the distinctive 'staircase' pattern in Table 3.7).

6.5 Analysis

Following the data presentation above, Gorwaa nominal suffixes can be described as entering into at least 178 different paradigms: 151 pairs, 20 monads, and 7 triads. The paradigm taken by any given noun stem is unpredictable. A given noun stem may have more than one paradigm: choice between which paradigm the stem takes may or may not affect semantic interpretation of the resultant noun. Suffixes of general number may have the kinds of agreement with which they may occur restricted based on the shape and texture of their paradigm. Finally, the grammatical gender of a noun is determined by the SFX2 morpheme. As such, if a noun is changed for number value, its gender may also change.

This section provides an analysis in the Distributed Morphology architecture to account for listed phenomena. Firstly, if roots are to be considered truly acategorial, this must be accomplished without resorting to root diacritics indicating declensional class (Acquaviva 2008: 1-3). The initial challenge, therefore, is to ensure that the nominal paradigm (aka declension class) is somehow available post-
6. The suffix 2: the listed phenomena

spellout, but not as part of the lexical root. This is addressed in subsection 6.4.1. Subsection 6.4.2 proposes that the 178 paradigms of Gorwaa are encoded as 178 different version of n, provides a revised tree structure which consolidates the Gorwaa suffix paradigm into the syntax, and gives an initial description of how paradigmatic material is realized post-Spellout. Subsection 6.4.3 returns to the Cl head and accounts for its post-Spellout realization. Subsection 6.4.4 addresses the final listed phenomenon: characteristic (e): gender ‘polarity’, specifically, how gender is realized post-Spellout, and how Agree must therefore be a kind of postsyntactic operation.

6.5.1 The place of the paradigm

The paradigm was described in §6.2 above as the instructions for suffix realization taken by a given noun stem. To be clear, it is important to highlight that the paradigm refers to the instructions for the realization of suffixes, and not to the suffixes themselves. In DM terms, the grammar does not make reference to the explicit contents of paradigms, but instead makes reference to its constituent pieces (i.e. features and vocabulary items) (Bobaljik 2002). The difference between the ‘paradigm as forms’ vs. ‘paradigm as instructions’ views is given in (6.26) below.

(6.26) Distributed morphology does not reference explicit forms within a paradigm, but references the constituent pieces of its structure (Adapted from Bobaljik 2002: 2)

<table>
<thead>
<tr>
<th>Paradigm as forms</th>
<th>Paradigm as instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pers</strong></td>
<td>Present</td>
</tr>
<tr>
<td>1</td>
<td>play-∅</td>
</tr>
<tr>
<td>2</td>
<td>play-∅</td>
</tr>
<tr>
<td>3</td>
<td>play-[z]</td>
</tr>
<tr>
<td>[past]</td>
<td>↔ -d</td>
</tr>
<tr>
<td>[ϕ[3, Sg]]</td>
<td>↔ -z</td>
</tr>
<tr>
<td>default/elsewhere</td>
<td>↔ -∅</td>
</tr>
</tbody>
</table>
6. The suffix 2: the listed phenomena

What may be observed above is that, rather than the entire table of forms, what DM makes reference to is the features relevant to the instructions. Under ‘paradigm as instructions’ the ordered list in (6.26) makes explicit that the paradigm is one in which the feature [past] is a relevant factor contributing to its shape, and that, for example, part of its content is the vocabulary item -d.

The configurations of the Gorwaa paradigms examined in this work are actually somewhat simpler than the English example above, in that they deal with less features. An example is given in (6.27) below⁴.

(6.27) ‘Paradigm as forms’ vs. DM ‘paradigm as instructions’: kookumó | kookuma’

<table>
<thead>
<tr>
<th>Paradigm as Forms</th>
<th>Paradigm as instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sg</td>
<td>[PI] ↔ -a’i</td>
</tr>
<tr>
<td>kook-(a)m -ó</td>
<td>default/elsewhere ↔ -ó</td>
</tr>
<tr>
<td>Pl</td>
<td></td>
</tr>
<tr>
<td>kook-(a)m -a’</td>
<td></td>
</tr>
</tbody>
</table>

To conclude this introductory clarification, what is being referred to as a nominal suffix paradigm in this work would translate to other DM accounts as a declensional class: that is, a pattern which dictates how a feature or set of features will be realized by the grammar post-Spellout. Returning to the English example in (6.26), the feature [past] is not realized on all verbs by the vocabulary item -d. The verb sing, for example, is realized not as sing-d, but as sang. Because the verb sing realizes its features in a different way from play, the two verbs must belong to different declensional classes. In this work, one would say that they belong to

⁴ The vocabulary item generated by a [plural] feature is obviously not generated here in its final form. The adaptation of -a’i to -a’ would have to be accomplished in this model through a readjustment rule.
different paradigms. An example of 5 different Gorwaa paradigms is provided in (6.28) below.

(6.28) 5 DIFFERENT GORWAA PARADIGMS (AKA DECLENSIONAL CLASSES)

<table>
<thead>
<tr>
<th>FORMS (EXAMPLE)</th>
<th>PARADIGM</th>
</tr>
</thead>
<tbody>
<tr>
<td>kookumó -{(a)mó (Mo)</td>
<td>-(a)ma’ (N∅)</td>
</tr>
<tr>
<td>kookuma’ kook- -(a)m -ó ‘a rooster’</td>
<td></td>
</tr>
<tr>
<td>default/elsewhere ↔ -ó</td>
<td></td>
</tr>
<tr>
<td>kookumó -{(a)mó (Mo)</td>
<td>-(a)ma’ (N∅)</td>
</tr>
<tr>
<td>daambumó daamb- -{(a)m -ó ‘a weaver bird’</td>
<td></td>
</tr>
<tr>
<td>daambáy daamb- -áy ‘a (kind of) weaver bird’</td>
<td></td>
</tr>
<tr>
<td>‘weaver birds’</td>
<td></td>
</tr>
<tr>
<td>qoonqalumó qoonqal- -{(a)m -ó ‘a crowned crane’</td>
<td></td>
</tr>
<tr>
<td>qoonqál qoonqal- -∅ ‘a (kind of) crowned crane’</td>
<td></td>
</tr>
<tr>
<td>‘crowned cranes’</td>
<td></td>
</tr>
<tr>
<td>qoonqalima’ qoonqal- -{(a)m -a’i ‘crowned cranes’</td>
<td></td>
</tr>
<tr>
<td>bi/iní bi/ina- -í ‘a silky blesmol’</td>
<td></td>
</tr>
<tr>
<td>bi/inaa bi/ina- -aa ‘a (kind of) silky blesmol’</td>
<td></td>
</tr>
<tr>
<td>‘silky blesmols’</td>
<td></td>
</tr>
<tr>
<td>maa’ay maa’- -ay ‘water’</td>
<td>default ↔ -ay</td>
</tr>
</tbody>
</table>

Previous Distributed Morphology analyses (e.g. Oltra Massuet (1999)) would encode a noun’s paradigm membership (i.e. declension class) as a diacritic on the root. Diacritics are a kind of feature “relevant for morphological spell out, but [which] do not have any semantic interpretation” (Embick and Noyer 2007:16). The root would therefore be predetermined as to what conjugation class it would enter. As a rudimentary implementation of this concept, the root of the noun stem kook-
(described above as forming the nouns kookumó ‘a rooster’ and kookuma’ ‘roosters’), would be marked with the diacritic feature [-ó | -a’i]. Following Spellout,
6. The suffix 2: the listed phenomena

this feature would then instruct the morphology to realize the feature [Pl] by the morpheme -a’i, and in all other cases, produce the morpheme -ó.

This is problematic for both empirical and conceptual reasons (Acquaviva 2008: 1-3), the most salient of which will be discussed below.

In Gorwaa, the greatest empirical issue for the roots-with-diacritics view exists in listed characteristic (c): a given noun stem may have more than one paradigm. For example, (and as shown above in (6.7)), the noun stem goof- may, using the paradigm -aangw (Mo) | -a’i (N∅), form the nouns goofaangw ‘an antelope’ and goofeeri ‘antelopes’. Likewise, the noun stem goof- may, using the paradigm -aangw (Mo) | -ee (Fr), form the nouns goofaangw ‘an antelope’ and goofaawee ‘antelopes’. As the translations show, the resultant nouns of both paradigms have the same meaning. Furthermore, such alternate forms are regularly employed interchangeably by the same speaker, with no observed semantic effects. If the paradigm exists as a diacritic inherent to the root, then every situation in which a given noun stem uses more than one paradigm to form a noun must therefore be ascribed to a separate root with the specific paradigm encoded as an inherent diacritic. Procedurally then, under the roots-with-diacritics view, the root which forms the pair goofaangw | goofeeri is different from the root which forms the pair goofaangw | goofaawee. Semantic and formal overlap between these forms has no explanation in this system other than being accidental.
6. The suffix 2: the listed phenomena

Regarding the most serious conceptual issue with the roots-with-diacritics view, Acquaviva argues succinctly that “[...] if a root has a feature that presupposes a category, then it is not really category-free” (2). In other words, if a Gorwaa root is posited as existing with a diacritic dictating the paradigm of its noun suffixes, then it has already been, to some degree, conceived of as a noun: exactly what the concept of roots discussed in Chapter 4 was designed to rule out.

Both Acquaviva (2008) and Harley (2014) argue convincingly that such root diacritics do not exist, but in so doing, provide no alternate explanation for how paradigms are associated with given noun stems. This is acknowledged in Acquaviva (2008), which concludes that:

“The approach I have outlined [...] does not provide a formal expression of the stable association of most roots with gender, class, or other diacritics. This seems to be a weakness, in so far as a noun’s idiosyncratic marking should have a formal grammatical encoding.” p.16

This section has adopted the argument that paradigms cannot be encoded as diacritics on the lexical root, and has accepted this argument’s associated cost: that no good alternative to encoding paradigms has so far been offered. The following subsection proposes a solution consistent with the Gorwaa data, and details how this is borne out both pre- and post-Spellout.

6.5.2 Paradigms as versions of n

In the last section, the argument that paradigms were encoded as special diacritic features on the root was jettisoned in favour of preserving the acategorial nature of
6. The suffix 2: the listed phenomena

the root. However, though the implementation of the roots-with-diacritics view is
problematic, its intent is insightful. Paradigms are instructions for suffix realization,
relevant to the phonological and semantic component of the grammar, but entirely
irrelevant to the syntax (c.f. Harris 1991, and Alexiadou 2004). Compare the
valuation of the following two Gorwaa paradigms taken by the noun stem tsifir- in
(6.29) below. The product of differing paradigms has both phonological and
(sometimes) semantic ramifications, but has no difference whatsoever in the syntax.

(6.29) Valuation of the paradigm -i (Fr) | -a'i (NØ) vs valuation of the paradigm
-aangw (Mo) | -a'i (NØ)

<table>
<thead>
<tr>
<th>Phonological Component (List 2)</th>
<th>Semantic Component (List 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paradigm Input</td>
<td>Syntactic Context</td>
</tr>
<tr>
<td>-i (Fr)</td>
<td>/ tsifir- + [Sg]</td>
</tr>
<tr>
<td>-a'i (NØ)</td>
<td>/ tsifir- + [Pl]</td>
</tr>
<tr>
<td>-aangw (Mo)</td>
<td>/ tsifir- + [Sg]</td>
</tr>
<tr>
<td>-a'i (NØ)</td>
<td>/ tsifir- + [Pl]</td>
</tr>
</tbody>
</table>

Again, the paradigm -i (Fr) | -a'i (NØ) realizes a set of sounds and a set of meaning
different from those realized by the paradigm -aangw (Mo) | -a'i (NØ). Syntactically,
however, the products of both valuations are nouns: singular if the syntactic context
supplies the feature [Sg], and plural if the syntactic context supplies the feature [Pl].
Paradigms are therefore inert to the syntax, and active to the phonology and
semantics.

In the previous chapter, the SFX2 was described as the instantiation of some
projection (identified in this work as n), dominating # and, in turn, dominated by D.
In order to account for the listed phenomena, this characterization will be revised.
Rather than SFX2 itself, it is the SFX2 paradigm which exists at n. 178 SFX2
6. The suffix 2: the listed phenomena

paradigms have thus far been identified for Gorwaa, and, as such, there are 178 different versions of n. The SFX2 itself is instantiated via a process of realization post-Spellout. The revised structure is presented in (6.30), and the valuation process is presented in Table 5.4, where -n₁₃₅ corresponds to the paradigm -ó (Mo) | -Ø (Mo) | (a)’i (NØ).

(6.30) *Qoonqalumó (version 2)*

Merge of n₁₃₅ (syntactic object α) and √qoonqal-(a)m-# (syntactic object β).

![Diagram of SFX2 structure]

Table 6.3: Valuation of n₁₃₅ (Version 1)

<table>
<thead>
<tr>
<th>Phonological Component</th>
<th>Semantic Component</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Input</strong></td>
<td><strong>Syntactic Context</strong></td>
</tr>
<tr>
<td>n₁₃₅</td>
<td>/Sg</td>
</tr>
<tr>
<td></td>
<td>/Pl</td>
</tr>
<tr>
<td>elsewhere</td>
<td>Ø <del>'</del></td>
</tr>
</tbody>
</table>

Having arrived at this characterization for the SFX2 morpheme, discussion will briefly return to SFX1 in order to provide a similar account.
6. The suffix 2: the listed phenomena

6.5.3 Realization of the morpheme Cl (i.e. SFX1)

It will be noted that throughout this section (i.e. §6.4), analysis of the paradigm has focused on the content of SFX2, whereas, prior to this (i.e. §6.2-6.3), the notion of paradigm has also included the SFX1. Though syntactically distinct (SFX1 was identified as being the instantiation of the head Cl, and SFX2 as the instantiation of one element of the paradigm, itself an instantiation of the head n), the two are clearly interrelated in their realizations: the SFX1 -(a)m and the SFX2 -ó (Mo) may be realized together, such as in qoonqalumó, but the same SFX1 -(a)m and the SFX2 -ee (Fr) are never realized together -- hence the absence of the form -amee.

A further characteristic of SFX1 morphemes is also worth restating. It was identified in the data presentation above (see §5.3) that all Cl suffixes (i.e. SFX1) could be identified as derivational suffixes which occur in a verbal context. For example, when realized as part of a noun, -(a)m is a classifier; when realized as part of a verb, -(a)m is durative aspect: therefore qoonqalumó ‘a crowned crane’, and aga hubiim ‘I was bringing it’.

The first characteristic, that of certain forms of SFX1 combining with only certain forms of SFX2, is the result of final realization of the Cl morpheme being dependent on the variety of n present in the syntactic structure. As such, if the variety of n present is -n135 (i.e. the paradigm of qoonqalumó, qoonqal, qoonqalama’), then the Cl morpheme will be realized as -(a)m; if the variety of n present is -n150 (the paradigm of, say, tsifiraangw, tsifireerí), then the Cl morpheme will be realized as -eer. The instructions for post-Spellout realization in this case are given in Table 5.4, where
6. The suffix 2: the listed phenomena

-\(n_{135}\) corresponds to the paradigm -\(\dot{o}\) (Mo) | -\(\emptyset\) (Mo) | \((a)i\) (N\(\emptyset\)), and -\(n_{150}\) corresponds to the paradigm -\(aangw\) (Mo) | -\(\{a\}i\) (N\(\emptyset\)).

<table>
<thead>
<tr>
<th>Table 6.4: Valuation of Cl</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phonological Component</strong></td>
</tr>
<tr>
<td>Input</td>
</tr>
<tr>
<td>Cl</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

The second characteristic, that of the SFX1 playing double-duty as either nominal classifier morphology or verbal aspectual morphology, requires recourse to the concept that these forms may be the same, but, in different syntactic contexts, are functioning in slightly different ways (i.e. the ‘allosemy’ of Marantz 2013, and Wood & Marantz, 2017). Thus, in a nominal syntactic environment, SFX1 is realized as individuation, and in a verbal syntactic environment, SFX1 is realized as durative, causative, etc. Table 5.5 below presents an example valuation of SFX1.

<table>
<thead>
<tr>
<th>Table 6.5: Valuation of SFX1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phonological Component</strong></td>
</tr>
<tr>
<td>Input</td>
</tr>
<tr>
<td>SFX1</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

6.5.4 A summary

A revised version of the derivation thus far is presented in (6.31): where \(\sqrt{735}\) is the root which realizes *qoonqal-*: Cl is the head which realizes the SFX1 -\((a)m\), and \(n_{135}\) is the paradigm which realizes the SFX2 -\(\dot{o}\).
Given this syntactic configuration, the post-syntactic valuation of $\sqrt{735}$ will result in *qoonqal*, the post-syntactic valuation of Cl will result in *-(a)m* [individuation], and the post-syntactic valuation of $n_{135}$ will result in *-ó* (Mo).

This more detailed level of representation now allows an update to be made to the description of how a root such as $\sqrt{735}$ is valued. Recall that, in the discussion in §4.4.3, it was assumed that the roots posited therein were conditioned in the syntactic context of individual suffixes (see Tables 4.1, 4.2, 4.3, and 4.4). The group *qoonqalumó | qoonqál | qoonqalima’* is a rather simplistic case to pursue, as the root only takes one paradigm, instead, a more complex form will be chosen. Consider the following:

(6.32) a. *soo’ay | soo’aawee* ‘dog, dogs’
    b. *se’eemi | se’eengw* ‘hair (one strand), hair’
6. The suffix 2: the listed phenomena

According to the conclusions drawn in Chapter 4, the valuation of the common root which realizes all of these forms (let it be $\sqrt{561}$), would proceed as in Table 6.6 below.

<table>
<thead>
<tr>
<th>Table 6.6: Valuation of $\sqrt{561}$ (version 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phonological Component</td>
</tr>
<tr>
<td>Root Input</td>
</tr>
<tr>
<td>$\sqrt{561}$</td>
</tr>
<tr>
<td>/-aawee</td>
</tr>
<tr>
<td>/-iimi</td>
</tr>
<tr>
<td>/-aangw</td>
</tr>
</tbody>
</table>

This arrangement is obviously problematic. The first problem is that the table fails to take into account that none of the syntactic contexts would, at this point, be valued phonologically. This interpretation could perhaps be saved by abstracting away from the suffixes, and assigning each of them an abstract index, to be valued at a later point (this would be the equivalent of positing the suffixes as syntactic heads, rather than the paradigms).

However, this analysis eventually runs into trouble as well. Consider the following:

(6.33) a. $\text{tsifiraangw} \mid \text{tsifireeri}$ ‘tongue, tongues’

b. $\text{tsifiri} \mid \text{tsifireeri}$ ‘language, languages’

The forms of the plural in each case is the same. As such, the semantic component of the valuation would have no way to distinguish the two.

What this approach fails to identify is that the suffixes themselves do not contribute to the overall meaning but the paradigms in which they exist do. As such, the
6. The suffix 2: the listed phenomena

Elements to be considered as the syntactic context within the valuation are the paradigms. Valuation of √561 would proceed thus (let the paradigm -ay (Mo) | -aawee (F) be n₁₁₈, and the paradigm -iimi (F) | -aangw (M) be n₁₉₇).

Table 6.7: Valuation of √₅₆₁ (version 2)

<table>
<thead>
<tr>
<th>Phonological Component</th>
<th>Semantic Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Root Input</td>
<td>Syntactic Context</td>
</tr>
<tr>
<td>√₅₆₁</td>
<td>n₁₁₈</td>
</tr>
<tr>
<td></td>
<td>n₁₉₇</td>
</tr>
<tr>
<td>Root</td>
<td>Syntactic Context</td>
</tr>
<tr>
<td>√₅₆₁</td>
<td>n₁₁₈</td>
</tr>
<tr>
<td></td>
<td>n₁₉₇</td>
</tr>
</tbody>
</table>

The above represents a case in which the choice of paradigm effects the semantic interpretation of the result. In many cases, however, such semantic effect does not occur. Consider the following:

(6.34) a. goofaangw | goofeeri ‘antelope, antelopes’
b. goofaangw | goofaawee ‘antelope, antelopes’

The kind of valuation proposed above handles this kind of case equally well. Let the root common to all these forms be √238. Let the paradigm -aangw (Mo) | -eeri (N∅) be n₂₇₉, and let the paradigm -aangw (Mo) | -aawee (F) be n₆₈₃⁵.

Table 6.8: Valuation of √₂₃₈

<table>
<thead>
<tr>
<th>Phonological Component</th>
<th>Semantic Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Root Input</td>
<td>Syntactic Context</td>
</tr>
<tr>
<td>√₂₃₈</td>
<td>n₂₇₉</td>
</tr>
<tr>
<td></td>
<td>n₆₈₃</td>
</tr>
<tr>
<td>Root</td>
<td>Syntactic Context</td>
</tr>
<tr>
<td>√₂₃₈</td>
<td>n₂₇₉</td>
</tr>
<tr>
<td></td>
<td>n₆₈₃</td>
</tr>
</tbody>
</table>

To conclude this subsection, what this analysis proposes is a mechanism by which paradigms may be treated under a Distributed Morphology framework. By

---

⁵ Note that, in this work, the indexical value given to little ns (in this case, 683) are arbitrary numbers, often considerably higher than the total number of paradigms identified (178). This is done simply to ensure that numerical values of n and numerical values of roots (√) do not coincide (itself not a theoretical problem, given that the indices are being used for entirely different elements), mainly for easier reading.
identifying each paradigm as its own version of n, subject to valuation conditioned by the syntactic context, it allows the regularities which hold within them to function as a part of the grammar, and not as an exception.

What must remain ‘exceptional’ (at least for Gorwaa), is the manner in which a given root comes to be associated with a given paradigm. It seems to me that the selection of roots by paradigms is lexical, both in the sense that the paradigm and the root both contribute to the meaning of a noun (e.g. soo’ay ‘dog’ vs. se’eengw ‘hair’), as well as in the sense that, like matching an appropriate noun with an appropriate verb to construct a coherent sentence, so too must a speaker match an appropriate root with an appropriate paradigm.

The following subsection treats the relation of the suffix to gender.

**6.5.5 The realization of gender**

Another characteristic which adds to the ‘lexicality’ of the paradigms represented in the SFX2 morpheme is the fact that each individual suffix has (to borrow Acquaviva’s phrase) a ‘stable association’ with gender. For example, the suffix -ee always triggers F agreement, and the suffix -u! always triggers N agreement. This is so consistent that such suffixes can be listed with their attendant gender.

If it is the SFX2 morpheme which determines gender, and if the realization of SFX2 is a process of valuation of a paradigm in the syntactic context of number features, then gender is necessarily a feature generated post-syntactically: specifically in the phonological component (i.e. List 2). A revised version of the valuation of $n_{135}$ (i.e.
6. The suffix 2: the listed phenomena

the paradigm which features in the suffixes -(a)mó (Mo) | -∅ (Mo) | -(a)ma’ (N∅) is given in Table 6.9 below.

Table 6.9: Valuation of \( n_{135} \) (revised)

<table>
<thead>
<tr>
<th>Phonological Component</th>
<th>Semantic Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input ( n_{135} )</td>
<td></td>
</tr>
<tr>
<td>Syntactic Context</td>
<td>Value</td>
</tr>
<tr>
<td>/Sg</td>
<td>[ó][Mo]</td>
</tr>
<tr>
<td>/Pl</td>
<td>[aʔ][N∅]</td>
</tr>
<tr>
<td>elsewhere</td>
<td>( \emptyset \sim \sim [Mo] )</td>
</tr>
<tr>
<td>Input ( n_{135} )</td>
<td></td>
</tr>
<tr>
<td>Syntactic Context</td>
<td>Value</td>
</tr>
<tr>
<td>/Sg</td>
<td>singular</td>
</tr>
<tr>
<td>/Pl</td>
<td>plural</td>
</tr>
<tr>
<td>elsewhere</td>
<td>general</td>
</tr>
</tbody>
</table>

Note that the gender features are realized in the phonological component, and are therefore inaccessible to the semantic component. This is desirable in that these gender values have no bearing on the semantic interpretation of the noun. Indeed, there is nothing inherently masculine about \( qantsá \) ‘green chyme’, nor is there anything feminine about \( saankaa \) ‘chyme’ -- both refer to a somewhat similar real world entity, but have different gender. The dikdik, even if female, is referred to by the masculine noun \( tsoyo \), whereas the hippopotamus, even if male, is referred to by the feminine noun \( hawweé(d) \).

Perhaps the most significant consequence of the analysis above is that, if gender features are realized only post-syntactically, and if these features are the input for agreement, then agreement must also occur post-syntactically, following the valuation of these roots in List 2. At the same time, however, the Agree operation has been proven to rely on relationships that are syntactic in nature, such as c-command. If this is the case, then a new version of Agree must operate post-syntactically, but still be capable of accessing the syntactic structure.
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In fact, it is exactly this type of Agree that has been proposed in Bobaljik (2008). The data used in the paper is at once quite different from Gorwaa, but also quite similar. As such, a moment will be taken to consider the empirical basis on which the argument is built.

In Icelandic (isl; Iceland), there exist a series of constructions in which the morphological case assigned to the subject is not nominative. This is known in the literature as *quirky case*. One such construction occurs with experiencer predicates, in which the subject is assigned *dative* case.

(6.35) **Quirky Case in Icelandic** (**From Bobaljik** (2008: 298))

a. Jóni líkuðu þessir sokkar
   Jon.DAT like.Pl these socks.NOM
   “Jon likes these socks.”
   (from Jónsson 1996: 143)

b. það líkuðu einherjum þessir sokkar
   EXPL liked.Pl someone.DAT these socks.NOM
   “Someone liked these socks.”
   (from Jónsson 1996: 153)

It is shown that, though morphologically marked for dative case, these quirky subjects are, by all criteria, grammatical subjects. Because of this, it is concluded that the system responsible for assigning structural case (i.e. case according to grammatical function), and that responsible for assigning morphological case are different. In languages such as German and Russian, the system of morphological case “tracks [case based on grammatical function] fairly neatly” (303). In the case of Icelandic, the two systems do not coincide so neatly, hence the occurrence of quirky case.
6. The suffix 2: the listed phenomena

Furthermore, because the assignment of morphological case makes reference to the syntactic structure (i.e. in assigning dative to the subject, and nominative to the remaining caseless NP), it must occur after the syntax, but be sensitive to it. It is argued that this post-syntactic stage is the morphology, which "takes a syntactic structure as its input and incrementally alters that structure in order to produce a phonological form" (296). Thus, quirky case and those phenomena similar to it are called m-Case (m for morphological). Based on the argument that, crosslinguistically, it is m-Case (and not any syntactic relation such as grammatical function) which determines the accessibility of a given NP for controlling agreement on the predicate, agreement must be a postsyntactic operation.

Even though the data in Gorwaa are not related to case, the same argument applies. As quirky case in Icelandic is assigned lexically, so too is suffixal gender in Gorwaa assigned lexically (i.e. by the paradigm). As quirky case in Icelandic has no effect on the (semantic) interpretation of the grammatical relations, so too does suffixal gender in Gorwaa have no effect on the semantic interpretation of the noun. Finally, as quirky case dictates agreement operations, so too does suffixal gender in Gorwaa control agreement operations. Gorwaa suffixal gender is m-gender, m-gender is postsyntactic, and agreement must be postsyntactic as a result.

The result of a system such as the one proposed is nouns for which gender has no semantic function showing gender regardless, assigned lexically based on the form
of the suffix (6.36), as well as entities which have a biological gender sometimes showing agreement for a mismatching gender (6.37).

(6.36) SEMANTICALLY GENDERLESS NOUNS TRIGGERING GENDER AGREEMENT

a.  *qantsá ku yaariir*
   
   qants- -á -ó t- ng- u- Ø yaariir
   
   STM- -SFX2 -L MP- A.3- P.M Aux much
   
   green.chyme 'There is much green chyme.'

b.  *saankaa ka yaariir*
   
   saank- -aa -r~˘~ t- ng- a- Ø yaariirur
   
   STM- -SFX2 -L MP- A.3- P.F Aux much
   
   chyme 'There is much chyme.'

(6.37) NOUNS WITH BIOLOGICAL GENDER TRIGGERING MISMATCHING AGREEMENT

a.  *tsoyó úr*
   
   tsoy- -ó -ó úr
   
   STM- -SFX2 -L big,M
dikdik 'a big dikdik' (possibly a female dikdik)

b.  *hawweér ur*
   
   haww- -ee -r~˘~ ur
   
   STM- -SFX2 -L big,F
   
   hippopotamus 'a big hippopotamus' (possibly a male hippopotamus)

6.6 Remarks and summary

This chapter, as well as the one before it, has treated the nominal suffix, an element which is morphologically highly complex, and theoretically very interesting. §5.5.1 provides some further comment on the nature of n, and §5.5.2 summarizes.

6.6.1 Remarks on the nature of n

It was noted in Chapter 5 (fn.5) that the labeling of SFX2 as n was a conscious choice. At this point, some remarks may be given on why, exactly, this is so.
6. The suffix 2: the listed phenomena

First, the letter label 'n' is a recognition that the SFX2 functions as the categorizing head, equivalent, more or less, to the various Ns proposed in the literature (Marantz (2001), Arad (2003, 2005), and Merchant (2018)). As established in Chapter 4 and Chapter 5, the majority of nominal material may also appear in the verbal domain. Noun stems are commonly isomorphic with verb stems (see §4.4.3), SFX1 morphology is virtually always isomorphic with durative, middle voice, and pluractional verbal derivational suffixes (see §2.3.2.4, and §5.3). The first element that does clearly not belong to the verbal domain is the SFX2 morphology. It is therefore this morphology that is identified as nominalizing the structure. (6.38) below yields a rough comparison of a structure containing a nominal categorizing head n, versus one containing a verbal categorizing head v. Strikingly, in (6.38)a) the nominal morphology involved in classifying and quantifying -- structuring the concept of the root in space -- is the same morphology involved in the projections X and Y in (6.38)b) structuring the concept of the root in time. This dissertation does not discuss verbal morphology and therefore the identity of these projections will remain vague, but compare a similar universal proposal made in Borer (2005a, b).

(6.38) **The noun xooslumö 'vessel, tool' vs. the verb xooslíím 'to grind': sole difference is the categorizing head**

\[
\begin{align*}
\text{a. xooslumö} & \quad \text{b. xooslíím} \\
\text{nP} & \quad \text{vP} \\
\text{#P} & \quad \text{XP} \\
\text{CIP} & \quad \text{YP} \\
\sqrt{291} & \quad \sqrt{291} \\
\text{-{a)m}} & \quad \text{-{a)m}} \\
\text{Cl} & \quad \text{~Long Vowel, RPA~} \\
\text{#} & \quad \text{X} \\
\text{-{a)m}} & \quad \text{-{a)m}}
\end{align*}
\]
6. The suffix 2: the listed phenomena

The fact that the n is little here represents a further nod to verb phrase structure, and was chosen specifically because ‘little v’ is often described as introducing an external argument. To be discussed in §7.4.2, as little v introduces an external argument to the verb phrase in the form of the subject argument, it is little n that introduces an external argument to the noun phrase in the form of the argument R.

As a separate remark, it is worth noting that n and the root function autonomously in some respects (e.g. the √-n combination may be separated by Cl and # morphology, as in (6.39)b)), but that they also have the linguistic properties of a single domain (e.g. √-n combinations have idiomatic meanings, as outlined in §6.2.3 above).

(6.39) N AND THE ROOT FUNCTION AUTONOMOUSLY IN SOME RESPECTS
   a. /aráy ‘white-galled acacias’
      [√ -n]
   b. /armó ‘white-galled acacia’
      [√-Cl -# -n]

(6.40) N AND THE ROOT HAVE THE LINGUISTIC PROPERTIES OF A SINGLE DOMAIN
   a. soo -ay ‘a dog’
      [√ -n]
   b. se’ -eengw ‘hair’
      [√ -n]

These behaviors are also characteristic of verb-particle constructions in Germanic (e.g. Ramchand & Svenonius 2002), and preverb constructions in Old Irish (sga: Ireland†) (e.g. Adger 2006). Examples (from Ramchand and Svenonius (2002: 101) are provided in (6.41) and (6.42) below.

(6.41) THE VERB AND THE PARTICLE FUNCTION AUTONOMOUSLY IN SOME RESPECTS
   a. They marched off the hangover
   b. They marched the hangover off.
6. The suffix 2: the listed phenomena

(6.42) The verb and the particle have the linguistic properties of a single domain
   a. They let up the pressure.
   b. They let the pressure up.

At this point, no further insight will be given into the parallels in syntactic behavior for the √-n relationship and the V-particle relationships mentioned above. With that said, it is worth noting the similarities at this point, in hope of further insight in the future.

6.6.2 Summary

This subsection concludes two chapters which focus on the suffix. Where chapter five treated the regular characteristics of the suffix, the current chapter treated the listed characteristics. Based on a detailed analysis of the paradigmatic patterns of Gorwaa, this work espouses the view that it is the paradigm itself which acts as a grammatical formative, within which suffixes (grammatical primitives lacking in syntactic features) are arranged. It is the structure of the paradigm itself which dictates what meanings these suffixes will be realized with. Post-syntactically, suffixes are realized with a diacritic gender feature -- in order for this gender feature to affect morphosyntactic agreement operations, Agree must be a post-syntactic operation.

Section 6.2 introduced the concept of the paradigm, and provided some motivation for the paradigm as a grammatical formative. Section 6.3 discussed the listed phenomena of the Gorwaa suffix, providing examples for each. Section 6.4 was a detailed presentation and description of the paradigms of Gorwaa. Section 6.5
6. The suffix 2: the listed phenomena

furnished a DM analysis: n is the locus of the paradigm in Gorwaa, which are realized post-Spellout as combinations of suffixes, each of which bearing its own diacritic gender feature. Crucially, this approach is valid only if Agree is a post-syntactic operation. Section 6.6 offered a brief remark on the nature of n, and summarized.

Empirically, this chapter has identified 42 different suffixes, which may be divided into three broad groups: those that may occur with only Sg agreement, those that may occur with only Pl agreement, and those that may occur with either Sg or Pl agreement. The choice of the term ‘occur with’ rather than ‘trigger’ is used advisedly, as it seems as if number agreement (seen on the adjective) comes from an element other than the noun. This will be further discussed in the following chapter. Each suffix has a stable association with a gender value -- that is, it is the nominal suffix which usually triggers the agreement on forms beyond the noun (again, exceptions will be discussed in the following chapter). These 42 suffixes enter into at least 178 groups, termed paradigms. Paradigms may be made up of two suffixes (a pair), three suffixes (a triad), or one suffix (a monad). The paradigm taken by any given stem is largely unpredictable.

Theoretically, the suffix was deconstructed into three morphosyntactic subcomponents: the classifier head (Cl), the quantity head (#), and the ‘little n’ (n). Suffixes valued for number (i.e. those which may only occur with Sg agreement and those which may only occur with Pl agreement) feature both a Cl and a #. Suffixes
6. The suffix 2: the listed phenomena

unvalued for number (i.e. those which may occur with Sg or Pl agreement), do not
feature a Cl or a #. n is the locus of the paradigm -- that is, it is realized post-
syntactically as the appropriate suffix based on a combination of its indexical value,
as well as its syntactic context. Cl, which can also be described as a functional head
whose syntactic environment determines both its phonological, as well as semantic
(i.e. individuation vs. aspect) identity. Crucially, the paradigms which merge at n are
all realized as individual suffixes at List 2 with gender features. These suffixal
gender features are morphological in nature, and do not contribute to the semantic
interpretation of the noun. In order to account for agreement phenomena, Agree
must therefore be a post-syntactic operation.
7. The linker

7.1 Introduction

This chapter is concerned with the form known in the literature (e.g. Mous 1993) as the linker, and is exemplified in (7.1).

(7.1)  

a.

\[ \text{slufítá wák} \]

\[ \text{sluf-} \quad \text{-i} \quad \text{-tá} \quad \text{wák} \]

\[ \text{STM-} \quad \text{-SFX2} \quad \text{-L} \quad \text{one} \]

\[ \text{lip} \]

\[ \text{‘one lip’} \]

b.

\[ \text{desír’eé’} \]

\[ \text{des-} \quad \text{-i} \quad \text{-r~’} \quad \text{=‘éé’} \]

\[ \text{STM-} \quad \text{-SFX2} \quad \text{-L} \quad \text{=POSS.1SG} \]

\[ \text{girl} \]

\[ \text{‘my girl’} \]

c.

\[ \text{hhawatá baabá} \]

\[ \text{hhawat-} \quad \text{-á} \quad \text{-ó} \quad \text{baaba} \]

\[ \text{STM-} \quad \text{-SFX2} \quad \text{-L} \quad \text{father} \]

\[ \text{man} \]

\[ \text{‘father’s man’} \]

d.

\[ \text{kurkí} \]

\[ \text{kur-} \quad \text{-u} \quad \text{-kú} \quad \text{=í} \]

\[ \text{STM-} \quad \text{-SFX2} \quad \text{-L} \quad \text{=DEM1} \]

\[ \text{year} \]

\[ \text{‘this year’} \]

e.

\[ \text{ayeemá uren} \]

\[ \text{ay-} \quad \text{-eem} \quad \text{-oo} \quad \text{-á} \quad \text{uren} \]

\[ \text{STM-} \quad \text{-SFX1} \quad \text{-SFX2} \quad \text{-L} \quad \text{big.N.PL} \]

\[ \text{lands} \]

\[ \text{‘big lands’} \]

f.

\[ \text{/aylá tleer} \]

\[ \text{/ayl-} \quad \text{-a’(!)} \quad \text{~’} \quad \text{tleer} \]

\[ \text{STM-} \quad \text{-SFX2} \quad \text{-L} \quad \text{long.N} \]

\[ \text{weddingsong} \]

\[ \text{‘a long wedding song’} \]

The first step in treating this suffix is a discussion of gender, building on the introduction given in §2.3.1.2. Presentation of the data follows, focusing on the
7. The linker

contexts in which the linker occurs and those in which it does not. The remainder of the chapter draws on this data, as well as some more challenging cases in order to motivate a syntactic analysis of the linker as a determiner obligatory on all nouns with reference, whose pronunciation is morphophonologically conditioned.

7.2 Characterizing the linker: gender revisited

One of the first assertions made in the initial description of gender in Gorwaa was that the system is composed of three values: (M)asculine, (F)eminine, and (N)euter (see §2.3.1.2). This is consistent with Mous’ analysis for Iraqw (1993, 2007, 2008), but differs from others, including Corbett (e.g. 2005: 126-129), and Di Garbo (2014: 119) for whom gender in these languages has two components: M and F. N gender is subsumed under Pl number marking.

Under a two-gender analysis, agreement morphology on the verb becomes a division between M and F gender, and Pl number. As such, a verb form such as qwala/amis ‘make happy’ (level pitch accent, long vowel) is M, the form qwala/amis (rising pitch accent, short vowel) is F, and the form qwala/amisiyá’ (suffix -iyá’) is Pl. This analysis breaks down, however, when adjectives are introduced, which show agreement for both gender and number. Consider the following, in which hhaysoo in (7.2)a) is N gender, and the adjective tleer shows N gender and Sg number, and hhaysusu in (7.2)b) is N gender and the adjective tlet shows N gender and Pl number. Under a two-gender analysis, both nouns are plural (as shown by the -iyá’ agreement on the verb), and so there is no principled way to justify the two different adjectival forms. In (7.2)b), it could be
argued that the adjective is somehow double-marked for Pl number, but in
(7.2)a, the adjective would have to be simultaneously marked for both Sg and Pl number -- a highly curious state of affairs indeed.

(7.2) a. *hhaysoó tleer i qwala/amisiyá'*

```
 hhays-o oo ~'~ tleer i- ∅ qwala amiis -iyá'
```

```
 STM- -Sfx2 -L long N S.3- AUX make.happy 3 -N.Pres
tail
```

"A long tail makes one happy."

b. *Hhaysusú tlet i qwala/amisiyá’*

```
 hhays-aC2 -u! ~'~ tlet i- ∅
```

```
 STM- -Sfx1 -Sfx2 -L long N Pt S.3- AUX
```

```
tail
```

make.happy 3 -N.Pres

"Long tails make one happy."

Furthermore, recent psycholinguistic work on the Cushitic language Konso (kxc: Ethiopia) investigated how native speakers process grammatical gender and number (Tsegaye 2017). Using picture-word interference and simple picture naming tasks to determine whether the equivalent of Gorwaa N gender in this language was processed as a gender value or a number value, it is argued that:

"[if N] is a value of gender in Konso, naming utterances with [N] gender should produce similar congruency effects as masculine and feminine genders. Conversely, if such effects were absent in naming utterances with [N] gender but present only in masculine and feminine gender, [N] would not be treated as a value of gender. Combined, compared to the gender-congruent condition, gender-incongruent distractor words slowed down the latencies of the target pictures significantly. Crucially, the results of the two experiments displayed that [N] gender nouns show gender congruency effects like masculine and feminine nouns. This indicates that [N] is processed in the same way as masculine and feminine genders, which supports the analysis that [...] N gender] is indeed part of the system of gender features in Konso." (22)

It is important here to note that evidence for Konso cannot be generalized to all Cushitic languages (Somali and Oromo, for example, are systems with straightforwardly M vs. F genders). However, within Cushitic, Mous (2008)
identifies what is essentially the same pattern of Konso in Bayso (bsw: Ethiopia), Dirayta (gdl: Ethiopia), Ts'amakko (tsb: Ethiopia), Rendille (rel: Kenya), Boni (bob: Kenya), as well as Iraqw, Alagwa, and Burunge. It is on the back of this experimental evidence, as well as on the basis that positing N as a gender value makes for an overall simpler analysis for Gorwaa, that this three-gender analysis will be adopted.

In addition to three gender values M, F, and N, each of these genders exhibit two internal subgenders: a second agreement pattern within the larger pattern that functions with a subset of nouns, and in a subset of environments (Corbett 1991: 163). Relevant to the current discussion, the one environment in which subgender functions is the linker itself, as displayed in (7.1). In all other environments, this distinction collapses (6.3). Mo-type subgender is instantiated by the morpheme –ó (6.1.c). Mk-type subgender is instantiated by the morpheme –kú (6.1.d). Fr-type subgender is instantiated by the morpheme –r, plus rising pitch accent (6.1.b). Ft-type subgender is instantiated by the morpheme –tá (6.1.a). Na-type subgender is instantiated by the morpheme –á (6.1.e). N∅-type subgender is instantiated by the morpheme -∅, plus rising pitch accent (6.1.f). Subgender is discussed above in.

(7.3) SUBGENDER DISTINCTION COLLAPSES IN VERB AGREEMENT
a. FT AND FR DISTINCTION COLLAPSES
   i. slufitá wák i qwala/amis
       sluf- -i  -tá  wák  i-  ∅  qwala/amis
       STM- SFX2 -L  one  S.3- AUX  make.happy.F.PRES
       lip
       ‘one lip makes one happy’
7. The linker

ii. desír wák i qwala/amís
  des- -i -r-́~ wák i- ∅ qwala/amís
  STM- -SFX2 -L one S.3- Aux make.happy.F.PRES

  ‘one girl makes one happy’

b. Mo and Mk Distinction collapses
i. hhawató wák i qwala/amíis
  hhawat- -a -ó wák i- ∅
  STM- -SFX2 -L one S.3- Aux

  qwala/amíis
  make.happy.M.PRES

  ‘one man makes one happy’

ii. kurkú wák i qwala/amíis
  kurk- -u -kú wák i- ∅
  STM- -SFX2 -L one S.3- Aux

  year
  qwala/amíis
  make.happy.M.PRES

  ‘one year makes one happy’

c. Na and N∅ Distinction collapses
i. ayeemá tsár i qwala/amisíyá'
  ay -eem -oo -á tsár i- ∅
  STM- -SFX1 -SFX2 -L two S.3- Aux

  lands
  qwala/amíis -iyá'
  make.happy. -NPRES

  ‘two lands make one happy’

ii. /aylá tsár i qwala/amisíyá'
 /ayl-`a'(I) ~́~ tsár i- ∅ qwala/amíis -iyá'
  STM- -SFX2 -L two S.3 Aux make.happy. -NPRES

  weddingsongs

  ‘two wedding songs make one happy’

Having established the gender system in Gorwaa as featuring 3 values (M, F, and N), each of which exhibit two minor values (Mo, Mk, Fr, Ft, Na, and N∅), attention may now turn fully to the linker.
7. The linker

7.3 Characterizing the linker: data presentation

This section establishes the linker on a (largely) pretheoretic basis, though some assumptions as to the structure of several larger syntactic environments are made. It will be argued that the linker is an obligatory, integral part of nouns with reference, but which goes unpronounced in certain well-defined environments. The first subsection will discuss the distribution of the linker, and the second subsection will examine some of the past analyses and the problems inherent therein. The third subsection will present a new analysis of the linker: that it is a suffix which undergoes elision when it occurs at the end of a phonological phrase.

7.3.1 Distribution of the linker

Nouns do not show the linker in the following environments:

1) unmodified subjects:

(7.4) LINKER UNPRONOUNCED ON UNMODIFIED SUBJECTS

a. **garma ina /akuút** [20160921i.23]
   
garm- -a -ó i- Ø -na /akuút
   STM- -SFX2 -L S.3- AUX -IMPRF jump.M.PST
   
   !"#$"%&'"
   The boy jumped.

b. **desi baahaa ngina táhh** [20160921i.2]
   
des- -i -r~´~ baahaár ng- a- Ø -na
   STM- -SFX2 -L hyaena.LFr A.3- P.F- AUX -
   IMPRF
   táhh
   hit.F.PST
   'The girl hit the hyaena.'

c. **na/i’i a Gorwaa**
   
   na/- -a’i ~’~ Ø Gorwaá
   STM- -SFX2 -L AUX Gorwaa.people.LNØ
   children


7. The linker

'The children are Gorwaa.'

2) unmodified direct objects in ‘second position’ (i.e. before the selector)

(7.5) LINKER UNPRONOUNCED ON UNMODIFIED DIRECT OBJECTS IN ‘SECOND POSITION’

a. \textit{desi baahaa ngina táhh} [20160921i.2]
   \begin{align*}
   \text{desi} & \quad \text{baahaa} & \quad \text{ngina} & \quad \text{táhh} \\
   \text{STM-} & \quad \text{SFX2} & \quad \text{L} & \quad \text{hyaena.LFr} \\
   \text{girl} & \quad \text{hit.F.PST} \\
   \end{align*}
   ‘The girl hit the hyaena.’

b. \textit{slee a koóm} [20150818a.1]
   \begin{align*}
   \text{slee} & \quad \text{a} & \quad \text{koóm} \\
   \text{STM-} & \quad \text{SFX2} & \quad \text{L} & \quad \text{have.1.PRES} \\
   \text{cow} & \quad \text{I have a cow.’}
   \end{align*}

3) incorporated objects

(7.6) LINKER NOT PRESENT ON INCORPORATED NOUNS

a. \textit{ngwa slee-gaás} [20161102b.52]
   \begin{align*}
   \text{ngwa} & \quad \text{slee} & \quad \text{gaás} \\
   \text{STM-} & \quad \text{SFX2} & \quad \text{kill.M.PST} \\
   \text{cow} & \quad \text{‘He killed a cow on him.’ (lit. “he cow-killed him”)}
   \end{align*}

b. \textit{[…] nguna saga-tááhh neer na/áy deti} [20131108b_20150725j.89]
   \begin{align*}
   \text{nguna} & \quad \text{saga} & \quad \text{taáhh} & \quad \text{neer} & \quad \text{na/áy} \\
   \text{STM-} & \quad \text{SFX2} & \quad \text{hit.M.PST} \\
   \text{head} & \quad \text{‘[...] he smashed him on the head with the seed pod of the} \\
   & \quad \text{<deti> tree.’ (lit. “he head-smashed him”)}
   \end{align*}
7. The linker

c.  

```
[...] asma ta ar a hee-gás [20151202d.116]
asma  t-  ð  ar  ð  hee  -ð
because  MP-  AUX see  AUX  STM-  -SFX2
person
```

gás
kill.2Sg.PRES
'because they saw you kill a man' (lit. "man-kill")

Nouns do show the linker everywhere else, some illustrative examples include:

1) modified subjects:

(7.7) LINKER PRONOUNCED ON MODIFIED SUBJECTS

```
a. garmá ùr ina /akuút  [20160921i.27]
garm-  -a  -ó  ùr  i-  ð  -na  /akuút
STM-  -SFX2 -L big.M S.3- AUX -IMPRF
boy
jump.M.PST
'The big boy jumped.'
```

```
b. desír doosl baahaa ngina táhh  [20160927l110-124.2]
des-  -i  -r~` doosl  baahaár
STM-  -SFX2 -L farm.ADN.F hyaena.LFr
girl
ng  a  ð  -na táhh
A.3-  P.F-  AUX -IMPRF hit.F.PST
'The farming girl hit the hyaena.'
```

```
c. na/i'i baahaa nga diifiyí'  [20160928c.36]
na/-  -(a)'i  ~`  baahaár  ng-  a-  ð  -a
STM-  -SFX2 -L hyaena.LFr A.3  P.F-  AUX -PRF
child
diff  -iyí'
hit.3  -3PL.SBJ
'The children who hit the hyaena.'
```

2) modified direct objects:

(7.8) LINKER PRONOUNCED ON MODIFIED DIRECT OBJECTS

```

hhawata garmá wák nguna taáhh  [20160119f.45]
hhawató  garm-  -a  -ó  wák  ng-  u-  ð  -na
man.LMo  STM-  -SFX2 -L  one  A.3-  P.M-  AUX -IMPRF
boy
```

taáhh
hit.M.PST
'The man hit one boy.'

1 In (7.7)a), the noun garma 'boy' is irregular in that the form does not show the final -o of the linker, but only the high tone. In every other respect, however, garma is a regular, (Mo) noun.
7. The linker

3) Direct objects in ‘encapsulated position’ (i.e. between the selector and the lexical verb)

(7.9) Linker pronounced on encapsulated objects

a. moro’osing i harimád kón

[20131027_20150725c.81]

moro’ó -sing i - Ø harim- -aa -r~̀~
things.LMo -DEM2 S.3- AUX STM- -SFX2 -L

kón
have.M.Pres
‘These things are just.’

b. [...] bar /aaymád sla’

[20150808a.117]

bar- Ø- a- Ø /ayim-aa -r~̀~ sla’
if- A.P- P.F- AUX STM- -SFX2 -L want.2.SUBJ

food

‘[...] if you want food.’

c. [...] tare yiikwá huw

[20151202e.124]

t- Ø -re yiikw- -a ~́~ huw
MP- AUX -CONSEC STM- -SFX2 -L bring.SUBJ

cows

‘[...] and they brought cows.’

4) Nouns which occur with topic and question morphology

(7.10) a. Linker pronounced on topic-marked nouns

i. [...] umó diroo [...] [20131027_20150725c.195]

umó d- -i -r~́~ -oo
every STM- -SFX2 -L -Top

place

‘[...] every place [...]’

ii. [...] umogó /ayitoo [...] [20131108b_20150725j.9]

umó =qo /ay- -i -tá -oo
every =EMPH STM- -SFX2 -L -Top

flower

‘[...] every flower [...]’

b. Linker pronounced on questioned nouns

i. wa gawtòô

[20150817d.225]

wa gaw- -a -tá -oo ~́~
Prep.ABL. STM- -SFX2 -L -Top ~Q~
top

‘from the top?’
7. The linker

ii. basokoð [20161109b.15]
bas- -a -kú -oo ~~
STM- -SFX2 -L -Top ~Q~
south

'south?'

7.3.2 Past analyses

The most common way to describe the linker is as construct state morphology (e.g. Mous 1993: 94). This refers to a special morphological form taken by nouns when possessed, and is characteristic of many Afro-Asiatic languages. This label handles perhaps the most frequent construction in which the linker occurs.

(7.11) LINKER PRONOUNCED IN POSSESSION CONSTRUCTIONS

a.  [...] garmá Bura  [20160927m.36]
garm- -a -ó Burá
STM- -SFX2 -L Bura.LMo
boy

'Bura's boy'

b.  [...] balaángw hee [...]  [20150727.52]
bal- -aangw -ó heé
STM- -SFX2 -L person.LMo
sorghum

' [...] a person’s sorghum [...] ’

c.  asltá baabá  [20150807.17]
asl- -a -tá baabó
STM- -SFX2 -L father.LMo
fire

'father’s fire'

Other modification constructions also seem to be comfortably covered by extending the idea of possession. Even in English, one can use the genitive to convey such concepts as noun-numeral “an army of one”, noun-pronoun “a friend of mine”, and noun-adjective “a cape of red”.

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7. The linker

However, the construct state analysis handles the remaining data less well. After all, it is hard to see how the object noun *slee* in (7.12)b below could be interpreted as somehow possessed.

(7.12) a. *aní slee* ana taáhh  

\[
\text{Pro1Sg} \quad \text{STM} \quad \text{SFX2} \quad \text{L} \quad \text{AUX} \quad \text{FREQ}
\]

*taáhh*

beat.1.PST

‘I beat the cow.’

b. *aní a sleér diíf*

\[
\text{Pro1Sg} \quad \text{S.P} \quad \text{AUX} \quad \text{STM} \quad \text{SFX2} \quad \text{L} \quad \text{PST}
\]

‘I beat the cow.’

Similarly, nouns in topicalizations or questions are equally hard to characterize as possessed.

This evidence seems adequate motivation for an attempt to characterize the linker according to a broader criterion. This will be the approach followed in the following subsection.

7.3.3 Linkers are morphophonologically conditioned

Following presentation of the data above, I propose that the linker is a morpheme which obligatorily occurs on any noun with reference, but goes unpronounced when it occurs at the right edge of a phonological phrase.

Essentially, the phenomenon is one of sandhi, analogous to *raddoppiamento sintattico* in Italian (ita: e.g. Italy) (Nespor & Vogel 1986: 165-184), *rendaku* in Japanese (jpn: Japan) (Kubozono 2005), and intonation in Bengali (ben: e.g.
7. The linker

Bangladesh) (Truckenbrodt 2003). The phonological phrases important to this particular work are those equivalent to the syntactic phrases DP and TP².

Because of this appeal to higher-level structure, examination of this claim therefore requires some comment on the clausal syntax of Gorwaa. This will be undertaken briefly below. With the shape of the Gorwaa clause properly motivated, discussion will return to the specific environments of linkers presented above.

7.3.3.1 Clausal syntax

Any in-depth description of the clausal syntax of Gorwaa lies outside the scope of this work. As such, this subsection can only establish the facts relevant to the discussion at hand. Therefore, if the argument being presented above sees linkers as going unpronounced only when at the right edge of phonological phrases (DP and/or TP), then it must be established that the noun sleē in (7.12)a is at the right edge of a phonological phrase, and that the noun sleér in (7.12)b is within a phonological phrase. The case of sleér (7.12)b will be addressed first, followed by sleē (7.12)a.

That sleér is within a phonological phrase in (7.12)b seems a simple assertion to make: as the direct object finches in §3.3 was merged as the internal argument of the verb examine in the English example, so too is sleér merged as the internal argument of the verb diiff. Unlike the English, however, the noun sleér moves to a

² Note that DP is commonly identified as a syntactic phase (e.g. Adger 2002), and, TP, while not a syntactic phase, is identified by Chomsky (2001) as a Core Functional Category. For some comment on Core Functional Categories and phasal properties, see Richards 2007.
7. The linker

position between the selector a and the verb. Looking at the functions of selectors (they may mark clause type, deixis, subject, object, aspect, mood, and adverbial case), it may be assumed that they are a form of highly inflected auxiliary (cf. Anderson, 2011). Indeed, Mous (2005: 308) identifies the selector as marking “the left hand edge of a syntactic unit”, a syntactic unit which I will interpret as TP. As such, anything between the selector and the lexical V is therefore within the TP and, furthermore, if located between the selector and the lexical V, within a phonological phrase, hence the pronunciation of the linker on nouns in this position.

A similar line of argument may be used to establish that slee in (7.12)a is not within TP. Given that this noun occurs to the left of the selector, it is therefore outside of the syntactic unit. This raises a more fundamental question: if nouns such as slee in (7.12)a are not part of the TP, then where, exactly, are they? I argue that, with the exception of nouns such as those in (7.12)b described above, all overt nominal expressions in Gorwaa are base-generated outside of the TP as adjuncts. Evidence for this claim will be provided in examining free word order, syntactically discontinuous expressions, and pervasive NP-drop: all key characteristics of non-configurationality (Jelinek 1984).

Free Word Order
The first piece of evidence that most nouns are base-generated outside of the TP is that they are not sensitive to the ordering restrictions imposed by the Uniformity of Theta Assignment Hypothesis (Baker 1988), which states that like thematic relations between items are represented by like structural
relationships. For example, in §3.3 finches, as patient of the verb examine, will always be generated as the internal argument of the verb, whereas Charles, the agent of the verb examine, will always be generated as the external argument of the verb. This results in a strict SVO word order in English. In Gorwaa, though SOV word order is common enough to be considered canonical, Gorwaa nouns may appear in any order relative to each other, and relative to the verb.

(7.13) **SOV Word Order (Canonical)**

\[
\begin{array}{c}
aní~slee~ana~taáhh \\
\text{PRO1SG}~\text{STMP}~\text{-SFX2}~\text{-L}~\text{A.P}~\text{-P.F}~\text{AUX}~\text{-IMPRF}~\text{beat.1.PST} \\
\text{cow}
\end{array}
\]

'I beat the cow.'

(7.14) **OSV Word Order**

\[
\begin{array}{c}
desírqá'~kuúng~an~sla' \\
\text{STM}~\text{-SFX2}~\text{-L}~\text{-DEM3}~\text{PRO.2SG.M} \\
\text{girl} \\
\text{A.P}~\text{-P.F}~\text{AUX}~\text{-EXPECT}~\text{want.2.Subj} \\
\text{You love that girl.}'
\end{array}
\]

(7.15) **VS Word Order**

\[
\begin{array}{c}
iná~tláy~gofaangw \\
\text{S.3}~\text{AUX}~\text{-IMPR}~\text{go.M.PST}~\text{STM}~\text{-SFX2}~\text{-L} \\
\text{buck}
\end{array}
\]

"The buck went."

(7.16) **VO Word Order**

\[
\begin{array}{c}
gwéh~a~ansiimaán~ya'eér~hatlá' \\
\text{let's.goA.P}~\text{-P.F}~\text{AUX}~\text{begin.1-1PL.PRES}~\text{STM}~\text{-SFX2}~\text{-L} \\
\text{leg}
\end{array}
\]

"Let's go -- we are starting another leg."
7. The linker

**Syntactically Discontinuous Expressions**

The second piece of evidence that most nouns are base-generated outside of the TP is that they are not sensitive to the theta criterion (Chomsky 1981), which states that all arguments must receive one and only one thematic role, and that each thematic role must be assigned to one and only one argument. Since most nouns in Gorwaa exist external to the argument structure, more than one noun phrase may be associated with a given thematic role. These are interpreted as discontinuous expressions.

(7.17) DISCONTINUOUS SUBJECT

a. [...] balaangwída’ ninaakw i deer oo /awaákw

```
balaángw -dá’ ninaákwi- Ø deer
millet.LMo -DEM4 small.M S.3- AUX be.present.M.PRES
oo /awaákw ~`~
ANA.M white.M ~EMPH~
“[...] that small white millet is there.”
```

b. bará ayawoo Endabeg gadiyeé i káhh qomásí ar Muungú

```
bará ayá -oo Endabég gadiyeér i- Ø
in land.LMo -TOP Endabég.LMo work.LFr S.3-AUX
káhh qomár -sí ar Muungú be.absent.F.PRES time.LFr -DEM2 ANA.F God.LMo
“In Endabeg the work of God isn’t here at that time.”
```

(7.18) DISCONTINUOUS OBJECT

a. daawaa nging amósí leehh ar seehhaa [...] [20151202d.171]

```ndaawáár ng- a- Ø -n amór -sí
medicine.LFr A.3- P.F- AUX -EXPECT place.LFr -DEM2
leehh ar seehhaár
fetch.M.SUBJ ANA.F tsetse.flies.LFr
“He would fetch tsetse fly medicine.”
```
7. The linker

b. *dinku'umári a tleehhaán ar /ameenaa*

\[20131027\_20150725c.56\]

dinku'umár -í ṭleéhh -aán ar /ameenaár
make.1 -1Pl.Pst A.NA.F women.LFr
“We made this women’s union.”

**Pervasive NP-dropping**

The third, and perhaps most compelling piece of evidence that most NPs are

generated outside the TP is the fact that virtually all of them are optional. As

adjuncts, most overt NPs may be omitted from a phrase in Gorwaa, with no effect

on the grammaticality of the utterance.

(7.19) **Pervasive NP-dropping**

a. No NPs dropped

\[20160119f.39\]

hhawata garma nguna taáhh
hhawató garmá ng- u- ṭaáhh
man.LMo boy.LMo A.3- P.M- Aux -Imprf hit.Pst
“The man hit the boy.”

b. Patient NP Garma dropped

\[20160119f.52\]

hhawata nguna taáhh
hhawató ng- u- ṭaáhh
man.LMo A.3- P.M- Aux -Imprf hit.Pst
“The man hit him.” (May also be interpreted as “He hit the man.”)

c. Agent NP Hhawata dropped

\[20160119f.57\]

garma nguna taáhh
garmá ng- u- ṭaáhh
boy.LMo A.3- P.M- Aux -Imprf hit.Pst
“He hit the boy.” (May also be interpreted as “The boy hit him.”)

d. Both argument NPs dropped

\[20150813.55\]

nguna taáhh
ng- ṭaáhh
A.3- P.M- Aux -Imprf hit.Pst
“He hit him.”

What is emphatically rejected by speakers is the omission of the argument-
marking in the selector. Such utterances are ungrammatical even if both overt
argument NPs are present.
7. The linker

(7.20) Argument marking in the selector is obligatory

*hhawata garma ana taáhh
hhawató  garmá  ∅  -na  taáhh
man.LMo  boy.L.Mo  Aux  -Imprf  hit.Pst
“The man hit the boy.” [Intended meaning] (Also ungrammatical
with “The boy hit the man as the intended meaning.)

In light of the data presented above, nouns which occur to the left of the selector
can be interpreted as adjunct DPs, and therefore outside of restrictions
associated with argument structure\(^3\). If these DPs are unmodified, then the
linker and the right-edge of the phonological phrase align, resulting in the non-
pronunciation of the linker.

**Summary: clausal syntax**
The data presented above may be represented as follows, where the
phonological phrases map onto the (simplified) syntactic structures, defining the
environments in which the linker is pronounced and those in which it is
unpronounced. The identity of the highest phrase will be left vague and labeled
XP. Bracketed elements marked with the subscript Φ in the phonology line are
phonological phrases.

\(^3\) Note that, though these adjunct DPs are not arguments per se, they must be associated
with the (assumedly pronominal) arguments generated within the TP, via some sort of
A-bar dependency.
7. The linker

(7.21) **SECOND POSITION UNMODIFIED DIRECT OBJECT: LINKER UNPRONOUNCED**

\[ \text{aní s} \text{le} \text{e a} \text{ná t} \text{áh} \text{h} \]

\[ \text{aní sl ee r} \sim \sim \emptyset \quad \text{a} \quad \emptyset \quad \text{na t} \text{áh} \text{h} \]

Pro1Sg **cow**  A.P.  P.F  Aux -Imprf  beat.1.Pst

"I beat the cow."

\[
\begin{array}{c}
\text{XP} \\
\text{DP} \\
\text{aní} \\
\text{DP} \\
\text{sl} \\
\text{ee} \\
\text{r} \sim \sim \emptyset \\
\text{TP} \\
\text{ana t} \text{áh} \text{h} \\
\end{array}
\]

Syntax: \([\text{DP aní}] [\text{DP sl} \text{eér}] [\text{TP ana t} \text{áh} \text{h}]\)

Phonology: \([\emptyset \text{ aní}] [\emptyset \text{ sl} \text{eér}] [\emptyset \text{ ana t} \text{áh} \text{h}]\)

\[ r \sim \sim \rightarrow \emptyset \]

(7.22) **ENCAPSULATED DIRECT OBJECT: LINKER PRONOUNCED**

\[ \text{aní a s} \text{le} \text{ér di} \text{íf} \]

\[ \text{aní} \quad \emptyset \quad \emptyset \quad \text{sl} \text{ee r} \sim \sim \text{ di} \text{íf} \]

Pro1Sg  A.P.  Aux **cow**  beat.1Sg,Pst

'I beat the cow.'

\[
\begin{array}{c}
\text{XP} \\
\text{DP} \\
\text{aní} \\
\text{TP} \\
\text{sl} \\
\text{ee} \\
\text{r} \sim \sim \text{ di} \text{íf} \\
\end{array}
\]

Syntax: \([\text{DP aní}] [\text{TP a sl} \text{eér di} \text{íf}]\)

Phonology: \([\emptyset \text{ aní}] [\emptyset \text{ a sl} \text{eér di} \text{íf}]\)

The other clausal environment, shown above (7.6) but not yet discussed, is the incorporated object construction. This will be treated in the analysis §7.4.1.1.

### 7.3.3.2 Summary: linkers as morphophonologically conditioned

The remainder of environments can be handled on the level of the DP, the mechanism being essentially the same. When the linker occurs at the right edge of the phonological phrase, it is unpronounced. Elsewhere, the linker is pronounced.
7. The linker

(7.23) **UNMODIFIED NOUN: LINKER UNPRONOUNCED**

\[
\text{na/i'i}
\]

na/ (a)'i ~´~

STM SFX L

children

“children”

\[
\text{DP}
\]

\[
\text{na/i'i}
\]

Syntax: [DP na/i'i]

Phonology: [Φ na/i'i]

~´~ → Ø

(7.24) **MODIFIED NOUN: LINKER PRONOUNCED**

\[
\text{na/i'i} \text{ baahaa nga diifiyi'}
\]

na/ (a)'i ~´~ baahaa ng- a- Ø diif -iyi'

STM SFX L

children hyaena A.3- P.F Aux hit.3 -3Pl.Subj

“The children who hit the hyaena.”

\[
\text{DP}
\]

\[
\text{na/i'i}
\]

\[
\text{CP}
\]

\[
\text{baahaa nga diifiyi'}
\]

Syntax: [DP na/i'i [CP baahaa nga diifiyi']] 

Phonology: [Φ na/i'i baahaa nga diifiyi']

(7.25) **TOPIC AND QUESTION MORPHOLOGY: LINKER PRONOUNCED**

\[
\text{basokoô}
\]

bas a kú-oo ~´~

STM SFX L

south ~Top ~Q~

“south?”

\[
\text{DP}
\]

\[
\text{D'}
\]

\[
\text{basakú}
\]

\[
\text{FP}
\]

\[
\text{-oo}
\]

Syntax: [DP basakú [FP -oô] ] 

Phonology: [Φ basokoô]
7. The linker

The syntactic structures rendered above are rudimentary, but give a basic idea of how the mechanism of realizing the linker works. What follows is a closer examination of the DP -- more specifically, the syntactic identity of the linker.

7.4 Syntactic identity of the linker: the analysis

The presentation above establishes linkers as obligatory suffixes for nouns with reference which occur in 6 different forms, depending on the subgender of the noun. The pronunciation of linkers is morphophonologically conditioned: they are not pronounced when their occurrence coincides with the right edge of a phonological phrase, and they are pronounced elsewhere.

This subsection establishes the syntactic identity of the linker, and is divided into three subsections. The first subsection establishes the linker as agreement morphology on D. This allows a satisfactory description of incorporated objects. The second subsection treats cases of mismatch between the m-gender of the nominal suffix and the form of the linker. The third subsection extends this treatment to explain number valuation of general number nouns.

7.4.1 The linker as D

Determiners in Gorwaa are considerably different from determiners in English. Possessives, demonstratives, and indefinites aside -- all of which could be analyzed in other ways, such as the category Adj or N (c.f. Leu 2008) -- the only element which could be taken as a determiner is possibly the quantifier umó. Otherwise, semantically significant determiners such as the and a do not exist. Following the assertion that all grammars mediate reference through the
7. The linker

functional projection D (Borer 2005a: 68), I argue that the linker is the instantiation of D in Gorwaa. Specifically, linkers are agreement morphology, which agree with the gender value of the specific SFX2 realized post-Spellout at n. Assuming that Agree takes place post-syntactically (see §6.5.5), the (abridged) derivation of slufitá ‘lip’ proceeds as in (7.26). Let √119 represent the root common to the forms slufi ‘lip’ and sluuf ‘to praise’. Let n150 represent the paradigm -(Ft) | -iya’ (N∅), represented in the pair slufi ‘lip’ | slufiya’ ‘lips’.

(7.26) DERIVATION OF SLUFITÁ (VERSION 1)

a. Step 1: Merge of D (syntactic object α) and nP

```
DP
√119-n150-D
[cat [D]]

nP
√119-n150

[cat [n]]
[cat [n]]
[cat [n]]

√119
 cate [n]  
infl [φ]
 sel [< n >]

```

b. Step 2: (Postsyntactic) valuation of forms in List 2 and List 3

A: Valuation of √119

<table>
<thead>
<tr>
<th>Phonological Component</th>
<th>Semantic Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Root Input</td>
<td>Syntactic Context</td>
</tr>
<tr>
<td>√119</td>
<td>/n150</td>
</tr>
<tr>
<td>/V</td>
<td>[sluf]</td>
</tr>
</tbody>
</table>

B: Valuation of n150

<table>
<thead>
<tr>
<th>Phonological Component</th>
<th>Semantic Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Root Input</td>
<td>Syntactic Context</td>
</tr>
<tr>
<td>n150</td>
<td>/Pl</td>
</tr>
<tr>
<td>/elsewhere</td>
<td>[i][Pl]</td>
</tr>
<tr>
<td>n150</td>
<td>/elsewhere</td>
</tr>
</tbody>
</table>
7. The linker

c. Step 3: Realisation of diacritic feature [Ft] in the agreement domain
   (i.e. the current syntactic structure)

   \[
   \begin{array}{c}
   \text{DP} \\
   \sqrt{119} \text{-} n_{150} \text{-} D \\
   \text{[cat [D]]} \\
   \text{nP} \\
   \sqrt{119} \text{-} n_{150} \\
   \text{[cat [n]]} \\
   \text{[cat [n]]} \\
   \text{infl} [\varphi [Ft]] \\
   \text{Case [GEN]} \\
   \text{sel [< n >]} \\
   \sqrt{119} \text{-} n_{150} \\
   \text{cat [n]} \\
   \text{infl} [\emptyset] \\
   \text{sel [< \sqrt{>}]} \\
   \sqrt{119} \end{array}
   \]


d. Step 4: Agree
   D c-commands \(n_{150}\) valued with the diacritic gender feature [Ft],
   and D has an unvalued gender feature. D agrees with \(n_{150}\), and obtains the
   gender feature [Ft].

   D \(\left\{\begin{array}{c}
   \text{cat [D]} \\
   \text{infl} [\varphi [Ft]] \\
   \text{Case [GEN]} \\
   \text{sel [< n >]} \\
   \end{array}\right.\)


e. Step 5: Valuation of D

<table>
<thead>
<tr>
<th>Phonological Component</th>
<th>Semantic Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input</td>
<td>Value</td>
</tr>
<tr>
<td>Syntactic Context</td>
<td></td>
</tr>
<tr>
<td>Value</td>
<td>Referring expression</td>
</tr>
<tr>
<td>D</td>
<td>ó</td>
</tr>
<tr>
<td>/[Mo]</td>
<td></td>
</tr>
<tr>
<td>/[Mk]</td>
<td>kú</td>
</tr>
<tr>
<td>/[Fr]</td>
<td>r~´~</td>
</tr>
<tr>
<td>/[Ft]</td>
<td>tá</td>
</tr>
<tr>
<td>/[N∅]</td>
<td><del>´</del></td>
</tr>
<tr>
<td>/[Na]</td>
<td>á</td>
</tr>
</tbody>
</table>

This analysis now allows the incorporation construction left undescribed above to be properly addressed.
7. The linker

7.4.1.1 Incorporation construction

Incorporation constructions were exemplified in (7.6), and feature a noun between the selector and the lexical verb with no linker morphology.

(7.27) \( uga \ tsir/i-\text{gaás} \)

\[
\begin{array}{cccccc}
\text{A.P.-} & \text{P.M.-} & \text{Aux} & \text{Prf} & \text{STM-} & \text{SFX2} \\
\hline
0 & 0 & -\text{ga} & \text{tsir/-} & i & \text{gaás} \\
\end{array}
\]

"I killed a bird on him." (lit. “I bird-killed him”)

Note that these constructions are essentially different from those in which the direct object is ‘encapsulated’ (i.e. is located between the selector and the lexical verb, but does occur with linker morphology). An example is given below.

(7.28) \( aní a \ sleér \ diíf \)

\[
\begin{array}{cccccc}
\text{Pro1Sg} & \text{A.P.-} & \text{P.F.-} & \text{Aux} & \text{Prf} & \text{STM-} \\
\hline
0 & a & 0 & -\text{g} & \text{sl-} & \text{ee} \\
\end{array}
\]

"I beat the cow."

Semantically, the noun \( tsir/i \) of the incorporation construction does not function as an argument of the verb. If the gender of the object in the selector is switched to match that of the bird (thus \(/u/ \text{P.M} \) to \(/a/ \text{P.F} \), the bird will still not be the grammatical object of the verb \( \text{kill} \).

(7.29) \( a\text{g}a \ tsir/i-\text{gaás} \)

\[
\begin{array}{cccccc}
\text{A.P.-} & \text{P.F.-} & \text{Aux} & \text{Prf} & \text{STM-} & \text{SFX2} \\
\hline
0 & a & 0 & -\text{ga} & \text{tsir/-} & i \\
\end{array}
\]

"I killed a bird on her." (lit. “I bird-killed her”)

This type of noun incorporation is best characterized as Mithun’s “Type II Noun Incorporation” (1984: 856).

Crucially, if the incorporated noun here can never be interpreted as an argument, and if nouns can only be arguments when headed by a D (Borer 2005a: 67), then
it may be assumed that nouns in these constructions lack D altogether, and will therefore lack linker morphology.

7.4.1.2 Summary: the linker as D

This subsection establishes the linker as the instantiation of D in Gorwaa. It was argued that linkers are agreement morphology, agreeing with the (postsyntactic and diacritic) m-gender generated on the suffixes after their valuation in List 2. However, this generalization does not hold in all cases, and must therefore be revised. This will be undertaken in the next subsection.

7.4.2 The R argument

In the last chapter, it was established that postsyntactic m-gender serves as a trigger for gender agreement on forms beyond the noun. Because m-gender is generated in List 2, nouns that are semantically genderless (i.e. not inherently male or female) trigger gender agreement (7.30), and nouns that might have biological gender (e.g. animals) may trigger agreement contrary to this biological gender (7.31).

(7.30) SEMANTICALLY GENDERLESS NOUNS TRIGGERING GENDER AGREEMENT
\[
\text{saankaa } \text{ka } \text{yaariir} \\
\text{saank- } \text{aa } -r~\sim \text{ yaariir} \\
\text{STM- } \text{-Sfx2 -L} \text{ much} \\
\text{chyme}
\]
‘There is much chyme.’

(7.31) NOUNS WITH BIOLOGICAL GENDER TRIGGERING MISMATCHING AGREEMENT
\[
\text{tsoyó } \text{ku } \text{úr} \\
\text{tsoy- } \text{-ó } \text{-ó } \text{ ku } \text{ úr} \\
\text{STM- } \text{-Sfx2 -L} \text{ CopAdj.M } \text{ big.M} \\
\text{dikdik}
\]
‘the dikdik is big’ (possibly a female dikdik)
However, the concept of m-gender as the sole trigger for gender agreement is complicated by patterns present in a subset of nouns. Compare the personal name forms in (7.32) with the common nouns in (7.30) and (7.31).

(7.32)

a. **Saanka ku úr**
   
   *saank* - *aa* - *ó* \( \text{ku} \) \( \text{úr} \)
   
   *STM = -SFX2 -L* \( \text{CopAdj.M big.M} \)
   
   Saanka

   ‘Saanka is big.’ (where Saanka is a man)

b. **Saanka ka ur**
   
   *saank* - *aa* \( \text{-r'} \) \( \text{ka} \) \( \text{ur} \)
   
   *STM = -SFX2 -L* \( \text{CopAdj.F big.F} \)
   
   Saanka

   ‘Saanka is big.’ (where Saanka is a woman)

c. **Tsoyo ku úr**
   
   *tsoy* - *ó* - *ó* \( \text{ku} \) \( \text{úr} \)
   
   *STM = -SFX2 -L* \( \text{CopAdj.M big.M} \)
   
   Tsoyo

   ‘Tsoyo is big’ (where Tsoyo is a man)

d. **Tsoyo ka ur**
   
   *tsoy* - *ó* \( \text{-r'} \) \( \text{ka} \) \( \text{ur} \)
   
   *STM = -SFX2 -L* \( \text{CopAdj.F big.F} \)
   
   Tsoyo

   ‘Tsoyo is big’ (where Tsoyo is a woman)

Agreement patterns for personal names will be used as support for the existence of a referential pronoun (R) as the external argument of nP. Before this, however, a more detailed examination of Gorwaa personal names is required.

### 7.4.2.1 Personal names

Personal names in Gorwaa (discussed briefly in §2.3.1.3) may be divided into two broad groups: forms of Gorwaa origin, and forms with no clear Gorwaa origin (of this second group, many borrowings from Datooga, Rangi, and Swahili have been identified). This discussion will focus on the former group, arguing
that these proper names are not stored as lexical entries in List 1, but are formed from underspecified roots in exactly the same manner as common nouns.

As established above, many names in Gorwaa can be used for both women and men, triggering different agreement patterns depending on the biological gender of the referent. Therefore, the common noun *aweε* 'bulls' triggers feminine agreement, hence *aweεr Yaya* 'Yaya's bulls'. The proper name may take the form *Aweεr Yaya* 'Awee, daughter of Yaya', or *Aweε Yaya* 'Awee, son of Yaya'.

One way to account for the agreement patterns in (7.32), versus those in (7.30) and (7.31), is to assume that proper names are stored in List 1, predetermined for gender. As such, while *saankan* in (7.30) is stored in List 1 as one unspecified root (for the portion realized as *saank-*) only valued for gender following merge with the nominal paradigm -*aa* (Fr) | -*u* (N∅) at n and postsyntactic valuation (in this case as -*aa* (Fr)), *Saankan* in (7.32)a) is stored as *Saankan* (Mo) in List 1, and *Saankan* in (7.32)b) is stored as *Saankan* (Fr).

This is undesirable for several reasons. First of all, it results in a large number lexical proper name entries that are otherwise identical to their common noun counterparts. In the case of *saank- -aa* (Fr) | *Saankan* ♂ | *Saankan* ♀ above, the number of entries in List 1 have been multiplied by three.

Second, *all* proper names can be deconstructed in a manner that is regular, principled, and largely consistent with the system developed for common nouns. This is illustrated in (7.33).
7. The linker

(7.33) a. PROPER NAME GEENÁY

i. geenaangw

geen-         -aangw    -ó
STM-          -Sfx2     -L

falcons

‘falcon’

ii. geenaawee

geen-         -aw      -ee    -r~́~
STM-          -Sfx2    -Sfx1   -L

falcons

‘falcons’

iii. Geenáy

geen-         -áy     -ó
STM-          -Sfx2    -L

“Geenáy” (name given to a boy, perhaps after a falcon is seen)

iv. Valuation (let: $\sqrt{176}$ = the root common to (i-iii), $n_{224} =$ the paradigm -aangw | -aawee, and $n_{570} =$ the paradigm -ay)

<table>
<thead>
<tr>
<th>Phonological Component</th>
<th>Semantic Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Root Input</td>
<td>Syntactic Context</td>
</tr>
<tr>
<td>$\sqrt{176}$</td>
<td>elsewhere</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

b. PROPER NAME AMSÍ

i. amsí

ams-    -(a)i   ~́~
STM-    -Sfx2   -L

‘night’

ii. Amsí

ams-    -(a)i    -r~́~
STM-    -Sfx2    -L

Amsí

‘Amsí’ (name given to a boy or girl, usually born at night)
iii. Valuation (let: $\sqrt{039}$ = the root common to (i-ii), $n_{964}$ = the paradigm -(a)'i, and $n_{221}$ = the paradigm -(Fr))

<table>
<thead>
<tr>
<th>Phonological Component</th>
<th>Semantic Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Root Input</td>
<td>Syntactic Context</td>
</tr>
<tr>
<td>$\sqrt{039}$</td>
<td>elsewhere</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Third, this stipulation fails to recognize the basic pattern present in gender agreement mismatch with proper names: when a name refers to a female, it always triggers feminine agreement; when a name refers to a male, it always triggers masculine agreement. If it is accepted that proper names make agreement with a real world entity, then stipulation of gender in List 1 is unnecessary.

### 7.4.2.2 Gender mismatch and R

Cases of mismatch between suffixal m-gender and semantic gender of the referent can be described in terms of override: when semantic gender and m-gender have different values, it is semantic gender that triggers agreement. M-gender triggers agreement elsewhere. All possible configurations are given in Table 7.1.
7. The linker

Table 7.1: Gender mismatch

<table>
<thead>
<tr>
<th>M-GENDER</th>
<th>SEMANTIC GENDER</th>
<th>GENDER FOR AGREEMENT</th>
<th>EXAMPLE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>X</td>
<td>X</td>
<td>haree ka ur woman CopAdj.F big.F “The woman is big”</td>
<td>A noun with m-gender F is semantically female</td>
</tr>
<tr>
<td>X</td>
<td>Y</td>
<td>Y</td>
<td>Saankaa ku ur Saankaa CopAdj.M big.M “Saanka is big.”</td>
<td>A noun with m-gender F is semantically male</td>
</tr>
<tr>
<td>X</td>
<td>0</td>
<td>X</td>
<td>qariyandi ka ur k.o.gourd CopAdj.F big.F “The gourd is big.”</td>
<td>A noun with m-gender F has no semantic gender</td>
</tr>
</tbody>
</table>

This mismatch dynamic can be accounted for by positing a null referential pronoun (R) as the external argument of nP, as proposed by Williams (1981), Higginbotham (1985), and Grimshaw (1990). Generated in the specifier of nP, this pronoun is a bundle of interpretable features only, and represents the referent of the noun. Beginning with arguably the most straightforward configuration -- a case in which the noun has m-gender but no semantic gender -- the derivation of the noun slufi can be revised as follows. Once again, let √119 represent the root common to the forms slufi ‘lip’ and slufúf ‘to praise’. Let n₁₅₀ represent the paradigm slufi ‘lip’ | slufiya ‘lips’.
7. The linker

(7.34) DERIVATION OF SLUFITÁ (REVISED FROM (7.26))

a) Step 1: Merge of nP (syntactic object α) and pro R

```
NP
  √119-n₁₅₀-pro
   [cat [n]]

n' pro
  √119-n₁₅₀
   [cat [n]]
     [infl [Ø]]
     [sel [Ø]]

√119 n₁₅₀
   [cat [n]]
     [infl [Ø]]
     [sel [< √>]]
```

b) Step 2: Merge of D (syntactic object α) and nP

```
DP
  √119-n₁₅₀-pro-D
   [cat [D]]

NP
  √119-n₁₅₀-pro
   [cat [n]]
     [infl [Ø]]
     [sel [Case [GEN]]]

D
  √119
   [cat [n]]
     [infl [Ø]]
     [sel [< n >]]

n' pro
  √119-n₁₅₀
   [cat [n]]
     [infl [Ø]]
     [sel [Ø]]

√119 n₁₅₀
   [cat [n]]
     [infl [Ø]]
     [sel [< √>]]
```
7. The linker

c) Step 3: (Postsyntactic) valuation of forms in List 2 and List 3

<table>
<thead>
<tr>
<th>A: Valuation of $\sqrt{119}$</th>
<th>Semantic Component</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phonological Component</strong></td>
<td><strong>Value</strong></td>
</tr>
<tr>
<td>Root Input</td>
<td>Syntactic Context</td>
</tr>
<tr>
<td>$\sqrt{119}$</td>
<td>$/n_{150}$</td>
</tr>
<tr>
<td>$/V$</td>
<td>$/n_{150}$</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B: Valuation of $n_{150}$</th>
<th>Semantic Component</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phonological Component</strong></td>
<td><strong>Value</strong></td>
</tr>
<tr>
<td>Root Input</td>
<td>Syntactic Context</td>
</tr>
<tr>
<td>$n_{150}$</td>
<td>$/Pl$</td>
</tr>
<tr>
<td>$/elsewhere$</td>
<td>$n_{150}$</td>
</tr>
</tbody>
</table>

|                         | **Value** |
|                         | $/Pl$     | elsewhere |

|                         | **Value** |
|                         | $n_{150}$ | general   |

Step 4: Realisation of diacritic feature [Ft] in the agreement domain (i.e. the current syntactic structure)

```
DP
   √119-n_{150}-pro-D
      [cat [D]]
        nP
         D
        √119-n_{150}-pro
          [cat [n]]
            infl [φ [ ] ]
              Case [GEN]
                sel [< n >]
          n'
            pro
          √119-n_{150}
            [cat [n]]
              cat [N]
                infl [Ø]
                  sel [Ø]
        √119
          [cat [V]]
            cat [n]
              infl [Ft]
                sel [< √>]
```
7. The linker

e) Step 5: Agree
   i) D c-commands both pro and n₁₅₀. The referent of pro has no
   semantic gender, so pro is not valued for gender. n₁₅₀ is valued with the
   diacritic gender feature [Ft], and D has an unvalued number feature. D
   agrees with n₁₅₀, and obtains the gender feature [Ft].

\[
D \left\{ \begin{array}{c}
\text{cat} [D] \\
\varphi [F t] \\
\text{Case} [G E N] \\
\text{sel} [<n>] \\
\end{array} \right.
\]

f) Step 6: Valuation of D

<table>
<thead>
<tr>
<th>Phonological Component</th>
<th>Semantic Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input</td>
<td>Syntactic Context</td>
</tr>
<tr>
<td>--------</td>
<td>-------------------</td>
</tr>
<tr>
<td>D</td>
<td>[Mo]</td>
</tr>
<tr>
<td></td>
<td>[Mk]</td>
</tr>
<tr>
<td>D</td>
<td>[Fr]</td>
</tr>
<tr>
<td></td>
<td>[Ft]</td>
</tr>
<tr>
<td>D</td>
<td>[N∅]</td>
</tr>
<tr>
<td></td>
<td>[Na]</td>
</tr>
</tbody>
</table>

The derivation of (7.34) provides an introduction to the mechanism, but given
that pro was not valued for gender, no mismatch occurred. The role of the
syntactic structure becomes sharper in a case such as Tsoyór, when the m-gender
of the noun has a value X, and the semantic gender of the referent has a different
value Y. It is in these cases when there are two possible goals (pro and the
paradigm n) from which the probe (D) may obtain its features. In this case, pro
must be able to serve as an intervener, effectively blocking agreement between D
and n from taking place. The relevant generalization for structures capable of
being interveners stipulates that the specifier of a given head does not intervene
in probe-goal relations targeting the complement of the same head. This is
stated in another way as the Equidistance Condition.

Equidistance Condition (Chomsky 1995, 2000; Collins 1997)

*If α and β are in the minimal search domain of the same head, then α
and β never intervene in relations targeting one another.*
7. The linker

Reexamining the relationship of pro and the paradigm n in relation to the search domain of D (see Figure 7.1), it is clear that pro is the specifier of n, but that the probe-goal relation in question (i.e. agree between D and n) does not involve the complement of n (which is \(\sqrt{\phantom{n}}\)), but involves n itself. As such, the Equidistance Condition does not apply, and pro may serve as an intervener to agreement operations of D targeting the paradigm n.

**Figure 7.1: Full structure of a general number noun**

```
DP
  /\  
nP  D
   /\ 
'n'  pro
  /\  \n\  \n'n'  n
```

Derivation of Tsoyör will therefore proceed as in (7.35) (where, for concision, the derivation picks up from the equivalent of Step 4, in (7.34)). Let \(\sqrt{834}\) represent the root common to the forms Tsoyo ‘personal name’ | tsoyo (Mo) ‘dikdik’ | tsoyeema’ (N∅) ‘dikdiks’, and \(n_{178}\) represent the paradigm of the SFX2 pair -o (Mo) | -eema’ (N∅).
7. The linker

(7.35) **Derivation of Tsoyör**

a) Step 4: Realisation of diacritic feature [Mo] in the agreement domain (i.e. the current syntactic structure). Note also the F feature on pro.

```
DP
√834-n₁₇₈-pro-D
[cat [D]]

nP
D
√834-n₁₇₈-pro
[cat [n]]

[cat [n]]

[cat [n]]

[cat [n]]

[cat [n]]

√834
n₁₇₈
[cat [v]]

[cat [v]]

√834
n₁₇₈
[cat [v]]

[cat [v]]
```

b) Step 5: Agree

i) D c-commands both pro and n₁₇₈. The referent of pro has semantic gender F, so pro is valued for gender. n₁₇₈ is valued with the diacritic gender feature [Mo]. D has an unvalued number feature. D probes for a gender feature and is valued by pro first. As such D agrees with pro, and obtains the gender feature [Fr]. pro is an intervener between D and n₁₇₈, so D cannot be valued as [Mo].

```
D
```
7. The linker

c) Step 6: Valuation of D

<table>
<thead>
<tr>
<th>Phonological Component</th>
<th>Semantic Component</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Input</strong></td>
<td><strong>Syntactic Context</strong></td>
</tr>
<tr>
<td>D</td>
<td>/[Mo]</td>
</tr>
<tr>
<td></td>
<td>/[Mk]</td>
</tr>
<tr>
<td></td>
<td>/[Fr]</td>
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<tr>
<td></td>
<td>/[Ft]</td>
</tr>
<tr>
<td></td>
<td>/[N∅]</td>
</tr>
<tr>
<td></td>
<td>/[Na]</td>
</tr>
</tbody>
</table>

7.4.2.3 Summary: the R argument

This subsection has addressed cases of mismatch between m-gender, a property of the suffix, and semantic gender, a property of the null referential pronoun. pro is structurally an intervener, and blocks agreement between D and n. pro may only act as an intervener for gender agreement when it bears a semantic gender feature and, as such, when a referent does not have semantic gender, agreement with m-gender results.

When, exactly, a given noun will bear a semantic gender feature seems largely down to how salient a given referent is in Gorwaa. As such, most humans are assigned gender in R, as well as common domestic animals, such as sheep (ram vs. ewe), cattle (bull vs. cow), and chickens (rooster vs. hen). Humans considered somehow deficient are not assigned gender in R (hence daktani ‘fool’, always shows agreement for Fr (m-gender)).

7.4.3 Extending R to number

Following the establishment of the null referential pronoun pro as an important trigger of gender agreement, its function may be extended to also account for number: specifically, cases of number agreement on nouns of general number.
As posited above, the referential pronoun may only bear features that are interpretable, i.e. relevant to the semantic interpretation of the noun. This was why nouns lacking semantic gender (such as ‘chyme’ in (5.139), ‘gourd’ in Table 6.1, and ‘lip’ in (7.34)) show agreement for suffixal m-gender. Essentially, gender is only sometimes interpretable (i.e. when it is a salient biological feature of a noun). Number, on the other hand, is always interpretable, and is therefore always valued on pro. This results in general number forms (unvalued for number) showing agreement on adjectives for either Sg or Pl number. Returning to the form qoonqál ‘crowned crane’, a revised derivation would appear as in (7.36).

(7.36) The General Number qoonqál (Revised for Sg Number Agreement)

a) Step 4: Realisation of diacritic feature [Mo] in the agreement domain (i.e. the current syntactic structure). Note also the Sg feature on pro.
7. The linker

b) Step 5: Agree
i) D c-commands both pro and $\emptyset^{[Mo]}$ in the trace of $nP$ ($<nP>$), the referent of pro has no semantic gender, so pro is unvalued for gender, and can therefore not act as an intervener in gender agreement. $\emptyset^{[Mo]}$ has a suffixal gender feature $[Mo]$. D probes for a gender feature and is valued by $\emptyset^{[Mo]}$. As such D agrees with $\emptyset^{[Mo]}$, and obtains the gender feature $[Mo]$.

$$D \begin{cases} \text{cat} [D] \\ \text{infl} \begin{cases} \varphi [\text{Mo}] \\ \text{Case} [\text{GEN}] \\ \text{sel} [<n>] \end{cases} \end{cases}$$

ii) D c-commands pro, the referent of pro has semantic number Sg, so pro is valued for number. $nP$ is configured for a general number noun, and therefore does not bear a number feature. D probes for a number feature and is valued by pro. As such D agrees with pro, and obtains the number feature Sg.

$$D \begin{cases} \text{cat} [D] \\ \text{infl} \begin{cases} \varphi [3, \text{Mo}, \text{Sg]} \\ \text{Case} [\text{GEN}] \\ \text{sel} [<n>] \end{cases} \end{cases}$$

iii) D has an unvalued person feature, and probes all possible goals in the structure for person features. No possible goals contain a person feature. *Agree* fails, but the structure is licit because *probe* has succeeded (Preminger 2010). Lack of person features on D will be interpreted as 3rd Person (see Harley & Ritter 2002).

c) Step 6: Valuation of D

<table>
<thead>
<tr>
<th>Phonological Component</th>
<th>Semantic Component</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Input</strong></td>
<td><strong>Value</strong></td>
</tr>
<tr>
<td>D</td>
<td>$\emptyset$</td>
</tr>
<tr>
<td>/[Mo]</td>
<td>ó</td>
</tr>
<tr>
<td>/[Mk]</td>
<td>kú</td>
</tr>
<tr>
<td>/[Fr]</td>
<td>r<del>́</del></td>
</tr>
<tr>
<td>/[Ft]</td>
<td>tá</td>
</tr>
<tr>
<td>/[N∅]</td>
<td><del>́</del></td>
</tr>
<tr>
<td>/[Na]</td>
<td>á</td>
</tr>
</tbody>
</table>

Note that, in this example, the noun *qoonqál* refers to 'a (kind of) crowned crane', hence the Sg feature on pro. If *qoonqál* were instead to refer to ‘(kinds of)
7. The linker

crowned crane’, the feature on pro would be Pl. The operation would proceed in exactly the same way.

Critically, number features (Sg or Pl) play no role in the ‘syntactic context’ column for the valuation of D. As such, though D bears number features, they are not instantiated phonologically on D. Because of this, if no adjective is present (to explicitly show either Sg or Pl agreement), then the number value of the noun must either be determined by the wider context of the utterance, or simply interpreted as unimportant.

7.5 Remarks and summary

This chapter treated the final element of the Gorwaa noun: the linker. Subsection 7.5.1 turns to a slightly different treatment of gender, developed in Kramer (2014), and evaluates this approach in comparison to the one proposed herein. Section 7.5.2 summarizes.

7.5.1 Remarks on Kramer (2014)

Kramer (2014) takes a similar approach to the current work, in that her proposed analysis attempts to represent biological sex syntactically. Lexical approaches (e.g. Harris 1991 for Spanish, Ferrari-Bridgers 2007 for Italian, and Alexiadou 2004 for Spanish, Italian, Hebrew, and Greek) see all nouns as listed in the lexicon, and either specified for gender or unspecified. Unspecified nouns receive gender via a lexical rule which depends on the biological sex of their discourse referent. For reasons mentioned above (c.f. Acquaviva 2009), and given that "nearly half of the languages with gender surveyed by Corbett (2011)
have ‘semantic’ gender assignment systems based primarily or predominantly on biological sex [...]]” (6), Kramer argues that gender must be added to roots syntactically, and instantiated as a feature of a head or some syntactic projection. The proposal is that both biological sex and grammatical gender features are located on the same nominalizing head (equivalent to what has been established in this work as the categorizing head n). For Amharic -- which possesses two gender values: M and F -- this results in four types of n: two of which bear interpretable gender features (n i[F] and n i[M]), and two whose gender features are uninterpretable (n u[F] and n u[M]).4 Interpretable gender features refer to the biological sex of the noun’s referent, and uninterpretable gender features refer to grammatical gender. As such, the Amharic noun wänbär ‘chair’ (M), is represented as an acategorial root, dominated by the categorizing head n of the kind u[M]. Kramer’s proposed structure is given in (7.37) below, along with an additional projection, meant to show D, which agrees with n in gender (-u if M, and -wa if F). The stepwise process, not given in Kramer (2014) is given here to be consistent with the rest of the current work.

(7.37) Amharic noun wänbär ‘chair’ (M), as per Kramer (2014)

a. Merge of D (syntactic object α) and nP

```
DP
   nP       D
   √wänbär n u[M]
[φ []]
```

b. Agree

i) D c-commands n. n has a gender feature u[M]. D probes for a gender feature and is valued by n u[M]. As such D agrees with u[M], and obtains the gender feature [M].

4 Actually, Kramer’s system sees the gender values as privative. Therefore, [M] is represented as [-F], or as a default. This will not affect the examination at hand.
7. The linker

\[
D = \begin{cases} 
\text{cat} [D] \\
\phi [\mathbf{M}] \\
\text{Case} [\text{GEN}] \\
\text{sel} [< n >]
\end{cases}
\]

c. Valuation of D

<table>
<thead>
<tr>
<th>Phonological Component</th>
<th>Semantic Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input</td>
<td>Syntactic Context</td>
</tr>
<tr>
<td>D</td>
<td>/[M]</td>
</tr>
<tr>
<td>/[F]</td>
<td>-\textit{wa}</td>
</tr>
</tbody>
</table>

In a more complex example, the Amharic noun \textit{ayt}'mouse' is F in gender when its biological sex is unknown (or unimportant), and therefore is a root dominated by the head \textit{n \textit{u}[F]}. If biologically female, the noun \textit{ayt}'female mouse' is F in gender: a root dominated by the head \textit{n \textit{i}[F]}. If biologically male, the noun \textit{ayt}'male mouse' is M in gender: a root dominated by the head \textit{n \textit{i}[M]}. Kramer's proposed structures are given in (7.38) below.

(7.38) Three forms of the Amharic noun \textit{ayt}', as per Kramer (2014)

a. \textit{AYT}'mouse' (F)

i) Merge of D (syntactic object \textit{α}) and nP

\[
\text{DP} \\
\text{nP} \quad D \\
\sqrt{\text{ayt}'} \quad \text{n \textit{u}[F]}
\]

ii) Agree

i) D c-commands \textit{n}. \textit{n} has a gender feature \textit{u}[F]. D probes for a gender feature and is valued by \textit{n \textit{u}[F]}. As such D agrees with \textit{u}[F], and obtains the gender feature \textit{[F]}.

\[
D = \begin{cases} 
\text{cat} [D] \\
\phi [\mathbf{F}] \\
\text{Case} [\text{GEN}] \\
\text{sel} [< n >]
\end{cases}
\]
7. The linker

iii) Valuation of D

<table>
<thead>
<tr>
<th>Phonological Component</th>
<th>Semantic Component</th>
</tr>
</thead>
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<td>Syntactic</td>
</tr>
<tr>
<td>D</td>
<td>/[M]</td>
</tr>
<tr>
<td></td>
<td>/[F]</td>
</tr>
</tbody>
</table>

b. **AYT''FEMALE MOUSE' (F)**

i) Merge of D (syntactic object α) and nP

\[
\begin{array}{c}
\text{DP} \\
\text{nP D} \\
\sqrt{\text{ayt'}} n \varphi [i[F]]
\end{array}
\]

ii) Agree

i) D c-commands n. n has a gender feature i[F]. D probes for a gender feature and is valued by n i[F]. As such D agrees with i[F], and obtains the gender feature [F].

\[
D \begin{cases} 
\text{cat [D]} \\
\varphi [F] \\
\text{Case [GEN]} \\
\text{sel [< n >]}
\end{cases}
\]

iii) Valuation of D

<table>
<thead>
<tr>
<th>Phonological Component</th>
<th>Semantic Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input</td>
<td>Syntactic</td>
</tr>
<tr>
<td>D</td>
<td>/[M]</td>
</tr>
<tr>
<td></td>
<td>/[F]</td>
</tr>
</tbody>
</table>

c. **AYT''MALE MOUSE' (M)**

i) Merge of D (syntactic object α) and nP

\[
\begin{array}{c}
\text{DP} \\
\text{nP D} \\
\sqrt{\text{ayt'}} n \varphi [i[M]]
\end{array}
\]
7. The linker

ii) Agree
   i) D c-commands n. n has a gender feature \(i[M]\). D probes for a
gender feature and is valued by n \(i[M]\). As such D agrees with \(i[M]\), and
obtains the gender feature \([M]\).

\[
D \begin{cases}
\text{cat [D]} \\
\varphi [M] \\
\text{Case [GEN]} \\
\text{sel [< n >]}
\end{cases}
\]

iii) Valuation of D

<table>
<thead>
<tr>
<th>Phonological Component</th>
<th>Semantic Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input</td>
<td>Syntactic Context</td>
</tr>
<tr>
<td>D</td>
<td>([/M])</td>
</tr>
<tr>
<td></td>
<td>([/F])</td>
</tr>
</tbody>
</table>

The biggest challenge for applying Kramer’s approach to Gorwaa is represented
by morphosyntactic characteristic IIe of the Gorwaa suffix, repeated below:

(7.39) Morphosyntactic characteristic IIe of the Gorwaa suffix

The grammatical gender (i.e. M, F, or N) of a noun is determined by the SFX2
morpheme, which has a stable association with gender. If a noun is changed for
number, its gender may also change.

Addressed in detail in §6.3.5, it suffices to remind readers of the consistently
stable association of specific suffixes with specific gender values, to the point of
which any given Gorwaa SFX2 may be listed with its attendant gender. As such,
the SFX2 -i triggers F agreement, the SFX2 -ó triggers M agreement, and the SFX2
-a’i triggers N agreement. Resultantly, if a noun is changed for number
(necessarily resulting in a change of suffix), the gender of the noun may change,
depending on the identity of the new suffix (specifically SFX2). Sakweeli ‘ostrich’
is F gender, and sakwél ‘ostriches’ is M gender; digirmó ‘footprint’ is M gender,
and digirma’‘footprints’ is N gender; duukaa ‘shop’ is F gender, and duukanáy
‘shops’ is M gender.
7. The linker

It is difficult to see how Kramer’s proposal would work here (even by increasing Kramer’s n heads to five in order to accommodate uninterpretable N gender). The first step would be, inevitably, replacing individual gendered suffixes at n with paradigms, within which the five gender values (n i[F] and n i[M], and n u[F], n u[M], and n u[N]) would be realized post-Spellout. But even having adopted this mechanism, the approach fails to capture the precise nature of how semantic gender ‘overrides’ grammatical gender. As may be seen in (7.38), semantic override is accomplished in Kramer’s analysis as a process by which an entirely different suffix is merged with the root (one with interpretable gender, rather than uninterpretable). In fact, the process is not one of ‘override’ at all, as the structures involve entirely different formatives. The motivation for this analysis is understandable: the majority of the proposed n morphemes in Amharic are formally identical (-∅ in most cases, no matter the feature values). In a language like Gorwaa, where a noun can retain its suffix’s (phonetic) identity, but assume the biological sex of the referent (as in cases discussed in §7.4.2.2), the argument that the head at n has been changed becomes, empirically speaking, less sound.

Conversely, the proposal developed in the present work seems to deal with most of the Amharic data in Kramer (2014) quite well. Specifically, by positing an R argument which bears the semantic (interpretable) gender features, and leaving grammatical (uninterpretable) gender features (i.e. m-gender) to be exponed post-Spellout at the n head, the data represented in (7.38) can be revised thus, 

(where, for concision, each derivation picks up from the equivalent of Step 4, in (7.34)): 429
7. The linker

(7.40) Three forms of the Amharic noun ayt’ (revised as per the current work)

a. ayt’ ‘mouse’ (F)

a) Step 4: Realisation of diacritic feature [F] in the agreement domain (i.e. the current syntactic structure). Note also that, because gender is either unknown or unimportant in this case, there is no gender feature on pro.

b) Step 5: Agree
i) D c-commands both pro and n^[F]. The referent of pro has no semantic gender, so pro is unvalued for gender, and can therefore not act as an intervener in gender agreement. n^[F] has a suffixal gender feature [F]. D probes for a gender feature and is valued by n^[F]. As such D agrees with n^[F], and obtains the gender feature [F].
c) Step 6: Valuation of D

<table>
<thead>
<tr>
<th>Phonological Component</th>
<th>Semantic Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input</td>
<td>Value</td>
</tr>
<tr>
<td>D</td>
<td>/[M] -u</td>
</tr>
<tr>
<td></td>
<td>/[F] -wa</td>
</tr>
</tbody>
</table>

b. *AYT* ‘FEMALE MOUSE’ (F)

a) Step 4: Realisation of diacritic feature [F] in the agreement domain (i.e. the current syntactic structure). Note also that, because the mouse’s biological sex is female, there is a gender feature F on pro.

\[
\begin{align*}
&\text{DP} \\
&\sqrt{621} - n_3\text{-pro-D} \\
&\quad [\text{cat} [D]] \\
&\sqrt{621} - n_3\text{-pro} \\
&\quad [\text{cat} [n]] \\
&\quad \quad \quad \text{infl} [\varphi [\text{Case [GEN]}]] \\
&\quad \quad \quad \text{sel} [<\text{n}>] \\
&\quad n' \quad \text{pro} \\
&\sqrt{621} - n_3 \\
&\quad [\text{cat} [n]] \\
&\quad \quad \quad \text{infl} [F] \\
&\quad \quad \quad \text{sel} [\varnothing] \\
&\sqrt{621} \\
&\quad [\text{cat} [\sqrt{\text{v}}]] \\
&\quad \quad \quad \text{cat} [n] \\
&\quad \quad \quad \text{infl} [F] \\
&\quad \quad \quad \text{sel} [<\sqrt{\text{v}}>] \\
\end{align*}
\]

b) Step 5: Agree

i) D c-commands both pro and n[^F]. The referent of pro is biologically female, so pro has gender feature F, and can therefore act as an intervener in gender agreement. n[^F] has a suffixal gender feature [F]. D probes for a gender feature and is valued by pro. As such D agrees with pro, and obtains the gender feature [F].

\[
D \begin{cases}
\text{cat} [D] \\
\text{infl} [\varphi [F]] \\
\text{Case [GEN]} \\
\text{sel} [<\text{n}>]
\end{cases}
\]
c) Step 6: Valuation of D

<table>
<thead>
<tr>
<th>Phonological Component</th>
<th>Semantic Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input</td>
<td>Value</td>
</tr>
<tr>
<td>D</td>
<td><img src="image1.png" alt="image" /></td>
</tr>
</tbody>
</table>

\(\text{D} / [M] - u\)
\(\text{D} / [F] - wa\)

\(\text{elsewhere} \text{ referring expression}\)

\(\text{c. } AYT''\text{MALE MOUSE}'' (M)\)

\[\sqrt{\text{ayt'}} \text{n } i[M]\]

a) Step 4: Realization of diacritic feature \(F\) in the agreement domain (i.e. the current syntactic structure). Note also that, because the mouse's biological sex is male, there is a gender feature \(M\) on \(\text{pro}\).
7. The linker

b) Step 5: Agree
i) D c-commands both pro and n^[F]. The referent of pro is biologically male, so pro has gender feature M, and can therefore act as an intervener in gender agreement. n^[F] has a suffixal gender feature [F]. D probes for a gender feature and is valued by pro. As such D agrees with pro, and obtains the gender feature [M].

\[
D \{ \begin{array}{l}
\text{cat} [D] \\
\varphi [M] \\
\text{Case} [\text{GEN}] \\
\text{sel} [<n>] \\
\end{array}
\]

c) Step 6: Valuation of D

<table>
<thead>
<tr>
<th>Phonological Component</th>
<th>Semantic Component</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Input</strong></td>
<td><strong>Syntactic Context</strong></td>
</tr>
<tr>
<td>D</td>
<td>/[M]</td>
</tr>
<tr>
<td></td>
<td>/[F]</td>
</tr>
</tbody>
</table>

Taking Kramer’s ‘additional evidence’ (2014: 12-15) into account, the analysis presented in the current work handles nominalizations equally as well as Kramer’s proposal. However, I provide no explanation for the phenomena of ‘interaction of gender and number’, as well as ‘distribution of the feminine suffix -it’. I expect that this is more a shortcoming of my familiarity with the facts of Amharic, than a shortcoming of the analysis proposed in the current work.

7.5.2 Summary

Using both empirical data from Gorwaa, as well as results from psycholinguistic experiments in the related language Konso, §6.2 established the Gorwaa gender system as featuring the values M, F, and N, each of which display two subgenders. §6.3 proposed the linker as obligatorily present on all nouns with reference, but unpronounced when it aligns with the right edge of a phonological phrase. §6.4 proposes a syntactic analysis of the linker as agreement morphology present at
7. The linker

the head D. Through examination of Gorwaa proper name morphology, agreement phenomena could be explained as the interaction of semantic gender features present on the external argument of n - R, and suffixal gender (m-gender) features on n. The null referential pronoun (R) analysis was extended to account for number agreement occurring with otherwise numberless (general) noun forms.
8. Conclusion

8.1 Summary of the thesis

Product of several years of Gorwaa language documentation, this thesis had two primary goals. The first of these goals was to provide a first description of the Gorwaa language, with particular attention given to the noun. This was motivated by the notable complexity of the Gorwaa noun, and aimed to detail the uncommon patterns present in this hitherto undocumented language. This work has included extensive presentations of data pertaining to the noun and, through this, increases the empirical data available to the field of Cushitic studies specifically, and linguistics in general.

The second goal of this work was to provide an analysis of noun morphosyntax. In contrast with functional accounts in South Cushitic, this thesis attempted a formal analysis, adopting the Distributed Morphology architecture, and Minimalism. By adopting this framework, it was shown that the Gorwaa noun is itself a complex of several subparts, the structure of which is dictated by the same rules applied to larger phrases. The resultant structure, and the relations which hold within its subparts, provides a ready account of many of the peculiarities of the Gorwaa noun described in the data presentations.

The thesis structure reflects the twofold nature of its goals: Chapter 2 is an (entirely descriptive) introduction to the language, and Chapter 3 is an (entirely formal
8. Conclusion

theoretical) introduction to the method of analysis. The remaining four chapters each feature descriptive sections, followed by sections of analysis.

Chapter 2 offers a grammatical sketch of Gorwaa. As a language with no previous description, this is meant as an empirical contribution to understanding the language in general. Second, the sketch ought to ground the reader in a basic understanding of the noun phrase and associated phenomena such as agreement – the theoretical and analytical focus of the thesis.

Chapter 3 introduced the reader to Minimalism and Distributed Morphology: the framework upon which much of the formal analysis in the thesis is based.

Chapter 4 established the Gorwaa noun as a complex of subparts, and considers some of the empirical criteria by which these subparts may be considered a unit: i.e. the noun. The remainder of the chapter is concerned with the first of these subparts: the stem. Specifically, an analysis is proposed which acknowledges both the phonetic similarities between nouns such as tsifiri ‘language’ and tsifiraangw ‘tongue’, as well as the semantic similarities between nouns such as garma ‘boy’ and daaqay ‘boys’. Syntactically, the stem is formed of an unspecified element (a root), many of whose characteristics (including phonetic and semantic) are determined by the larger syntactic structure in which they are found. It is also mentioned that lexical category is determined by syntactic context, accounting for similarities between forms such as the noun wa/aangw ‘an arroyo’ and the verb waá/‘vomit’.
8. Conclusion

The specific syntactic context in which nouns are realized forms the main content of the following chapters.

The following two chapters treated the second subpart of the Gorwaa noun: the stem. Distinguished by two broad groups of morphosyntactic characteristics, Chapter 5 addressed those characteristics identified as ‘regular’ (i.e. stable correspondences which can largely be explained as feature bundles being manipulated in the syntax), and Chapter 6 addressed those characteristics identified as ‘listed’ (i.e. irregular patterns which require recourse to more detailed explanations of realization rules post-Spellout).

Chapter 5 began with two detailed presentations of data: the first outlining and exemplifying the regular characteristics of the Gorwaa suffix, and the second organizing and (where applicable) decomposing each of the 42 suffixes. The analysis which followed proposed that the suffix is formed of (maximally) three syntactic heads: Cl (classifier), # (quantifier), and n (‘little n’). In order to bear a number value, nouns must be classified and quantified. As such, nouns of Sg or Pl number also bear classifier morphology (quantifier morphology was determined to be null). Nouns unvalued for number (‘general’ number nouns) are neither classified nor quantified, and therefore lack these syntactic heads in their structure. The little n head is the site of SFX2 morphology, which contributes to the lexical meaning of the noun.
First, Chapter 6 established the concept of the paradigm: a tool central to much of the following discussion. Following this were two detailed presentations of data: the first outlined and exemplified the listed characteristics of the Gorwaa suffix, and the second describing the paradigms of Gorwaa. In the following analysis, the paradigm was established as a grammatical formative, instantiated on the little n head, and realized as a specific suffix through instructions post-Spellout. The realization of the morpheme Cl was also described as a valuation process post-Spellout. Grammatical gender was described as a diacritic feature, also realized post-Spellout, making Agree a necessarily post-Spellout operation (as argued in Bobaljik 2008).

Chapter 7 treats the third and final subpart of the Gorwaa noun: the linker. Following a short section revisiting Gorwaa gender and reasserting that there are three gender values in Gorwaa, each of which exhibit two subgenders, Chapter 7 presents data on the distribution of the linker. Using evidence from larger clausal syntax, it is argued that the linker is obligatory for all nouns of reference, but goes unpronounced at the end of a phonological phrase. In the analysis that follows, the linker is established as agreement morphology on the syntactic head D. In order to account for cases of mismatch between the form taken by the linker and the gender value of n, the R argument is introduced. External argument of the noun and merged as the specifier of n, R represents the interpretable (semantic) features of the referent of the noun, and may serve as a syntactic intervener in agreement.
relations between D and n. This mechanism is extended to account for adjectival number agreement on nouns of general number (i.e. nouns unvalued for number).

8.2 Descriptive insights, and implications for South Cushitic

Given that, to this point, Gorwaa had been without a dedicated linguistic description, it may be argued that all of the material herein represents, to an extent, descriptive insight. The specific observations that bear particular attention are discussed below, along with their possible ramifications.

The element treated with the most descriptive detail was doubtless the suffix. Gorwaa suffixes number 42 in total, and may combine in at least 178 patterns (or paradigms): 151 pairs, 20 monads, and 7 triads. Observed first in Mous (1993: 47), and given a full examination here, some suffixes are formed of one morpheme (identified here as SFX2), whereas others are formed of two morphemes (identified here as SFX1 and SFX2). SFX1 morphology is formally analogous to aspectual morphology in the verbal domain. For the first time, this work identified an important correlation: nouns with SFX1 morphology are always valued for number (Sg or Pl), and can therefore occur with external elements (e.g. adjectives) only if they show matching agreement; conversely, nouns without SFX1 morphology are unvalued for number, and can therefore occur with external elements (e.g. adjectives) which show either Sg or Pl agreement. Sometimes, these latter nouns of general number may have their agreement restricted by the paradigm in which they occur.
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From a wider perspective, this pattern can be extended to Iraqw, Alagwa, and (probably) Burunge. This is significant, and will necessitate (and perhaps aid) a more nuanced approach to number in its every manifestation. For example, the Iraqw-English Dictionary (Mous, Qorro & Kießling 2002) makes consistent use of ‘singular’ versus ‘plural’, whereas the grammatical reality is much more complex. The noun *afee* ‘mouths’ is listed as Pl (9), whereas it is shown to occur with either Sg or Pl adjectival agreement in Mous (1993:204). A revised treatment sees *afee* as a general number noun and labels it as such in the dictionary. In this way, the user expects to encounter the form *afee* with either Sg or Pl adjectives, in the case of the former, interpreting it as ‘kind of mouths’ or ‘group of mouths’, and in the case of the latter, interpreting it as ‘mouths’.

Equally important was the identification of the linker as an obligatory element of all nouns with reference, but which is morphosyntactically conditioned to be unpronounced when the right-edge of the noun phrase corresponds to the right-edge of a phonological phrase. This is a novel analysis and is empirically preferable to those previously proposed for analogous morphology in Iraqw.

Linker morphology in Alagwa is somewhat different, and I do not know the situation in Burunge, but, for Iraqw, this new analysis of linkers may be applied with no modifications. Most immediately, this will necessitate a reassessment of the construct state in South Cushitic (perhaps along the lines of Borer (1999)), as well as the syntax of noun phrases more generally.
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8.3 Formal structure, and implications for formal syntax

The syntactic structures developed for the nouns examined in this work are as follows:

(8.1) **NUMBER-VALUED NOUN**

(8.2) **GENERAL-NUMBER NOUN**

Nouns that do not bear reference (i.e. incorporated nouns), do not have either D or R (pro).

(8.3) **NUMBER-VALUED NOUN (NON-REFERRING)**

(8.4) **GENERAL-NUMBER NOUN (NON-REFERRING)**
8. Conclusion

The building of these structures is incremental, relying on the feature structures of the lexical elements present in the numeration. A sample derivation for the singular (i.e. number-valued) noun *qooqalumó* ‘crowned crane’ is provided below. For this derivation, it is also assumed that *qoonqalamó* in this case bears reference.

(8.5) **Numeration for *qoonqalamó* ‘crowned crane’**

<table>
<thead>
<tr>
<th>Lexical Elements</th>
<th>Where:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(\sqrt{735})</td>
<td>(\sqrt{735} = ) the root common to the forms <em>qoonqalamó</em> ‘crowned crane’</td>
</tr>
<tr>
<td>Cl</td>
<td><em>qoonqálin</em> ‘(a group of) crowned cranes’</td>
</tr>
<tr>
<td>#</td>
<td><em>qoonqalama</em> ‘crowned cranes’</td>
</tr>
<tr>
<td>(n_{135})</td>
<td>Cl = the suffix common to the forms <em>qoonqalamó</em> ‘crowned crane’, and <em>aga hubiim</em> ‘I was bringing it’</td>
</tr>
<tr>
<td>pro</td>
<td>(n_{135} = ) the paradigm realizing the suffixes -(a)mó (Mo)</td>
</tr>
<tr>
<td>D</td>
<td>-∅ (Mo)</td>
</tr>
</tbody>
</table>
8. Conclusion

(8.6) Features structures for the lexical elements in (8.5)

\[
\sqrt{735} \{ \text{cat} [\sqrt{\text{v}}] \\
\text{Cl} \{ \text{cat} [\text{Cl}] \\
\quad \text{infl} [\emptyset] \\
\quad \text{sel} [\sqrt{\text{v}}] \\
\# \{ \text{cat} [\#] \\
\quad \text{infl} [\text{Sg}] \\
\quad \text{sel} [\text{Cl}] \\
n_{135} \{ \text{cat} [\text{n}] \\
\quad \text{infl} [\varphi [\text{]}] \\
\quad \text{sel} [\text{n}; #] \\
\text{pro} \{ \text{cat} [\text{N}] \\
\quad \text{infl} [\varphi [\emptyset] [\text{Sg}]] \\
\quad \text{sel} [\emptyset] \\
D \{ \text{cat} [\text{D}] \\
\quad \text{infl} [\varphi [\text{]} [\text{Case} [\text{GEN}]]] \\
\quad \text{sel} [\text{n}] \}
\]

Note that the R argument here (i.e. pro) is unvalued for gender. This is because, in Gorwaa, this particular entity (i.e. the crowned crane) does not receive a biological sex feature. Typically, such features are reserved for humans, as well as some domestic animals.

Having established the lexical elements involved and the features therein, the derivation may now proceed.
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(8.7) Derivation of *qoonqalumó*

a) Step 1: Merge of Cl (syntactic object α) and √735 (syntactic object β)

```
CIP
\( \sqrt{735} \cdot \text{Cl} \)
[cat [Cl]]
\( \sqrt{735} \)
[cat [\( \sqrt{\cdot} \)]]
[cat [Cl]]
\[\text{infl [}\emptyset]\]
\[\text{sel [< }\sqrt{>}\)\]
```

b) Step 2: Merge of # (syntactic object α) and CIP (syntactic object β)

```
#P
\( \sqrt{735} \cdot \text{Cl} \cdot # \)
[cat [#]]
\( \sqrt{735} \cdot \text{Cl} \)
[cat [Cl]]
\[\text{infl [Sg]}\]
\[\text{sel [< Cl >]}\]
\( \sqrt{735} \)
[cat [\( \sqrt{\cdot} \)]]
[cat [Cl]]
\[\text{infl [}\emptyset]\]
\[\text{sel [< }\sqrt{>}\)\]
```
c) Step 3: Merge of $n_{135}$ (syntactic object $\alpha$) and $\#P$ (syntactic object $\beta$)
d) Step 4: Merge of $n_{135}$ (syntactic object $\alpha$) and pro $R$ (syntactic object $\beta$)

$$
\begin{array}{c}
\text{nP} \\
\sqrt{735}\text{-Cl-#-n}_{135}\text{-pro} \\
\left[\text{cat [n]}\right] \\
\sqrt{735}\text{-Cl-#-n}_{135} \\
\left[\text{cat [n]}\right] \\
\left[\text{select [N]}\right] \\
\left[\text{infl} \left[\varphi \emptyset \right] \right] \\
\left[\text{select [∅]}\right] \\
\#P \\
\sqrt{735}\text{-Cl-#} \\
\left[\text{cat [#]}\right] \\
\left[\text{cat [n]}\right] \\
\left[\text{infl} \left[\varphi \emptyset \right] \right] \\
\left[\text{select [∅]}\right] \\
\text{ClP} \\
\sqrt{735}\text{-Cl} \\
\left[\text{cat [Cl]}\right] \\
\left[\text{cat [#]}\right] \\
\left[\text{infl [Sg]}\right] \\
\left[\text{select [< Cl >]}\right] \\
\sqrt{735} \\
\text{Cl} \\
\left[\text{cat [Cl]}\right] \\
\left[\text{cat [Cl]}\right] \\
\left[\text{infl [∅]}\right] \\
\left[\text{select [< √ >]}\right]
\end{array}
$$
8. Conclusion

e) Step 5: Merge of D (syntactic object α) and nP (syntactic object β)

\[
\begin{align*}
\text{DP} & \quad \text{cat [D]} \\
\sqrt{735}\text{-Cl-}\#-n_{135}\text{-pro-D} & \\
nP & \quad \text{cat [n]} \\
\sqrt{735}\text{-Cl-}\#-n_{135}\text{-pro} & \\
[\text{cat [n]}] & \quad \text{cat [N]} \\
[\text{sel [< N >]}] & \quad \text{infl} [\varphi [ ] ] \\
[\text{sel [\#]}] & \quad \text{sel [\#]} \\
\end{align*}
\]

f) Step 6: (Post)syntactic valuation of √735 in List 2 and List 3

Valuation of √735

<table>
<thead>
<tr>
<th>Phonological Component</th>
<th>Semantic Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Root Input</td>
<td>Syntactic Context</td>
</tr>
<tr>
<td>√735</td>
<td>elsewhere</td>
</tr>
</tbody>
</table>
8. Conclusion

g) Step 7: (Postsyntactic) valuation of Cl in List 2 and List 3

Valuation of Cl

<table>
<thead>
<tr>
<th>Phonological Component</th>
<th>Semantic Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input</td>
<td>Syntactic Context</td>
</tr>
<tr>
<td>SFX1</td>
<td>/n₁₃₅</td>
</tr>
<tr>
<td></td>
<td>/n₁₅₀</td>
</tr>
</tbody>
</table>

h) Step 8: Agree between probe n₁₃₅ and goal #

n₁₃₅ c-commands #. # is valued with the number feature [Sg], and n₁₃₅ has an unvalued number feature. n₁₃₅ agrees with #, and obtains the number feature [Sg].

\[
\begin{align*}
n₁₃₅ \left\{ \begin{array}{l}
cat[n] \\
\text{infl } \varphi [\text{Sg}] \\
\text{sel } <N> ; <#> \\
\end{array} \right. 
\end{align*}
\]

i) Step 9: (Postsyntactic) valuation of n₁₃₅ in List 2 and List 3

Valuation of n₁₃₅

<table>
<thead>
<tr>
<th>Phonological Component</th>
<th>Semantic Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input</td>
<td>Syntactic Context</td>
</tr>
<tr>
<td>n₁₃₅</td>
<td>/Sg</td>
</tr>
<tr>
<td></td>
<td>/Pl</td>
</tr>
<tr>
<td>elsewhere</td>
<td>0  <del>´</del> [Mo]</td>
</tr>
</tbody>
</table>
8. Conclusion

j) Step 10: Realization of diacritic feature [Mo] in the agreement domain (i.e. the current syntactic structure)

\[
\begin{align*}
\text{DP} & \quad \begin{array}{c}
\text{cat [D]} \\
\sqrt{735}\text{-Cl-#-n}_{135}\text{-pro-D} \\
nP & \quad \text{D} & \quad \text{cat [D]} \\
\sqrt{735}\text{-Cl-#-n}_{135}\text{-pro} & \quad \text{infl} & \quad \begin{array}{c}
\varphi \\
\text{Case [GEN]} \\
\text{sel [< n >]}
\end{array}
\end{array}
\end{align*}
\]

\[
\begin{align*}
\text{[cat [n]]} & \quad \begin{array}{c}
\text{cat [n]} \\
\text{sel [< N >]}
\end{array}
\end{align*}
\]

\[
\begin{align*}
\text{nP} & \quad \begin{array}{c}
\text{cat [n]} \\
\text{sel [< N >; < # >]}
\end{array}
\end{align*}
\]

\[
\begin{align*}
\text{[cat [#]]} & \quad \begin{array}{c}
\text{cat [#]} \\
\text{infl} & \quad \begin{array}{c}
\varphi & \text{Mo} \\
\text{Sg}
\end{array} \\
\text{sel [< N >; < # >]}
\end{array}
\end{align*}
\]

\[
\begin{align*}
\text{CIP} & \quad \text{#} & \quad \text{[cat [Cl]]} \\
\sqrt{735}\text{-Cl} & \quad \begin{array}{c}
\text{cat [#]} \\
\text{infl [Sg]} \\
\text{sel [< Cl >]}
\end{array}
\end{align*}
\]

\[
\begin{align*}
\sqrt{735} & \quad \text{Cl} & \quad \text{[cat [√]]} \\
\text{[cat [√]]} & \quad \begin{array}{c}
\text{cat [Cl]} \\
\text{infl [∅]} \\
\text{sel [< √> ]}
\end{array}
\end{align*}
\]

k) Step 11: Agree for D

i) D c-commands both pro and nP, the referent of pro has no semantic gender, so pro is unvalued for gender, and can therefore not act as an intervener in gender agreement. ∅^[Mo] has a suffixal gender feature [Mo]. D probes for a gender feature and is valued by ∅^[Mo] As such D agrees with ∅^[Mo], and obtains the gender feature [Mo].
D \left\{ \begin{array}{ll}
\text{cat} & [D] \\
\varphi & [\text{Mo}] \\
\text{Case} & [\text{GEN}] \\
\text{sel} & [< n >]
\end{array} \right.

ii) D c-commands pro, the referent of pro has semantic number Sg, so pro is valued for number. nP is configured for a number-valued noun, and therefore bears a number feature [Sg]. D probes for a number feature and is valued by pro. As such D agrees with pro, and obtains the number feature Sg.

D \left\{ \begin{array}{ll}
\text{cat} & [D] \\
\varphi & [\text{Mo}, \text{Sg}] \\
\text{Case} & [\text{GEN}] \\
\text{sel} & [< n >]
\end{array} \right.

iii) D has an unvalued person feature, and probes all possible goals in the structure for person features. No possible goals contain a person feature. \textit{Agree} fails, but the structure is licit because \textit{probe} has succeeded (Preminger 2010). Lack of person features on D will be interpreted as 3\textsuperscript{rd} Person (see Harley & Ritter 2002).

D \left\{ \begin{array}{ll}
\text{cat} & [D] \\
\varphi & [3, \text{Mo}, \text{Sg}] \\
\text{Case} & [\text{GEN}] \\
\text{sel} & [< n >]
\end{array} \right.

\text{Step 12: (Postsyntactic) valuation of D in List 2 and List 3}

<table>
<thead>
<tr>
<th>Valuation of D</th>
<th>Phonological Component</th>
<th>Value</th>
<th>Semantic Component</th>
<th>Input</th>
<th>Syntactic Context</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>/[/Mo]\</td>
<td>ó</td>
<td>elsewhere</td>
<td>D</td>
<td>elsewhere</td>
<td>referring expression</td>
</tr>
<tr>
<td></td>
<td>/[/Mk]\</td>
<td>kú</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>/[/Fr]\</td>
<td>r~~</td>
<td>referring expression</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>/[/Ft]\</td>
<td>tá</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>/[/N∅]\</td>
<td>~~</td>
<td></td>
<td>D</td>
<td>elsewhere</td>
<td>referring expression</td>
</tr>
<tr>
<td></td>
<td>/[/Na]\</td>
<td>á</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

At its most general, the formal analysis undertaken in this work is significant in that it has shown that the nominal morphosyntax of Gorwaa may be represented under Distributed Morphology and Minimalism by roughly the same methods commonly
used for a wide array of other languages. Throughout the course of the analyses offered, many of the explanations have an established precedent in past work. Perhaps most immediately striking is way in which SFX1 morphology in the nominal domain resembles aspectual morphology in the verbal domain. Analyzed as the instantiation of Cl, Borer (2005a, b) identifies Cl and # morphology of a nominal structure as the direct equivalent of Asp in a verbal structure. The empirical similarity of forms in Gorwaa must lend some further support to this insight.

With that said, this work differs from Borer (2005a, b) in that it could not dispense with 'little n'. In this way, this work supports the existence of a nominal categorizing head, as employed in Marantz (2001), Arad (2003, 2005), and Merchant (2017). Elaborating further, and subsuming the insight of Cobbinah (2013), and Watson (2015), this work established little n as the locus of the nominal paradigm, the suffixes of which are realized post-Spellout. Grammatical gender (m-gender), established as a diacritic feature realized on individual suffixes, is available for agreement by applying Bobaljik’s (2008) version of Agree as a post-Spellout operation.

To handle cases of where biological sex affects morphological agreement, appeal was made to the null referential pronoun R (Williams (1981), Higginbotham (1985), and Grimshaw (1990)). Merged as external argument to nP, R may serve as an intervener in agreement between D and (m-)gender features on n. As an afterthought, it was briefly explained that, for Gorwaa, this approach seemed preferable to that of Kramer (2014), but in order to decide whether an analysis like
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this one could, in fact, handle Kramer’s Amharic data equally as well as Gorwaa, more detailed examination of Amharic is necessary.

8.4 Prospects

The most immediate step following from this thesis is further descriptive work. Detailed examination of nominal morphosyntax has uncovered a plethora of fascinating patterns, relevant for the writing of a Gorwaa grammar, as well as lexicographic work. Doubtless, the same sort of attention to the morphosyntax of the verb, or indeed larger phrasal domains will be equally fruitful and relevant. It has been established in this work that nouns are typically not arguments to the verb. In §7.3.3.1, free word order, syntactically discontinuous expressions, and pervasive NP-dropping were shown to exist in Gorwaa -- each key characteristics of a pronominal argument language (Jelinek 1984, Hale 2003).

(8.8) Free word order

a. SOV word order (canonical)
   \[\text{ani slee ana taáhh} \quad [201609271222-228.25]\]
   \begin{align*}
   \text{aní} & \quad \text{sl} & \quad \text{ee} & \quad \text{-r} & \quad \text{-n} & \quad \text{na} & \quad \text{taáhh} \\
   \text{PRO1Sg} & \quad \text{STM} & \quad \text{-SFX2} & \quad \text{-L} & \quad \text{A.P} & \quad \text{P.F} & \quad \text{AUX} & \quad \text{-IMPRF} & \quad \text{beat.1.PST} \\
   \text{cow}'I beat the cow.'
   \end{align*}

b. OSV word order
   \[\text{desirqá' kuúng an sla'} \quad [20131108b_20150725j.84]\]
   \begin{align*}
   \text{des} & \quad \text{-i} & \quad \text{-r} & \quad \text{qá'} & \quad \text{kuúng} \\
   \text{STM} & \quad \text{-SFX2} & \quad \text{-L} & \quad \text{DEM3} & \quad \text{PRO2Sg.M} \\
   \text{girí} & \quad \text{∅} & \quad \text{a} & \quad \text{∅} & \quad \text{n} & \quad \text{sla'} \\
   \text{AP} & \quad \text{P.F} & \quad \text{AUX} & \quad \text{-EXPECT} & \quad \text{want.2.SUBJ} \\
   \text{cow}'You love that girl.'
   \end{align*}
8. Conclusion

c. VS WORD ORDER
\textit{ina tláy gofaangw} [20131108b_20150725j.152]
\begin{tabular}{llllll}
  i- & Ø & -na & tláy & goof- & -aangw & -Ø \\
  S.3- & AUX & -IMPR & go.M.PST & STM- & -SFX2 & -L \\
\end{tabular}

“The buck went.”

d. VO WORD ORDER
\textit{gwéh a ansiimaán ya’eér hatlá’} [20150817d.106]
\begin{tabular}{llllllll}
  gwéh & Ø- & a- & Ø & ansiim -aán & ya’- & -ee & -r~´~ \\
  let’s.goA.P- & P.F- & AUX & begin.1-1PL.PRES & STM- & -SFX2 & -L & leg \\
\end{tabular}

hatlá’
other
“Let’s go -- we are starting another leg.”

(8.9) SYNTACTICALLY DISCONTINUOUS EXPRESSIONS

a. DISCONTINUOUS SUBJECT
i. [...] \textit{balaangwdá’ ninaákw i deer oo /awaákw}
\begin{tabular}{llllllll}
  balaángw & -dá’ & ninaákw & i- & Ø & deer & \\
  millet.LMo & -DEM4 & small.M & S.3- & AUX & be.present.M.PRES & \\
  oo & /awaákw & ~`~ & \\
  ANA.M & white.M & ~EMPH~ & \\
\end{tabular}

“[...] that small white millet is there.”

ii. \textit{bará ayawoo Endabeg gadiyeé i káhh qomasí ar Muungú}
\begin{tabular}{llllllll}
  bará & ayá & -oo & Endabég & gadiyeér & i- & Ø & \\
  in & land.LMo & -TOP Endabeg.LMo & work.LFr & S.3-AUX & \\
  káhh & qomár & -sí & ar & Muungú & \\
  be.absent.F.PRES & time.LFr & -DEM2 & ANA.F & God.LMo & \\
\end{tabular}

“In Endabeg the work of God isn’t here at that time.”

b. DISCONTINUOUS OBJECT
i. \textit{daawaa ngin amosi leehh ar seehhaa} [...] [20151202d.171]
\begin{tabular}{llllllllll}
  daawaár & ng- & a- & Ø & -n & amór & -sí & \\
  medicine.LFr & A.3- & P.F- & AUX & -EXPECT place.LFr & -DEM2 & \\
  leehh & ar & seehhaár & \\
  fetch.M.SUBJ & ANA.F & tsetse.flies.LFr & \\
\end{tabular}

“He would fetch tsetse fly medicine.”
8. Conclusion

ii. *dinku’umarí a tleeahkan ar /ameenaa* [20131027_20150725c.56]

dinku’umá–í Ø- a- Ø -a
meeting.LFr -DEM1 A.P- P.F- AUX -PRF
tleeëh -áán ar /ameenaár
make.1 -1PL.PST ANA.F women.LFr
“We made this women’s union.”

(8.10) **Pervasive NP-dropping**

a. No NPs dropped

*hhawata garma nguna taáhh* [20160119f.39]

hhawatótò garmá ng- u- Ø -na taáhh
man.LMo boy.LMo A.3- P.M- Aux -Imprf hit.Pst
“The man hit the boy.”

b. Patient NP *garma* dropped

*hhawata nguna taáhh* [20160119f.52]

hhawató ng- u- Ø -na taáhh
man.LMo A.3- P.M- Aux -Imprf hit.Pst
“The man hit him.” (May also be interpreted as “He hit the man.”)

c. Agent NP *hhawata* dropped

*garma nguna taáhh* [20160119f.57]

garmá ng- u- Ø -na taáhh
boy.LMo A.3- P.M- Aux -Imprf hit.Pst
“He hit the boy.” (May also be interpreted as “The boy hit him.”)

d. Both Argument NPs dropped

*nguna taáhh* [20150813.55]

ng- u- Ø -na taáhh
A.3- P.M- Aux -Imprf hit.Pst
“He hit him.”

Full understanding of the argument structure of Gorwaa therefore rests in a fuller understanding of the pronominal arguments of Gorwaa. In this work, these were described as the argument marking present in the selector. The selector, so-named by W.H. Whiteley (1958), is a morphological complex which, as stated in §2.4.2, can formally mark: clause-type (independent vs. dependent), voice (active vs. mediopassive), deixis (movement toward vs. movement away from the *origo*), argument structure (sole argument versus agent and patient), person, gender, and
number of arguments, aspect (perfect vs. imperfective vs. expectational vs. consecutive vs. background), mood (indicative vs. conditional vs. prohibitive vs. questioning), and adverbial case (reason vs. lative vs. ablative vs. instrumental).

Focusing on argument structure, the behavior of selectors is interesting in several respects. Firstly, the morphosyntactic alignment is split, depending on whether the argument is third person, or a speech act participant (i.e. 1st or 2nd person). For third person arguments, alignment is tripartite: that is, the (S)ole argument of an intransitive clause, the (A)gent of a transitive clause, and the (P)atient of a transitive clause are all realized differently. This can be seen in (8.11) (repeated from §2.4.2.1), where the noun *garma* ‘boy’ is realized in three different ways, depending on whether it is S (a), A (b), or P (c).

(8.11) **Tripartite Alignment for 3rd Person Arguments**

a. *Garma* as (S) argument: realized as *I-*

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<td>-IMPRF be.ill.M.Pst</td>
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“The boy was ill.”

b. *Garma* as (A) argument: realized as *ng-*

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<td>A.3-</td>
<td>P.F-</td>
<td>AUX</td>
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“The boy hit the hyaena.”

c. *Garma* as (P) argument: realized as *u-*

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<th>u-</th>
<th>Ø</th>
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<td>A.3-</td>
<td>P.M-</td>
<td>AUX</td>
<td>-IMPRF</td>
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</table>

“The man hit the boy.”
8. Conclusion

For arguments which are speech act participants (i.e. 1st or 2nd person), alignment is accusative: the (S)ole argument of an intransitive clause and the (A)gent of a transitive clause are marked in one way, and the (P)atient of a transitive clause are is realized differently. This can be seen in the examples in (8.12) (repeated from §2.4.2.1, where the 1st person pronoun aní is realized in two different ways, depending on whether it is S (a), A (b), or P (c).

(8.12) ACCUSATIVE ALIGNMENT FOR ARGUMENTS WHICH ARE SPEECH ACT PARTICIPANTS (I.E. 1ST OR 2ND PERSON)

a. Aní as (S) argument: Realized as Ø-
   aní ana mamaá/ [20160921i.38]
   aní Ø- Ø -na mamaá/
   Pro1sg S.P- AUX -IMPRF be.ill.1sg.PST
   “I was ill.”

b. Aní as (A) argument: Realised as Ø-
   aní baaaha an taáhh
   aní baahaár Ø- a- Ø -na
   Pro1sg hyaena.LFr A.P- P.F- AUX -IMPRF
   taáhh hit.1sg.PST
   “I hit the hyaena.”

c. Aní as (P) argument: Realised as i-
   hhawata aní ina taáhh
   hhawató aní i- Ø -na taáhh
   man.LMo Pro1sg P.1sg- AUX -IMPRF hit.M.PST
   “The man hit me.”

Cross-linguistically speaking, tripartite alignment of this sort is incredibly rare and, as such, requires further exploration, both from a synchronic and historical point of view.

Second, when the object argument is located between the selector and the verb (a configuration known as ‘encapsulation’), it is not marked on the selector. That is to
8. Conclusion

say, a selector which otherwise would have marked an A and a P for a transitive
verb (8.13a), will now only mark one argument. This argument will be marked as if
it were S, and therefore as if the clause were intransitive (8.13b). (Example is
repeated from §2.4.2.1.

(8.13) Encapsulation of direct object balaangw reduces V valency
a. garma balaangw ngu doosl [20161109c.29]
garmá balaângw ng- u- Ø doosl
boy.LMo millet.LMo A.3- P.M- AUX farm.M.PRES
“The boy is farming millet.”

b. garma i balaángw doosl [20160927l222-228.1]
garmá i- Ø balaángw doosl
boy.LMo S.3 AUX millet.LMo farm.M.PRES
“The boy is farming millet.”

Encapsulation seems best characterized as Mithun’s “Type III Noun Incorporation”
(1984: 859), in which incorporated nouns are used to background information.

What makes encapsulation different is that material larger than a single noun may
be encapsulated.

(8.14) Encapsulation of material larger than a noun
a. bara gadiyeér Muungú káw [20131027_20150725c.158]
bar- Ø- Ø -(g)a gadiyeér Muungú káw
if- A.P- Aux -Prf work.LFr God.LMo go.to.1.Pst
“If I went on the work of God.”

b. [...] in’in daqane i /uurú /abén koná’ [20131027_20150725c.188]
in’in daqane i- Ø /uurú /abén koná’
Pro.3Pl then A.3- Aux strength.LF new.M have.3.Pres
“[...] then they have new strength.”

Put simply, as central as pronominal argument marking is to understanding Gorwaa
syntax, so too are the patterns complex and novel. Further insight may only be
 gained through examination of similar phenomena in related (Svolacchia & Puglielli
1999) as well as unrelated languages (Baker 1996, Barrie & Mathieu 2016, Adger,
8. Conclusion

Harbour, & Watkins 2009), as well as detailed work in Gorwaa, further analyzing the recorded texts, and conducting targeted elicitation.
9. Bibliography


9. Bibliography


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### Appendix A: Participant Information

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### Appendix A: Participant Information

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## Appendix A: Participant Information

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*Note: Additional details such as occupation, education, and relationship may be included for each participant.*
Appendix B: Swahili version of consent dialogue

Kabla kuanza kazi, nataka tuogee kuhusu vitu kadhaa, ili tukubaliane kwa kila kitu, na tuelewe kazi yetu vizuri. Iko sawa?

Kwanza, unaweza kuach a kufanya kazi nami muda yoyote, na sio lazima kuniambia sababu unataka kuacha.

Iko sawa kama kazi yetu inarekodiwa kwa njia ya kinyasa sauti au kamera? Natumia kinyasa sauti na kamera ili naweza kuhakikisha kwamba mimi vizuri, na ili watu wanaweza kusikiliza maneno na hadithi baadaye.

Kama husikii vizuri kurekodiwa, kwa sababu yoyote, unaweza kuniambia hivyo, na nitazima kinyasa sauti na kamera.

Utalipwa [hourly rate] au bidhaa zenye thamani hii wakati tunapofanya kazi. Iko sawa?

Iko sawa kama watu wanaweza kusikiliza watu wengine kutoka eneo lako? (Kwa mfano, familia yako? watu wengine wanaenye eneo lako? mtu yoyote?)

Iko sawa nikiwaambiwa watu wengine kwamba wewe unawanyea kazi nami kwa lugha ya Kigorowa? Kwa mfano, iko sawa nikiweka jina lako kwenye orodha ya watu ambao wamechanga kwenyewe kazi hii?

Iko sawa nikiweka kazi yetu kwenye benki ya lugha? Yaani, benki ya lugha ni mahali unapoweka sauti na video ili ikae, hata kama kopi zangu zinaharibiwa.

Iko sawa nikiandika vitabu kuhusu lugha ya Kigorowa?

Iko sawa nikitumia kazi hi kwa mashauri mengine? Kwa mfano, labda leo, lengo langu ndo kutengeneza kamusi. Iko sawa nikirudi kwa hii kazi siku nyingine kuitumia kujifunza kuhusu sauti za Kigorowa pia?

Mi nimemaliza maswali yangu. Sijui kama wewe una maswali kuniuliza mimi kabla tuanze kazi yetu?
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<td>/Ankwí</td>
<td>/Ankwí</td>
<td>Personal Name (♀)</td>
<td>c.f. /ankwi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/antsumo (Mo)</td>
<td>/antsí (Fr)</td>
<td>plant sp.</td>
<td>Sycamore Fig (Ficus sycomorus)</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>/antsaa (Fr)</td>
<td>spent coarse millet flour</td>
<td>Mass</td>
<td></td>
<td></td>
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<tr>
<td>/api (Ft)</td>
<td>/api (Ft)</td>
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<tr>
<td>/Ara'i</td>
<td>/Ara'i</td>
<td>Personal Name (♂/♀)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>/ara/antumó (Mo)</td>
<td>/ara/anti (Fr)</td>
<td>plant sp.</td>
<td>Fire-Ball Lily (Scadoxus multiflorus)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/aráy desumó (Mo)</td>
<td>/aráy desu (Mo)</td>
<td>plant sp.</td>
<td>Terminalia (Terminalia brownii)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/Ári (Ft)</td>
<td>/Ári (Ft)</td>
<td>Place Name</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>/Arí</td>
<td>/Arí</td>
<td>Personal Name</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>/armó (Mo)</td>
<td>/aráy (Mo)</td>
<td>plant sp.</td>
<td>White-Galled Acacia, Whitethorn (Acacia seyal)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/arumó (Mo)</td>
<td>/areeri (N∅)</td>
<td>tobacco ball</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>/Aslá</td>
<td>/Aslá</td>
<td>Personal Name; c.f. /aslaangw</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>/aslaangw (Mo)</td>
<td>/asleeri (N∅)</td>
<td>hut; plant sp.; comb (i.e. of chicken)</td>
<td>Candelabra Tree, Tree Euphorbia (Euphorbia sp.); a piece of the /asla/ plant may be cut and placed in the earth on top of the roof of the traditional tembe house, where it will continue to grow. This is often done to provide ritual protection to the household</td>
<td></td>
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<tr>
<td>/asla àngw kuma (Mo)</td>
<td>/asleeri kuma (N∅)</td>
<td>plant sp.</td>
<td>prickly pear cactus</td>
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<tr>
<td>Nouns</td>
<td>Singular</td>
<td>General</td>
<td>Plural</td>
<td>Gloss</td>
<td>Nota</td>
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<td>----------------------------------------------------------------------</td>
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<tr>
<td>/atso (Fr)</td>
<td></td>
<td></td>
<td>/attee (Fr)</td>
<td>playing; game</td>
<td>Mass Deverbal (source verb, &lt;/aáts&gt;)</td>
</tr>
<tr>
<td>/átú (Mo)</td>
<td>/atú (Mo)</td>
<td>/attee (Fr)</td>
<td>/atelee (Fr)</td>
<td>milk (curdled)</td>
<td>&lt;/attee&gt; and &lt;/atelee&gt; 'crumbs', 'scattered curds'</td>
</tr>
<tr>
<td>/awaakeema' (NØ)</td>
<td></td>
<td></td>
<td></td>
<td>whiteness</td>
<td></td>
</tr>
<tr>
<td>/Awaakí</td>
<td></td>
<td></td>
<td></td>
<td>/Awaakí</td>
<td>Personal Name (♀); (even a dark woman may be named &lt;/Awaakí&gt;)</td>
</tr>
<tr>
<td>/Awtú</td>
<td></td>
<td></td>
<td>/awteema' (NØ)</td>
<td></td>
<td>Personal Name (♂); c.f. /awtú</td>
</tr>
<tr>
<td>/awtú (Mo)</td>
<td>/awtú (Mo)</td>
<td>/awteema' (NØ)</td>
<td></td>
<td>monkey; butterfly</td>
<td></td>
</tr>
<tr>
<td>/awú (Mo)</td>
<td>/awú (Mo)</td>
<td>/aweema' (NØ)</td>
<td></td>
<td>bird sp.</td>
<td>any large raptor, esp. bearing a hooked-beak and crest (eagles, etc.)</td>
</tr>
<tr>
<td>/ayi (Ft)</td>
<td></td>
<td></td>
<td>/ayoo (Fr)</td>
<td>flower</td>
<td></td>
</tr>
<tr>
<td>/Ayi</td>
<td></td>
<td></td>
<td>/Ayi</td>
<td>/ayoo (Fr)</td>
<td></td>
</tr>
<tr>
<td>/ayla (NØ)</td>
<td></td>
<td></td>
<td>/ayla (NØ)</td>
<td>wedding song</td>
<td></td>
</tr>
<tr>
<td>/Ayla</td>
<td></td>
<td></td>
<td>/Ayla</td>
<td>/ayla (NØ)</td>
<td>Personal Name (♂); c.f. /ayla</td>
</tr>
<tr>
<td>/aymu (Mo)</td>
<td>/aymu (Mo)</td>
<td>/aymeeri (NØ)</td>
<td></td>
<td>word</td>
<td></td>
</tr>
<tr>
<td>/Aytí'i</td>
<td></td>
<td></td>
<td>/aytie'mó (Mo)</td>
<td></td>
<td>Personal Name (♂/♀) Possibly derived from /aytie'mó</td>
</tr>
<tr>
<td>/aytie'mó (Mo)</td>
<td></td>
<td></td>
<td>/ayto'oo (Fr)</td>
<td>corn (one kernel or one plant)</td>
<td></td>
</tr>
<tr>
<td>/Ayto'oo</td>
<td></td>
<td></td>
<td>/Ayto'oo</td>
<td>Personal Name (♂/♀); c.f. /Ayto'oo</td>
<td></td>
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<tr>
<td>/Eendú</td>
<td></td>
<td></td>
<td>/Eendú</td>
<td>Personal Name (♂)</td>
<td></td>
</tr>
<tr>
<td>/eetlimó (Mo)</td>
<td>/eetlimó (Mo)</td>
<td></td>
<td>/etlí (Fr)</td>
<td>pimple</td>
<td></td>
</tr>
<tr>
<td>/eetloo (Fr)</td>
<td></td>
<td></td>
<td>/eetloo</td>
<td>difficulty in finding food</td>
<td>Mass</td>
</tr>
<tr>
<td>/éw (Na)</td>
<td></td>
<td></td>
<td>/éw (Na)</td>
<td>west</td>
<td>Personal Name (♂); c.f. v. &lt;/iinkí&gt;: to come at a slow pace (perhaps because of tiredness or being distracted by other things)</td>
</tr>
<tr>
<td>/linkáy</td>
<td></td>
<td></td>
<td>/linkáy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nouns</td>
<td>Singular</td>
<td>General</td>
<td>Plural</td>
<td>Gloss</td>
<td>Nota</td>
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<tr>
<td>/ilintimó (Mo)</td>
<td>/ilintima' (NØ)</td>
<td>mammal sp.</td>
<td>Bohor reedbuck (Redunca redunca)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/iliwi (Fr)</td>
<td>/iliwoó (Fr)</td>
<td>/iliwáy (Mo)</td>
<td>leopard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/itsi (Ft)</td>
<td>/itsaa (Fr)</td>
<td>/itseemi (NØ)</td>
<td>insect sp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/itsimó (Mo)</td>
<td>/iteemi (NØ)</td>
<td>intestinal worm</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>/o/oo (Fr)</td>
<td>/o/oodu (NØ)</td>
<td>excrement</td>
<td></td>
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<tr>
<td>/Oo/im</td>
<td></td>
<td>/Oo/im</td>
<td>Personal Name (♂)</td>
<td></td>
<td></td>
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<tr>
<td>/oonaa (Fr)</td>
<td>/onu (NØ)</td>
<td>darkness</td>
<td></td>
<td></td>
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<tr>
<td>/Oru'oo</td>
<td>/Oru'oo</td>
<td>Vitex doniana; alternate pronunciation /oruru'umó/, /oruru'uma'</td>
<td></td>
<td></td>
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<tr>
<td>/oruru'umó (Mo)</td>
<td>/oruru'uma' (NØ)</td>
<td>plant sp.</td>
<td></td>
<td></td>
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<tr>
<td>/oyee (Fr)</td>
<td>/oyeedu (NØ)</td>
<td>advertisment of a coming dance</td>
<td></td>
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<tr>
<td>/Oyee</td>
<td>/Oyee</td>
<td>Personal Name (♂); c.f. /oyee</td>
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<tr>
<td>/Oyi</td>
<td>/Oyi</td>
<td>Personal Name (♂/♀); c.f. /oyee</td>
<td></td>
<td></td>
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<tr>
<td>/umi (Ft)</td>
<td>/umáy (Mo)</td>
<td>hump (e.g. of a cow)</td>
<td></td>
<td></td>
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<tr>
<td>/untla (Mo)</td>
<td>/unteema' (NØ)</td>
<td>cheek</td>
<td></td>
<td></td>
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<tr>
<td>/urfi (Fr)</td>
<td>/urfaa (Fr)</td>
<td>reptile sp.</td>
<td>any sp. of skink</td>
<td></td>
<td></td>
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<tr>
<td>/uu/umoo (Fr)</td>
<td></td>
<td>lowing of cattle in distress</td>
<td>Mass</td>
<td></td>
<td></td>
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<tr>
<td>/Uukú</td>
<td></td>
<td></td>
<td>Personal Name (♀)</td>
<td></td>
<td></td>
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<tr>
<td>/uuru (Mo)</td>
<td>/uureema' (NØ)</td>
<td>strength</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>/uyá (Mk)</td>
<td></td>
<td>north</td>
<td>Singulamia Tantum</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/uyáy (Mo)</td>
<td>/uyeema' (NØ)</td>
<td>right (side)</td>
<td>&lt;/uyeema'&gt; is uncommon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>aahhamoo (Fr)</td>
<td></td>
<td>lowing (of cattle)</td>
<td>Mass</td>
<td></td>
<td></td>
</tr>
<tr>
<td>aako (Mo)</td>
<td>akoki'i (NØ)</td>
<td>grandfather</td>
<td></td>
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<tr>
<td>Aakó</td>
<td></td>
<td>Aakó</td>
<td>Personal Name (♂); c.f. aako</td>
<td></td>
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<tr>
<td>aali (Fr)</td>
<td></td>
<td>inheritance</td>
<td></td>
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<tr>
<td>Aalitó</td>
<td></td>
<td>Aalitó</td>
<td>Personal Name (♂); c.f. v. aal</td>
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<tr>
<td>Nouns</td>
<td>Singular</td>
<td>General</td>
<td>Plural</td>
<td>Gloss</td>
<td>Nota</td>
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<tr>
<td>Aaloo</td>
<td>Aaloo</td>
<td>Aaloo</td>
<td>Personal Name (♂); c.f. aali</td>
<td></td>
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<tr>
<td>aalutumo (Mo)</td>
<td>aalutee (Fr)</td>
<td>inheritor (♂, ♀ respectively)</td>
<td>also &lt;aalusumo&gt; or &lt;aalous'o&gt;</td>
<td></td>
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<tr>
<td>aama (Fr)</td>
<td>aamami'i (NØ)</td>
<td>grandmother</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Aamí</td>
<td>Aamí</td>
<td>Personal Name</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>aari (Fr)</td>
<td>aari (Fr)</td>
<td>prophecy</td>
<td></td>
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<tr>
<td>aaxisa (Fr)</td>
<td>aaxama (Mk)</td>
<td>satisfaction, fulfilment</td>
<td>Deverbal (source verb, &lt;áx&gt;)</td>
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<tr>
<td>Abayí</td>
<td>Abayí</td>
<td>Personal Name (♀)</td>
<td></td>
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<tr>
<td>Abo'oo</td>
<td>Abo'oo</td>
<td>Personal Name (♀); c.f. abo'oo</td>
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<tr>
<td>abo'oo (Fr)</td>
<td>abu'u (Fr)</td>
<td>newlywed (♀)</td>
<td></td>
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<tr>
<td>afa (Mk)</td>
<td>afi'i (NØ)</td>
<td>mouth</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>afá da/aát</td>
<td>?</td>
<td>bird sp.</td>
<td></td>
<td></td>
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<tr>
<td>afa oha (Fr)</td>
<td>afi ohiingw (Mo)</td>
<td>smothering</td>
<td></td>
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<tr>
<td>afa'uray (Mo)</td>
<td>afa'uray (Mo)</td>
<td>annoyance</td>
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<tr>
<td>afa/ay (Mo)</td>
<td>afa/i'i (NØ)</td>
<td>thigh</td>
<td></td>
<td></td>
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<tr>
<td>Afa/ay</td>
<td>Afa/ay</td>
<td>Personal Name (♀); c.f. afa/ay</td>
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<tr>
<td>afada/aatúmó (Mo)</td>
<td>afada/aat (Mo)</td>
<td>bird sp.</td>
<td>any sp. of Oriole or Oxpecker</td>
<td></td>
<td></td>
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<tr>
<td>afahho'aa (Fr)</td>
<td>afahho'aa (Fr)</td>
<td>eloquence</td>
<td></td>
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<tr>
<td>afawa/i (Ft)</td>
<td>afawa/áy (Mo)</td>
<td>windfall</td>
<td></td>
<td></td>
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<tr>
<td>afeeni (Fr)</td>
<td>afeenaa (NØ)</td>
<td>outside</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>afeetloo (NØ)</td>
<td>afeetla' (NØ)</td>
<td>waist</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>afoo (Fr)</td>
<td>afoo (Fr)</td>
<td>voice, sound</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>afqurmó (Mo)</td>
<td>afqurma' (NØ)</td>
<td>warthog</td>
<td></td>
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<tr>
<td>afurtlimi (Ft)</td>
<td>afurtlimay (Mo)</td>
<td>simple knot</td>
<td></td>
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<tr>
<td>Nouns</td>
<td>Singular</td>
<td>General</td>
<td>Plural</td>
<td>Gloss</td>
<td>Nota</td>
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<tr>
<td>afusa (Fr)</td>
<td></td>
<td>afuums (Mo)</td>
<td></td>
<td>curse</td>
<td></td>
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<tr>
<td>ageengw (Mo)</td>
<td></td>
<td></td>
<td></td>
<td>dry season</td>
<td></td>
</tr>
<tr>
<td>ahaarimó (Mo)</td>
<td>ahaarima' (N∅)</td>
<td></td>
<td></td>
<td>k.o. gourd</td>
<td></td>
</tr>
<tr>
<td>Ahhamá</td>
<td></td>
<td></td>
<td></td>
<td>Personal Name (♂); c.f. ahhamo</td>
<td></td>
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<tr>
<td>akeesi (Fr)</td>
<td>akeesa' (N∅)</td>
<td></td>
<td></td>
<td>cooking stone</td>
<td></td>
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<tr>
<td>Alawaa</td>
<td></td>
<td></td>
<td></td>
<td>Alawaa; Person Name (♂); c.f. Alawaa</td>
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</tr>
<tr>
<td>Alawumo (Mo)</td>
<td>Alawito'o (Fr)</td>
<td></td>
<td>Alawaa</td>
<td>person of Alagwa ethnicity (♂, ♀ respectively)</td>
<td></td>
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<tr>
<td>ale/isay (Mo)</td>
<td></td>
<td></td>
<td></td>
<td>help</td>
<td></td>
</tr>
<tr>
<td>alesleemu (Mo)</td>
<td></td>
<td></td>
<td></td>
<td>ability; Mass</td>
<td></td>
</tr>
<tr>
<td>alhhe'esáy (Mo)</td>
<td>alhhe'esusu (N∅)</td>
<td></td>
<td></td>
<td>end</td>
<td></td>
</tr>
<tr>
<td>Allee</td>
<td></td>
<td></td>
<td></td>
<td>Allee; Personal Name (♂); c.f. allee</td>
<td></td>
</tr>
<tr>
<td>allimó (Mo)</td>
<td></td>
<td>allee (Fr)</td>
<td></td>
<td>house post</td>
<td></td>
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<tr>
<td>Alót</td>
<td></td>
<td></td>
<td>Alót</td>
<td>Personal Name (♂); this was reported to be a very rare name, of a semi-mythical ancestor</td>
<td></td>
</tr>
<tr>
<td>alqadoo (Fr)</td>
<td>alqadidiingw (Mo)</td>
<td></td>
<td>agreeing</td>
<td>Deverbal (source verb ? &lt;alqaát&gt;)</td>
<td></td>
</tr>
<tr>
<td>alu (N∅)</td>
<td></td>
<td></td>
<td>behind</td>
<td>Mass</td>
<td></td>
</tr>
<tr>
<td>Aluto'o</td>
<td></td>
<td></td>
<td></td>
<td>Personal Name (♀); c.f. aluto'o</td>
<td></td>
</tr>
<tr>
<td>alutumo (Mo)</td>
<td>alutuo' (Fr)</td>
<td>alutee (Fr)</td>
<td></td>
<td>last-born child (♂, ♀ respectively); [t] may be pronounced as [s]; c.f. alu</td>
<td></td>
</tr>
<tr>
<td>ama'ari (Fr)</td>
<td></td>
<td>ama'aráy (Mo)</td>
<td></td>
<td>reptile sp.; any slender, non-venomous, green snake</td>
<td></td>
</tr>
<tr>
<td>amafa/umó (Mo)</td>
<td>amafa/á (Fr)</td>
<td></td>
<td>plant sp.</td>
<td>(Parinaria curatellifolia)</td>
<td></td>
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<tr>
<td>amageenda'i (Fr)</td>
<td>amageendá' (Mo)</td>
<td></td>
<td>plant sp.</td>
<td>(Combretum zeyheri)</td>
<td></td>
</tr>
<tr>
<td>amama'umó (Mo)</td>
<td>amama'ó (Fr)</td>
<td>amama'odu (N∅)</td>
<td></td>
<td>bird sp.; any slender, venomous, green snake (esp. Boomslang (Dispholidus typus))</td>
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<tr>
<td>amanaani (Fr)</td>
<td></td>
<td>amanaanáy (Mo)</td>
<td></td>
<td>reptile sp.</td>
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<tr>
<td>Nouns</td>
<td>Singular</td>
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<td>Gloss</td>
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<td>Amas lukú (Fr)</td>
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<td>Amas lukú</td>
<td>Place Name</td>
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<td>amato/i (Fr)</td>
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<td>amato/áy (Mo)</td>
<td></td>
<td>snake</td>
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<td>amaxingi (Fr)</td>
<td>amaxingaa (Fr)</td>
<td>amaxingáy (Mo)</td>
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<td>Amay</td>
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<td>Personal Name (♂)</td>
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<tr>
<td>amayimó (Mo)</td>
<td></td>
<td>amayó (Fr)</td>
<td></td>
<td>plant sp. (Gynandropsis gynandra)</td>
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<td>Amayo</td>
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<td>Amayo</td>
<td>Personal Name; c.f. amayó</td>
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<tr>
<td>amayto’o (Fr)</td>
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<td>amayó (Mo)</td>
<td></td>
<td>plant sp. (Gynandropsis Gynandra)</td>
<td></td>
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<tr>
<td>ambaraki (Fr)</td>
<td>ambarakáy (Mo)</td>
<td></td>
<td></td>
<td>bird sp.</td>
<td>any sp. of dove</td>
</tr>
<tr>
<td>amoo (Fr)</td>
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<td>Amowa</td>
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<td>Personal Name (♀)</td>
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<td>amsi (N∅)</td>
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<td></td>
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<td>night</td>
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<td>Amsí</td>
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<td></td>
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<td>Personal Name (♂/♀); c.f. amsi</td>
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<td>anxari (Ft)</td>
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<td>phlegm</td>
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<td>ara (Ft)</td>
<td>ara’ar (Mo)</td>
<td></td>
<td></td>
<td>seeing</td>
<td>Deverbal (source verb, &lt;ár&gt;)</td>
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<td>Aroyá (Fr)</td>
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<td>Aroyá</td>
<td>Place Name</td>
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<tr>
<td>asfoolusumo (Mo)</td>
<td>asfoolusee (Fr)</td>
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<td>shit disturber (♂,♀ respectively)</td>
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<tr>
<td>askaarimó (Mo)</td>
<td>askár (Mo)</td>
<td>askaráy (Mo)</td>
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<td>soldier</td>
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<td>askoofumó (Mo)</td>
<td>askóf (Mo)</td>
<td>askoofáy (Mo)</td>
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<td>asla (Ft)</td>
<td>asloo (N∅)</td>
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<td>Aweé</td>
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<td>Personal Name (♂); this was reported to be a very rare name, of a semi-mythical ancestor</td>
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<td>awu (Mo)</td>
<td>awee (Fr)</td>
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<td>aya (Mo)</td>
<td>ayeemo (Na)</td>
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<td>land</td>
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<td>Ayá /Abén (Mo)</td>
<td></td>
<td></td>
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<td>Ayá /Abén</td>
<td>Place Name</td>
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<tr>
<td>Ayá /Awaákw (Mo)</td>
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<td></td>
<td></td>
<td>Ayá /Awaákw</td>
<td>Place Name</td>
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<td>Nouns</td>
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<td>General</td>
<td>Plural</td>
<td>Gloss</td>
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<td>Ayá Hayshi (Mo)</td>
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<td>Place Name</td>
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<tr>
<td>Ayá Tla/aa (Mo/Fr)</td>
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<td>Ayá Tla/aa</td>
<td>Place Name</td>
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<td>Ayamaango (M)</td>
<td>Ayamaango</td>
<td>Ayamaango</td>
<td>Place Name</td>
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<td>Ayasanda (Mo)</td>
<td>Ayasanda</td>
<td>Ayasanda</td>
<td>Place Name</td>
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<td>Ayaslä</td>
<td>Place Name</td>
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<td>Ayaxoxo</td>
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<tr>
<td>ayí (Fr)</td>
<td>amu (Nø)</td>
<td>mother (one's own)</td>
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<td>ayishagá (Fr)</td>
<td>ayishagadu (Nø)</td>
<td>father's sister</td>
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<td>ayoo (Fr)</td>
<td>amu (Nø)</td>
<td>mother (general)</td>
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<td>ba'aa (Fr)</td>
<td>ba'u (Nø)</td>
<td>grave</td>
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<td>ba'aarimó (Mo)</td>
<td>ba'aari (Fr)</td>
<td>bee</td>
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<tr>
<td>ba'aarimó (Mo)</td>
<td>ba'ár (Mo)</td>
<td>fly</td>
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<td>ba'animó (Mo)</td>
<td>ba'aní (Fr)</td>
<td>ba'anaa (Fr)</td>
<td>reptile sp.</td>
<td>any sp. of gecko</td>
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<tr>
<td>ba'at (Mo)</td>
<td>ba'ateeema' (Nø)</td>
<td>mammal sp.</td>
<td>Greater kudu (Tragelaphus strepsiceros)</td>
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<td>Ba/a</td>
<td>Ba/a</td>
<td>Personal Name (♂)</td>
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<tr>
<td>ba/aata (Nø)</td>
<td>Ba/aata</td>
<td>Fatigue</td>
<td>Mass</td>
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<td>Ba/aatá</td>
<td>ba/i (Fr)</td>
<td>Ba/i</td>
<td>Personal Name (♂)</td>
<td>Personal Name (♀); c.f. ba/aata</td>
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<td>Ba/i</td>
<td>baabá (Mo)</td>
<td>baabi'i (Nø)</td>
<td>father</td>
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<td>baahaa (Fr)</td>
<td>bahu (Nø)</td>
<td>hyaena</td>
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<td>Baahaa</td>
<td>baahaár Maandaa (Fr)</td>
<td>Baahaa</td>
<td>Personal Name (♂, less commonly ♀); c.f. baahaa</td>
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<tr>
<td>baahhi (Fr)</td>
<td>maandaa's horn</td>
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<tr>
<td>baalusmo (Mo)</td>
<td>baaluso'o (Fr)</td>
<td>baalusee (Fr)</td>
<td>master (♂, ♀ respectively)</td>
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<tr>
<td>baambari (Fr)</td>
<td>baambár (Mo)</td>
<td>bell</td>
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<tr>
<td>Baambay (Mo/Fr)</td>
<td>Baambay</td>
<td>Baambay</td>
<td>Place Name</td>
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<tr>
<td>Nouns</td>
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<td>General</td>
<td>Plural</td>
<td>Gloss</td>
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<td>Babati (Fr)</td>
<td></td>
<td></td>
<td>Babati</td>
<td>Place Name</td>
<td></td>
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<tr>
<td>babi/i (Fr)</td>
<td>baba/aa (Fr)</td>
<td></td>
<td>insect sp.</td>
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<tr>
<td>babumó (Mo)</td>
<td>babí (Ft)</td>
<td></td>
<td>insect sp.</td>
<td></td>
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<td>Bacho</td>
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<td>Baicho</td>
<td>Personal Name (♂)</td>
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<td>Personal Name</td>
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<td>bafú (Mo)</td>
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<td>drizzle</td>
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<td>Bagara (Fr)</td>
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<td>Bagara</td>
<td>Place Name</td>
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<tr>
<td>Bagari (Fr)</td>
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<td>Bagari</td>
<td>Place Name</td>
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<td>Bagayí</td>
<td>Bagayí</td>
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<td>Personal Name (♂)</td>
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<tr>
<td>bahhaymó (Mo)</td>
<td>bahháy (Mo)</td>
<td></td>
<td>plant sp.</td>
<td>(Syzigium cordatum)</td>
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<td>Baahhi</td>
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<td>Baahhi</td>
<td>Personal Name (♂/♀); c.f. baahhí</td>
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<tr>
<td>balaali (Fr)</td>
<td>balaangw (Mo)</td>
<td></td>
<td>millet</td>
<td>balaali refers to 'one grain' or 'one plant' of millet</td>
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<td>Balaáli</td>
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<td>Personal Name (♂/♀); c.f. balaali</td>
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<td>Balaangw</td>
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<td>Balabalá</td>
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<td>Personal Name (♂/♀); c.f. balbalá</td>
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<tr>
<td>balasumó (Mo)</td>
<td>balasi (Fr)</td>
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<td>pigeon pea</td>
<td>balasumó refers to 'one pea' or 'one plant'</td>
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<td>Balawá</td>
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<td></td>
<td>Personal Name (♂); c.f. Swahili 'barua': 'letter'</td>
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<tr>
<td>Balbalá (Ft)</td>
<td>balbaldu (NØ)</td>
<td></td>
<td>road</td>
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<td>Balisaa</td>
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<td>Balowá (Fr)</td>
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<td></td>
<td>Place Name</td>
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<td>Bambaray</td>
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<td>Personal Name (♂); c.f. bambaray</td>
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<tr>
<td>bambarimo (Mo)</td>
<td>bambaree (Fr)</td>
<td></td>
<td>bulrush millet (one grain or one plant)</td>
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<tr>
<td>bami'ito'o (Fr)</td>
<td>bamiya (Fr)</td>
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<td>okra fruit</td>
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<tr>
<td>bamiyumó (Mo)</td>
<td>bamiya (Fr)</td>
<td></td>
<td>okra plant</td>
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<td>Nouns</td>
<td>Singular</td>
<td>General</td>
<td>Plural</td>
<td>Gloss</td>
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<td>bangilito'o (Fr)</td>
<td>bangili (Fr)</td>
<td>bangiláy (Mo)</td>
<td>k.o. bracelet</td>
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<td>bangimó (Mo)</td>
<td>bangi (Fr)</td>
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<td>plant sp.</td>
<td>(Tagetes minuta)</td>
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<td>Personal Name</td>
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<tr>
<td>baqayoo (Fr)</td>
<td>baqaydu (NØ)</td>
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<td>court, chamber</td>
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<tr>
<td>baqumó (Mo)</td>
<td>baq (Mo)</td>
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<td>house partition</td>
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<tr>
<td>bara (Ft)</td>
<td>badu (NØ)</td>
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<td>side</td>
<td>Questioned form &lt;baratoô&gt;</td>
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<tr>
<td>Bara/ee</td>
<td></td>
<td></td>
<td>k.o. dance</td>
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<td>bará/umó (Mo)</td>
<td>bara/i (Fr)</td>
<td>bara/i (Mo)</td>
<td>plant sp.</td>
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<td>bara/usee (Fr)</td>
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<td>baranqumó (Mo)</td>
<td>baranqú (Mo)</td>
<td>baranquma' (NØ)</td>
<td>plant sp.</td>
<td>&lt;baranqú&gt; collective</td>
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<td>Personal Name</td>
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<td>barisumo (Mo)</td>
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<td>bariyadu (NØ)</td>
<td>k.o. disease</td>
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<td>Personal Name</td>
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<td>bariyomodi (Fr)</td>
<td>bariyomodaa (Fr)</td>
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<td>plant sp.</td>
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<td>basa (Mk)</td>
<td>basáy (Mo)</td>
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<td>south</td>
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<td>left</td>
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<td>Gloss</td>
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<td>Personal Name (♂); c.f. Gidabasoo</td>
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<td>Personal Name (♂/♀); c.f. derived from basoroo</td>
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<td>basorumó (Mo)</td>
<td>basoroo (Fr)</td>
<td></td>
<td></td>
<td>sorghum (one grain or plant)</td>
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<tr>
<td>Basosideé(d)</td>
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<td>Basosideé</td>
<td>Place Name</td>
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<tr>
<td>bata (Fr)</td>
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<td>bata (Fr)</td>
<td>duck</td>
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<td>Bata</td>
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<td>Bata</td>
<td>Personal Name; c.f. bata</td>
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<tr>
<td>batlitimo (Mo)</td>
<td>batli (Ft)</td>
<td>batláy (Mo)</td>
<td>batlitima' (N∅)</td>
<td>young animal, young person (♂, ♀ respectively)</td>
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<tr>
<td>Bay</td>
<td></td>
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<td>Bay</td>
<td>Personal Name (♂)</td>
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<td>Bayjók</td>
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<td>Personal Name (♂)</td>
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<td>baynimó (Mo)</td>
<td>baynoo (Fr)</td>
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<td>pig</td>
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<td>Bayo</td>
<td></td>
<td></td>
<td></td>
<td>Bayo</td>
<td>Personal Name (♂); this was reported to be a very rare name, of a semi-mythical ancestor</td>
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<tr>
<td>Bee/á</td>
<td></td>
<td></td>
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<td>Bee/á</td>
<td>Personal Name; possibly derived from bee/aangw</td>
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<tr>
<td>bee/amó (Mo)</td>
<td>bee/aángw (Mo)</td>
<td></td>
<td></td>
<td>bird sp.</td>
<td>White-eyed Slaty Flycatcher (Melaenornis fischeri)</td>
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<tr>
<td>bee/i (Fr)</td>
<td></td>
<td>bee/aangw (Mo)</td>
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<td>sheep</td>
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<td>Bee/i</td>
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<td>Personal Name (♂); c.f. bee/i</td>
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<td>Beekoo</td>
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<td>Personal Name (♂/♀)</td>
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<tr>
<td>beerá (Mo)</td>
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<td></td>
<td></td>
<td>milk (fresh)</td>
<td>Mass</td>
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<td>Beerimi (Ft)</td>
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<td>Beerimi</td>
<td>Place Name</td>
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<tr>
<td>beerumó (Mo)</td>
<td>beerimi (Fr)</td>
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<td>beerimáy (M)</td>
<td>plant sp. (Dodonea viscosa)</td>
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<td>Bereqo  (Fr)</td>
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<td>Place Name</td>
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<td>Nouns</td>
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<td>General</td>
<td>Plural</td>
<td>Gloss</td>
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<tr>
<td>bi/iní (Fr)</td>
<td>bi/inaa (Fr)</td>
<td>bi/ináy (Mo)</td>
<td>mammal sp. Silky blesmol (Heliophobius argenteocinereus)</td>
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<tr>
<td>bibilia (Fr)</td>
<td>bibiliadu (NØ)</td>
<td>bible</td>
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<td>Bichá</td>
<td>Bichá</td>
<td>Personal Name (♂)</td>
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<tr>
<td>bihhi (NØ)</td>
<td>bihhihhee (Fr)</td>
<td>side (of the body)</td>
<td></td>
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<tr>
<td>biintlaa (Fr)</td>
<td>wave</td>
<td>Mass</td>
<td></td>
<td></td>
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<tr>
<td>bila (Mo)</td>
<td>mud deposited by water</td>
<td>Mass</td>
<td></td>
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<td>Bilaari</td>
<td>Bilaari</td>
<td>Personal Name; c.f. the Swahili 'bilauri': 'drinking glass'</td>
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<td>Bilo</td>
<td>Bilo</td>
<td>Personal Name (♂)</td>
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<td>Binday</td>
<td>Binday</td>
<td>Personal Name (♂)</td>
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<tr>
<td>biriri/imó (Mo)</td>
<td>biriri/ (Mo)</td>
<td>bird sp. Red-faced Crimsonwing (Cryptospiza reichenovii)</td>
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<td>Bisiye</td>
<td>Bisiye</td>
<td>Personal Name (♂)</td>
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<tr>
<td>biyashara (Mo)</td>
<td>commerce</td>
<td></td>
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<td>Biyay</td>
<td>Biyay</td>
<td>Personal Name (♂)</td>
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<tr>
<td>Biyedá</td>
<td>Biyedá</td>
<td>Personal Name (♂/♀)</td>
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</tr>
<tr>
<td>bo/ay (Mo)</td>
<td>multitude (of people)</td>
<td>Mass</td>
<td></td>
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<tr>
<td>Bo/ay (Mo)</td>
<td>Bo/ay</td>
<td>Place Name</td>
<td></td>
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<tr>
<td>Bo/oo</td>
<td>Bo/oo</td>
<td>Personal Name (♂); c.f. boo/</td>
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<tr>
<td>Bo/umo</td>
<td>Bo/umo</td>
<td>Personal Name (♂); c.f. boo/</td>
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<tr>
<td>boksi (Mo)</td>
<td>boksáy (Mo)</td>
<td>bokseema' (NØ) box</td>
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<td>Bolos</td>
<td>Bolos</td>
<td>Personal Name (♂)</td>
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</tr>
<tr>
<td>bomba (Fr)</td>
<td>bombadu (NØ)</td>
<td>pipe</td>
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<tr>
<td>bombó(t) (Fr)</td>
<td>bombodu (NØ)</td>
<td>old beer</td>
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<td>Bombó(t)</td>
<td>Bombó(t)</td>
<td>Personal Name; c.f. bombó(t)</td>
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<tr>
<td>Bonga (Fr)</td>
<td>Bonga</td>
<td>Place Name</td>
<td></td>
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<tr>
<td>Nouns</td>
<td>Singular</td>
<td>General</td>
<td>Plural</td>
<td>Gloss</td>
<td>Nota</td>
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<tr>
<td>Bonga</td>
<td>Bonga</td>
<td>Bonga</td>
<td>Bonga</td>
<td>Personal Name (♂); c.f. the place name &lt;Bonga&gt;</td>
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<tr>
<td>Dongani</td>
<td>Dongani</td>
<td>Dongani</td>
<td>Personal Name (♂)</td>
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<tr>
<td>Boo/i</td>
<td>Boo/i</td>
<td>Boo/i</td>
<td>Personal Name (♂/♀); c.f. bo/áy</td>
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<tr>
<td>Booga</td>
<td>Booga</td>
<td>Booga</td>
<td>Personal Name (♂); c.f. the Swahili 'boga': 'pumpkin'</td>
<td></td>
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<tr>
<td>Boohaa (Fr)</td>
<td></td>
<td></td>
<td>bundle of firewood</td>
<td>Mass</td>
<td></td>
</tr>
<tr>
<td>Boohá</td>
<td></td>
<td></td>
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<td>Personal Name (♂); c.f. boohaa</td>
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<tr>
<td>boohoongw (Mo)</td>
<td>boohi'i (N∅)</td>
<td>hole; crater</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>boohontó (Mo)</td>
<td>boohonte'eeri (N∅) boohontima' (N∅)</td>
<td>small hole</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Bookí</td>
<td>Bookí</td>
<td></td>
<td>Personal Name (♂)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>booloo (Fr)</td>
<td>bolu (N∅)</td>
<td>day</td>
<td></td>
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<tr>
<td>Bootá</td>
<td>Bootá</td>
<td></td>
<td>Personal Name (♂)</td>
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<tr>
<td>boymó (Mo)</td>
<td>boyáy (Mo)</td>
<td>colonial-era subvillage leader</td>
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<tr>
<td>bu'i (Ft)</td>
<td>bu'áy (Mo)</td>
<td>cosmetic burn mark</td>
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<td>Bu'í</td>
<td>Bu'í</td>
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<td>Personal Name (♂); c.f. bu'i or bu'ungw</td>
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<tr>
<td>Bu'u</td>
<td>Bu'u</td>
<td></td>
<td>Personal Name (♂/♀); c.f. bu'ungw</td>
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<tr>
<td>bu'ungw (M)</td>
<td>bu'ungw (Mo)</td>
<td>harvest (harvesting?)</td>
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<tr>
<td>Bubu (Mo/Fr)</td>
<td>Bubu</td>
<td>Place Name</td>
<td></td>
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</tr>
<tr>
<td>bubuka (Mo)</td>
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<td>insect sp.</td>
<td>Mass</td>
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<tr>
<td>buhha (N∅)</td>
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<td>quarrel</td>
<td>Mass</td>
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<td>Personal Name (♂); c.f. buhha</td>
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<tr>
<td>Bunga (Mo)</td>
<td>Bunga</td>
<td>Place Name</td>
<td></td>
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<tr>
<td>buraa (Fr)</td>
<td>burdu (N∅)</td>
<td>beer</td>
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<td>Buraá</td>
<td>Buraá</td>
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<td>Personal Name (♂/♀); c.f. buraa</td>
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<tr>
<td>buri (Ft)</td>
<td>buráy (Mo)</td>
<td>forehead</td>
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<tr>
<td>Nouns</td>
<td>Singular</td>
<td>General</td>
<td>Plural</td>
<td>Gloss</td>
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<tr>
<td>Burí</td>
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<td>Personal Name (♀); c.f. buraa or Buraá</td>
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<tr>
<td>bursli (Fr)</td>
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<td>burslaa (Fr)</td>
<td>plant sp.</td>
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<td>busla (Mo)</td>
<td>white clay</td>
<td>Mass</td>
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<td>Buslá</td>
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<td>buunqaa (Fr)</td>
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<td>chaabú (Mo)</td>
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<td>Chalo</td>
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<td>Cheempoó</td>
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<td>Chemchem (Mo/ Fr)</td>
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<td>Place Name</td>
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<tr>
<td>chirimo (Mo)</td>
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<td>chirima'</td>
<td>bird sp.</td>
<td>any sp. of blue and rufous kingfisher</td>
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<td>chupadu (NØ)</td>
<td>bottle</td>
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<td>chupáy (Mo)</td>
<td>underwear</td>
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<tr>
<td>da'aangw (Mo)</td>
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<td>da'ayee (Fr)</td>
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<td></td>
<td>da'ayeedu (NØ)</td>
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<td>da'aysee (Fr)</td>
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<td>coward (♂, ♀ respectively)</td>
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<td>da/a (Ft)</td>
<td></td>
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<td>da/a/aangw (Mo)</td>
<td>burning</td>
<td>Deverbal (source verb, &lt;daá/&gt;</td>
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<td>da/alusumó (Mo)</td>
<td></td>
<td></td>
<td>da/alusuma' (NØ)</td>
<td>insect sp.</td>
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<tr>
<td>da/alusumo (Mo)</td>
<td></td>
<td></td>
<td>da/alusáy (Mo)</td>
<td>plant sp.</td>
<td>(Osyris compressa)</td>
</tr>
<tr>
<td>da/alusumo (Mo)</td>
<td></td>
<td></td>
<td>da/alusee (Fr)</td>
<td>sorcerer (♂, ♀ respectively)</td>
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<td>Da/araa</td>
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<td>Da/araa</td>
<td>Personal Name (♂); c.f. da/araa</td>
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<td>da/araa (Fr)</td>
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<td>Nouns</td>
<td>Singular</td>
<td>General</td>
<td>Plural</td>
<td>Gloss</td>
<td>Nota</td>
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<td>Da/ată</td>
<td>da/ari (NØ)</td>
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<td>Da/atí</td>
<td>Da/atí</td>
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<td>Personal Name (♀); c.f. da/atá</td>
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<td>da/éboo (NØ)</td>
<td>da/awi (NØ)</td>
<td>da/ebubu (NØ)</td>
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<tr>
<td>daa'i (Fr)</td>
<td>daa'aa (Fr)</td>
<td></td>
<td></td>
<td>plant sp.</td>
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<tr>
<td>Daadú</td>
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<td></td>
<td>bringing the cows home</td>
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<tr>
<td>daafi (Fr)</td>
<td>dafifiingw (Mo)</td>
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<td>Deverbal (source verb, &lt;daáf&gt;)</td>
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<td>Daafí</td>
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<td>Personal Name (♂/♀); c.f. daafi</td>
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<td>Daahhí</td>
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<td>Personal Name (♂/♀); c.f. daahhi</td>
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<tr>
<td>daahhumó (Mo)</td>
<td>daahhí (Fr)</td>
<td>daahháy (Mo)</td>
<td></td>
<td>bird sp. any sp. of starling</td>
<td></td>
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<tr>
<td>daama’umo (Mo)</td>
<td>daamá (Mo)</td>
<td></td>
<td></td>
<td>mammal sp.</td>
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<td>Daambáy</td>
<td>Daambáy</td>
<td></td>
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<td>Personal Name (♂/♀); c.f. daambáy</td>
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<td>daambumó (Mo)</td>
<td>daambáy (Mo)</td>
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<td></td>
<td>bird sp. any sp. of weaver</td>
<td></td>
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<tr>
<td>daamó(g) (Fr)</td>
<td>daamó(g) (Fr)</td>
<td>daamogadu (NØ)</td>
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<td>beard</td>
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<tr>
<td>daanda (Mo)</td>
<td>daandeemo (Na)</td>
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<td>daangafi (Ft)</td>
<td>daangafáy (Mo)</td>
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<td>k.o. gourd</td>
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<td>daasloo (Fr)</td>
<td>daslisliingw (Mo)</td>
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<td>grinding millet (roughly, for beer)</td>
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<td>Daasloó</td>
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<td>Baobab (Adansonia digitata)</td>
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<td>mammal sp.</td>
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<td>fool (both ♂ and ♀)</td>
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<td>calf</td>
<td>c.f. the Swahili 'ndama': 'calf'</td>
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<td>Personal Name</td>
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<td>daqarito'o (Fr)</td>
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<td>daqaqaangw (Mo)</td>
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<td>Dáqaro</td>
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<td>daqway (Mo)</td>
<td>daqwa' (N∅)</td>
<td>donkey; 15-gallon measure</td>
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<td>daqwi'i (N∅)</td>
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<td>Personal Name (♂); c.f. daqway</td>
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<td>daqwáy sla/aa (Mo)</td>
<td>daqwá sla/aa (N∅)</td>
<td>mammal sp. any zebra sp.</td>
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<td>Darabe</td>
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<td>dari (Ft)</td>
<td>daráy (Mo)</td>
<td>comb (of rooster)</td>
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<td>Personal Name</td>
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<td>datumó (Mo)</td>
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<td>Sausage Tree (Kigelia africana)</td>
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<td>dataa (Mo)</td>
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<td>dabee (Fr)</td>
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<td>sky, heavens</td>
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<td>Dawri</td>
<td>Dawri</td>
<td>Singularia Tantum</td>
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<td>dawutimee (Fr)</td>
<td>Dawo</td>
<td>Personal Name (♂)</td>
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<td>Dawo</td>
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<td>Personal Name (♂); c.f. de'eengw</td>
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<tr>
<td>De'emáy</td>
<td>De'emáy</td>
<td>any sp. of Wagtail (esp. African Pied Wagtail (Motacilla aguimp))</td>
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<td>de'emisi (Ft)</td>
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<td>de/arumó (Mo)</td>
<td>de/ár (Mo)</td>
<td>vein, root</td>
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<td>de/eeboo (N∅)</td>
<td>de/eebubu (N∅)</td>
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<td>deede/i (Fr)</td>
<td>deedé/ (Mo)</td>
<td>bird sp.</td>
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<td>deelimó (Mo)</td>
<td>deeláy (Mo)</td>
<td>kid (i.e. baby goat)</td>
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<td>deeloo (Fr)</td>
<td>delu (N∅)</td>
<td>day</td>
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<tr>
<td>deemu (Mo)</td>
<td>being present</td>
<td>c.f. v. deer 'be present'</td>
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<td>deeqwaa (Fr)</td>
<td>dequ (N∅)</td>
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<td>delaa (Fr)</td>
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<td>Delí</td>
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<td>Personal Name (♂/♀); c.f. deli</td>
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<td>desu (Mo)</td>
<td>girl</td>
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<td>yaamu (N∅)</td>
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<td>dí/áy (Mo)</td>
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<td>Deverbal (source verb, &lt;dif&gt;)</td>
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<td>digirmó (Mo)</td>
<td>digír (Mo)</td>
<td>footprint</td>
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<td>diimarusee (Fr)</td>
<td>senile person (♂,♀ respectively)</td>
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<td>diingi (Fr)</td>
<td>diingoo (Fr)</td>
<td>bird sp.</td>
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<td>diinku'umadu (N∅)</td>
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<td>diinqáy (Mo)</td>
<td>slipknot, noose</td>
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<td>Diinyá</td>
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<td>Personal Name (♂)</td>
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<td>diitsa' (N∅)</td>
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<td>diqiyá daba (N∅)</td>
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<td>do' (Mo)</td>
<td>maray (NØ)</td>
<td>mar'i (NØ)</td>
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<td>do/i (Fr)</td>
<td>do/áy (Mo)</td>
<td>cane rat</td>
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<td>do/ita (Fr)</td>
<td>do/imit (Mo)</td>
<td>scurrying away</td>
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<td>fining</td>
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<td>Dohom (Mo)</td>
<td>doloodumó (Mo)</td>
<td>doloodima' (NØ)</td>
<td>bird sp.</td>
<td>Southern Ground-hornbill (Bucorvus leadbeateri)</td>
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<td>doofaa (Fr)</td>
<td>dofu (NØ)</td>
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<td>Personal Name (♂); c.f. doofaa</td>
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<td>c.f. the Swahili 'mdarobo' (?): 'tsetse fly'; also pronounced &lt;darbo&gt;</td>
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<td>duxuxuungw (Mo)</td>
<td>duxut (Mo)</td>
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<td>&lt;duxuxuungw&gt; (Men) &lt;duxut&gt; (Women): act of marrying or being married many times, or many marriages</td>
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<td>Whistling Thorn or Black-Galled Acacia (Acacia drepanolobium)</td>
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<td>gamiaa (Fr)</td>
<td>gamiaadu (N∅)</td>
<td>camel</td>
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<tr>
<td>gamu</td>
<td>(N∅)</td>
<td>gammee</td>
<td>(Fr)</td>
<td>underneath (n.), foot (e.g. of a tree, mountain, etc.)</td>
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<tr>
<td>gangalhimó (Mo)</td>
<td>gangalhima' (N∅)</td>
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<td>wedding bracelet</td>
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<td>garaangw (Mo)</td>
<td>gareeri (N∅)</td>
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<td>mouse, rat</td>
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<td>Garaangw</td>
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<td>Personal Name; c.f. garaangw</td>
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<td>garma (Mo)</td>
<td>daaqay (Mo)</td>
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<td>boy, young man</td>
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<td>gasesmó (Mo)</td>
<td>gasesáy (Mo)</td>
<td>gasesima' (N∅)</td>
<td>reptile sp.</td>
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<td>gawá (Ft)</td>
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<td>up (n.)</td>
<td>Questioned form &lt;gawatoô&gt;</td>
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<td>Personal Name (♂); c.f. gawdi</td>
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<td>gawdi (Fr)</td>
<td>gawdaa (Fr)</td>
<td></td>
<td>plant sp.</td>
<td>(Acacia nilotica)</td>
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<td>Gayuw (Mo)</td>
<td></td>
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<td>Place Name</td>
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<td>Gedabósh (Fr)</td>
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<td>Place Name</td>
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<td>Gedamár (Fr)</td>
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<td>Gedamár</td>
<td>Place Name</td>
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<tr>
<td>gee/ay (Mo)</td>
<td>gee/aawee (Fr)</td>
<td></td>
<td>slope, shelf in a traditional house</td>
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<tr>
<td>Gee/ay</td>
<td></td>
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<td>Gee/ay</td>
<td>Personal Name (♀); c.f. gee/ay</td>
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<tr>
<td>gee/umó (Mo)</td>
<td>gee/ó (Mo)</td>
<td></td>
<td>bird sp.</td>
<td>any sp. of Rock-thrush</td>
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<td>Geejay</td>
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<td>Personal Name (♂)</td>
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<td>Jeela</td>
<td></td>
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<td>Jeela</td>
<td>Personal Name (♂/♀); c.f. jeela</td>
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<td>geenaangw (Mo)</td>
<td>geenaawee (Fr)</td>
<td></td>
<td>bird sp.</td>
<td>any medium-sized raptor which hunts primarily by rapidly snatching its prey (goshawks, etc.)</td>
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<td>Geenáy</td>
<td></td>
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<td>Personal Name (♂); c.f. geenaangw</td>
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<td>geenda’i (Fr)</td>
<td>geendá’ (Mo)</td>
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<td>plant sp.</td>
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<td>Place Name</td>
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<td>Place Name</td>
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<td>geera (N∅)</td>
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<td>geera</td>
<td>front (n.)</td>
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<td>Nouns</td>
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<td>geeraharusumo (Mo)</td>
<td></td>
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<td>leader, guide (♂,♀ respectively)</td>
<td>Personal Name (♂); c.f. the Datooga &lt;geeso&gt;: a type of traditional beer</td>
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<td>geeraharuso'o (Fr)</td>
<td>geerarahusee (Fr)</td>
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<td>Geeso</td>
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<td>Place Name</td>
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<td>gidondór (Mo)</td>
<td>gidondoráy (Mo)</td>
<td>gidondoori</td>
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<td>giheeri(d) (Fr)</td>
<td>giheeridima' (NØ)</td>
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<td>mammal sp. Striped hyaena (Hyaena hyaena)</td>
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<td>giroo (Fr)</td>
<td>gigidiingw (Mo)</td>
<td>giirweeri (NØ)</td>
<td>ambushing Deverbal (source verb, &lt;giir&gt;)</td>
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<td>giirwaangw (Mo)</td>
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<td>giirweeri (NØ)</td>
<td>plant sp. (Catunaregan spinosa)</td>
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<td>Giroo</td>
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<td>Personal Name (♂/♀); c.f. giroo</td>
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<td>Giroyí (Fr)</td>
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<td>gisaangi (Fr)</td>
<td>gisaangá' (NØ)</td>
<td>k.o. gourd</td>
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<td>Gisboy</td>
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<td>giseerimó (Mo)</td>
<td>giseeri(d) (Mo)</td>
<td>giseeridu (NØ)</td>
<td>giseerima' (N∅) giseeridima' (N∅)</td>
<td>pot for special beer</td>
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<td>gitlahharima' (N∅)</td>
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<td>gixsadu (N∅) gixseema' (N∅)</td>
<td>town, city</td>
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<td>gongooxi (Fr)</td>
<td>gongoxa' (NØ)</td>
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<td>gonoxumó (Mo)</td>
<td>gonoxuma' (NØ)</td>
<td>ankle</td>
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<td>Goodí</td>
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<td>Personal Name (♂); c.f.the Swahili 'kodi': 'tax'</td>
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<td>goofaangw (Mo)</td>
<td>goofaawee (Fr)</td>
<td>antelope sp.</td>
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<td>gooli (Fr)</td>
<td>gooláy (Mo)</td>
<td>goal (in football)</td>
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<td>gootlumó (Mo)</td>
<td>gootló (Mo)</td>
<td>bird sp.</td>
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<tr>
<td>Gora</td>
<td>Gora</td>
<td>any sp. of Robin-Chats</td>
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<tr>
<td>goranga (Mo)</td>
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<td>song for hero</td>
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<td>Gormo (Mo)</td>
<td></td>
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<td>person of Gorwaa ethnicity (♂, ♀ respectively)</td>
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<td>Gorto'o (Fr)</td>
<td>Gorwaa (NØ)</td>
<td>&lt;Gorwaa&gt; may be reduced to &lt;Goraa&gt;</td>
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<td>gotla (Mo)</td>
<td>gootlit (Mo)</td>
<td>insulting</td>
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<td>gotlitiiingw (Mo)</td>
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<td>Deverbal (source verb ? &lt;gotl&gt;)</td>
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<td>gu'ute (Fr)</td>
<td>gu'usa (Fr)</td>
<td>sleeping</td>
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<tr>
<td>guugu'usa (Fr)</td>
<td></td>
<td>Deverbal (source verb, &lt;guu'&gt;); &lt;guu'umis&gt; repeatedly laying (someone) down to sleep</td>
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<td>gugu'umis (Mo)</td>
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<td>Gu/uloo</td>
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<td>Personal Name (♂); c.f. gu/a</td>
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<td>guddee (Fr)</td>
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<td>guffee (Fr)</td>
<td>smouldering stick</td>
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<td>guhhulay (Mo)</td>
<td>guhhuli'i (NØ)</td>
<td>club (i.e. a weapon)</td>
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<td>gulguchaandi (Fr)</td>
<td>gulguchantaa (Fr)</td>
<td>plant sp.</td>
<td>(Zanha africana)</td>
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<td>gulgunglita</td>
<td>gulungulimit (Mo)</td>
<td>making (sth.) into a sphere</td>
<td>Deverbal ?</td>
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<td>gumbayá' (Mo)</td>
<td>gumbayaya'ee (Fr)</td>
<td>kidney</td>
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<td>Gunakí</td>
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<td>Gunakí</td>
<td>Personal Name; perhaps derived from Datooga (etymon unknown)</td>
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<td>gura' (Mo)</td>
<td>gur'i (N∅)</td>
<td>stomach</td>
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<td>gureendi (Fr)</td>
<td>gureenday (Mo)</td>
<td>donkey colt</td>
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<td>gurhami (Fr)</td>
<td>gurhammi (Fr)</td>
<td>misgiving</td>
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<td>gurhoo'a (Fr)</td>
<td>gurhoo'a (Fr)</td>
<td>good (n.)</td>
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<td>gurtlakwee (Fr)</td>
<td>gurtlakwee (Fr)</td>
<td>malevolence</td>
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<tr>
<td>gurtleemu (Mo)</td>
<td>gurtleemu (Mo)</td>
<td>pity, mercy</td>
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<tr>
<td>gurando (Mo)</td>
<td>gurando (Mo)</td>
<td>male goat</td>
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<td>Gurtu</td>
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<td>Gurtu</td>
<td>Personal Name (♂/♀); c.f. gurtu</td>
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<td>guta/ati (Fr)</td>
<td>guta/ati (Fr)</td>
<td>plant sp.</td>
<td>(Dombeya sp.)</td>
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<td>guundurufi (Fr)</td>
<td>guundurufaa (Fr)</td>
<td>reptile sp.</td>
<td>Royal Python (?) (Python regius)</td>
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<td>gwa’ara (Fr)</td>
<td>gwa’ardu (N∅)</td>
<td>death</td>
<td>Deverbal (source verb &lt;gwaá’&gt;)</td>
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<tr>
<td>gwa’ara (Fr)</td>
<td>gwagwa’aangw (Mo)</td>
<td>dying, breaking</td>
<td>Deverbal (source verb &lt;gwaá’&gt;)</td>
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<td></td>
<td>Personal Name (♂/♀); c.f. gwa’ara</td>
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<td>gwa/ateema (N∅)</td>
<td></td>
<td>light</td>
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<td>gwaambumó (Mo)</td>
<td>gwaambú (Mo)</td>
<td>bird sp.</td>
<td>White-browed Coucal (Centropus superciliosus)</td>
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<td>Gwaande/i</td>
<td>Gwaande/i</td>
<td>Personal Name (♂/♀); c.f. gwaande/imó</td>
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<td>Nouns</td>
<td>Singular</td>
<td>General</td>
<td>Plural</td>
<td>Gloss</td>
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<td>gwande/imó (Mo)</td>
<td>gwandé/ (Mo)</td>
<td>gwaande/ima' (N∅)</td>
<td>tomcat</td>
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<td>gwalay (Mo)</td>
<td>gwalíi (N∅)</td>
<td>vagina</td>
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<td>gwaloo (Fr)</td>
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<td>hunting honey</td>
<td>Mass</td>
<td>Deverbal (source verb &lt;gwaluús&gt;)</td>
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<td>Personal Name (♂); c.f. gwaloo</td>
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<td>gambú (Mo)</td>
<td>gwanbeemo (N∅)</td>
<td>animal trap (made of netting)</td>
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<td>gwandi (Mo)</td>
<td>gwandaawee (Fr)</td>
<td>male sheep</td>
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<td></td>
<td>gwanda (?)</td>
<td>plant sp. Milkweed (Gomphocarpus fruticosus)</td>
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<td>Gwandú</td>
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<td>gwantsumó (Mo)</td>
<td>gwantsáy (Mo)</td>
<td>gwantseema' (N∅)</td>
<td>bird sp.</td>
<td>any sp. of Paradise-Whydah, Whydah, or Indigobird</td>
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<td>gwar/i (Fr)</td>
<td>gwár/ (Mo)</td>
<td>gwar/ay (Mo)</td>
<td>mammal sp.</td>
<td>Brindled gnu, Common wildebeest (Connochaetes taurinus)</td>
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<td>wareesi (Fr)</td>
<td>gwarés (Mo)</td>
<td>bird sp.</td>
<td>any vulture sp.</td>
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<td>gwe'edoo (N∅)</td>
<td>gwe'edudu (N∅)</td>
<td>buttock</td>
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<td>Gweelo</td>
<td></td>
<td></td>
<td>protesting (specifically by women)</td>
<td>Mass</td>
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<td>gweerusumo (Mo)</td>
<td></td>
<td></td>
<td>saviour (♂, ♀ respectively)</td>
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<td>gweeruso'o (Fr)</td>
<td>gweerusee (Fr)</td>
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<td>gwehímó (Mo)</td>
<td>gwehima' (N∅)</td>
<td>rib</td>
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<td>gwerehhi (Fr)</td>
<td>gweréhh (Mo)</td>
<td>dikdik (large)</td>
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<td>gwu/a (Ft)</td>
<td>gwu/uungw (Mo)</td>
<td>swallowing</td>
<td>Deverbal (source verb, &lt;guú/&gt;)</td>
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<td>gwu/uma (Mo)</td>
<td>gwu/eemi (NØ)</td>
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<td>carcass, badly burned person, stogie</td>
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<td>Haangáy</td>
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<td>Haangáy</td>
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<td>habahambi (Fr)</td>
<td>habahamboo (Fr)</td>
<td>habahambáy (Mo)</td>
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<td>spider</td>
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<td>Habiyé</td>
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<td>Hamdi</td>
<td>hampú (Mo)</td>
<td>hampe'eeri (NØ)</td>
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<td></td>
<td>hamslitoo (Fr)</td>
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<td>Hanarumó (Mo)</td>
<td></td>
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<td>Place Name</td>
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<td>Hangoni (Fr)</td>
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<td>Place Name</td>
</tr>
<tr>
<td>hapeelimó (Mo)</td>
<td>hapél (Mo)</td>
<td>hapeelima' (NØ)</td>
<td>bird sp.; mammal sp. any sp. of nightjar; any sp. of bat</td>
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<td>Haqweé</td>
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<td>Haqweé</td>
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<td>Personal Name (♂)</td>
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<td>Hara/a (Fr)</td>
<td>harafarí (Fr)</td>
<td>harafaroo (Fr)</td>
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<td>Harár</td>
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<td>Place Name (Semi-Mythical Place)</td>
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<td>harariyooodaa (Fr)</td>
<td>harariyooodáy (Mo)</td>
<td>harariyooodudu (NØ)</td>
<td>semi-mythical creature</td>
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<td>hardahamu (Mo)</td>
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<td>hardarah (NØ)</td>
<td>arriving</td>
<td>Deverbal (source verb &lt;hardáh&gt;)</td>
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<td>haree (Fr)</td>
<td>tiyay (NØ)</td>
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<td>wife</td>
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<td>hareth kuráy</td>
<td>hárr kuráy</td>
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<td>bird sp. hammerkop</td>
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<tr>
<td>hareér loolií(d) (Mo)</td>
<td>hareér loolií(d) (Mo)</td>
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<td>bird sp.</td>
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<td>harima (Fr)</td>
<td>harimadu (NØ)</td>
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<td>justice, right</td>
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<td>Nouns</td>
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<td>General</td>
<td>Plural</td>
<td>Gloss</td>
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<td>haritlakwee (Fr)</td>
<td>haritlakwee (Fr)</td>
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<td>accident, disaster</td>
<td>Mass</td>
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<td>Hariyá</td>
<td>Hariyá</td>
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<td>Personal Name (♂)</td>
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<td>harma'i (Fr)</td>
<td>harma'oo (Fr)</td>
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<td>shoot (i.e. of plant)</td>
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<td>harmagahhitoo (Fr)</td>
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<td>vigilance</td>
<td>Mass</td>
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<td>Harmo</td>
<td>Harmo</td>
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<td>Deverbal (source verb &lt;harweér&gt;)</td>
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<td>harweera (Fr)</td>
<td>harweera (Fr)</td>
<td>harweririingw (Mo)</td>
<td>surrounding</td>
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<td>Harweeri</td>
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<td>Personal Name (♂); c.f. harweera</td>
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<td>hasloo (Fr)</td>
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<td>idea(s)</td>
<td>Mass</td>
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<td>hatliroo (Fr)</td>
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<td>hatliingw (Mo)</td>
<td>trapping with birdlime</td>
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<td>hatlitiingw (Mo)</td>
<td>hatlitiingw (Mo)</td>
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<td>Deverbal (source verb ? &lt;haátl&gt;)</td>
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<td>hatlitiingw (Mo)</td>
<td>hatlitiingw (Mo)</td>
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<td>difference(s)</td>
<td>Mass</td>
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<td>hawweé(d) (Fr)</td>
<td>hawweéd (N∅)</td>
<td>hawweédima' (N∅)</td>
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<td>hayi (Ft)</td>
<td>hayaa (N∅)</td>
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<td>Haytemba (Mo/Fr)</td>
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<td>hee (Mo)</td>
<td>muu (Mk)</td>
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<td>heele/i (Fr)</td>
<td>heele/i (Fr)</td>
<td>heelé/ (Mo)</td>
<td>bird sp.</td>
<td>any heron or egret-like waterbird</td>
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<td>Heeloo</td>
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<td>heeyuma (Fr)</td>
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<td>Hemét (Fr)</td>
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<td>hhaamú (Mo)</td>
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<td>hhaameema' (N∅)</td>
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<td>hhay (Mo)</td>
<td></td>
<td>hha'i (N∅)</td>
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<td>line, stripe</td>
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<td>hhafti (Fr)</td>
<td>hhaftăy (Mo)</td>
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<td>hhafeeto (N∅)</td>
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<td>hhafumó (Mo)</td>
<td>hhafa (Ft)</td>
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<td>hhalahhala' (N∅)</td>
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<td>Hhalu (Mo)</td>
<td>hhalahhaláy (Mo)</td>
<td>hhalahhalima' (N∅)</td>
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<td>hhamhhamó (Mo)</td>
<td>hhamhhama' (N∅)</td>
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<td>hhangál (Mo)</td>
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<td>hhangál (Mo)</td>
<td>Sodom Apple</td>
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<td>hhangwí (Fr)</td>
<td>hhaangwaa (Fr)</td>
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<td>plant sp. (Ormocarpum trichocarpum)</td>
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<td>hhantima' (N∅)</td>
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<tr>
<td>hhar’imó (Mo)</td>
<td>hhar’í (Fr)</td>
<td>hhar’aa (Fr)</td>
<td>plant sp.</td>
<td>Wild Mango (Tabernaemontana ventricosa)</td>
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<td>hhar (Ft)</td>
<td>hhadoo (NØ)</td>
<td>stick, staff</td>
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<td>hharahharumó (Mo)</td>
<td>hharahhará (Mo)</td>
<td>insect sp.</td>
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<td>Personal Name (♂); c.f. hhari</td>
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<td>hhadoo (NØ)</td>
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<td>Mass</td>
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<td>hharusumó (Mo)</td>
<td>hharí (Fr)</td>
<td>weeds</td>
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<td>hhasaangw (Mo)</td>
<td>sand</td>
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<td>hhaseerimó (Mo)</td>
<td>hhaseerima’ (NØ)</td>
<td>sandy place</td>
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<td>hhawata (Mo)</td>
<td>hhawate (NØ)</td>
<td>man</td>
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<td>hhawumó (Mo)</td>
<td>hhawáy (Mo)</td>
<td>plant sp.</td>
<td>Desert Date, Simple-Thorned Torchwood (Balanites aegyptiaca)</td>
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<td>Hhayma</td>
<td>hhaysusu (NØ)</td>
<td>hhayseema’ (NØ)</td>
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<td>hhayuma (Fr)</td>
<td>hhayumadu (NØ)</td>
<td>journey</td>
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<td>Hheehhá</td>
<td>hheehhaa (Fr)</td>
<td>Hheehhá</td>
<td>Personal Name; derived from hheehhaa. Given to a child following the deaths of previous children.</td>
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<td>hheehhaa (Fr)</td>
<td>hhehhu (NØ)</td>
<td>gluttony</td>
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<td>hheehhaa (Fr)</td>
<td>hhehhu (NØ)</td>
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<td>hheera (Mo)</td>
<td>hheera (Mo)</td>
<td>discontent</td>
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<td>Personal Name (♂); c.f. hheewaasi</td>
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<td>hheewaasumó (Mo)</td>
<td>hheewaasi (Fr)</td>
<td>plant sp.</td>
<td>(Brachystegia</td>
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<td>Hhekee</td>
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<td>hhekw (Mo)</td>
<td></td>
<td>iihhekit (Mo) hhekit (Mo) iihheekikiingw (Mo) hheekikiingw (Mo)</td>
<td>drawing water</td>
<td>Deverbal (source verb &lt;hheék&gt;)</td>
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<td>Hhili</td>
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<td>hhima'i (Fr)</td>
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<td>hhimami (Fr)</td>
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<td>hhimindi (Fr)</td>
<td>hhimindaa (N∅) hhimindāy (Mo)</td>
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<td>plant sp.</td>
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<td>hhinthimitimó (Mo)</td>
<td>hhinhhiní (Fr)</td>
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<td>pumpkin</td>
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<td>hhirhheirimó (Mo)</td>
<td>hhirheeri (N∅)</td>
<td>hhirheerima' (N∅)</td>
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<td>hhiya' (Mo)</td>
<td>hhi'i (N∅)</td>
<td></td>
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<td>hho'odu (N∅)</td>
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<td>hhooki (Fr)</td>
<td>hhookáy (Mo)</td>
<td></td>
<td>bird sp.</td>
<td>any sp. of white-collared pigeon</td>
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<td>Personal Name; c.f. hhookí</td>
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<td>hhumpe'eeri (N∅) hhumpupu (N∅) hhumpepee (Fr)</td>
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<td>lung</td>
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<td>hhuntsitoo (Fr)</td>
<td></td>
<td>hhuuntsitsiingw (Mo)</td>
<td>washing clothes</td>
<td>Deverbal (source verb &lt;hhuúnts&gt;)</td>
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<td>hhuruhurumó (Mo)</td>
<td>hhurahúr (Mo)</td>
<td>hhurahuruma' (N∅)</td>
<td>bird sp.</td>
<td>any sp. of Bulbul and Greenbul, or Turdus Thrush</td>
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<td>Hhurumpí</td>
<td></td>
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<td>hhutlumó (Mo)</td>
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<td>Hi'ilí</td>
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<td>going</td>
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<td>hiinsla (Mo)</td>
<td>hiinsleema' (NØ)</td>
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<td>breath</td>
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<td>Hiintáy</td>
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<td>himi’i (NØ)</td>
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<td></td>
<td>himtu (Mo)</td>
<td>himtaawee (Fr)</td>
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<td>bird sp.</td>
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<td>himtu (Mo)</td>
<td>himtetee (NØ)</td>
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<td>necklace (metal)</td>
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<td>hirit (Mo)</td>
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<td>Hoomaa</td>
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<td>Hoomam (Mo)</td>
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<td>hoomito'o (Fr)</td>
<td>hoomaa (Fr)</td>
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<td>outsider (♂, ♀ respectively)</td>
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<td>Hoonda</td>
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<td>life</td>
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<td>hootari (Fr)</td>
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<td>life, living</td>
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<td>Hosé</td>
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<td>Hoshán(d) (Fr)</td>
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<td>Huché</td>
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<td>Hulán</td>
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<td>Hulán</td>
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<tr>
<td>humay (Mo)</td>
<td></td>
<td></td>
<td></td>
<td>earth dug from the floor of the house and placed on the roof</td>
</tr>
<tr>
<td>Humay</td>
<td></td>
<td></td>
<td>Humay</td>
<td></td>
</tr>
<tr>
<td>humba/aya (Fr)</td>
<td></td>
<td></td>
<td></td>
<td>white colouration around the ribs and hind legs of cattle</td>
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<td>Humuri</td>
<td></td>
<td></td>
<td>humri (Fr)</td>
<td></td>
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<td>hurusee (Fr)</td>
<td></td>
<td></td>
<td></td>
<td>millet mash (stage in making beer)</td>
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<tr>
<td>hutlay (Mo)</td>
<td>hutli'i (N∅)</td>
<td></td>
<td></td>
<td>earthen cooking pot</td>
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<tr>
<td>huwa (N∅)</td>
<td></td>
<td></td>
<td>cooking</td>
<td>Deverbal (source verb &lt;huriím&gt;)</td>
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<td>iido (Fr)</td>
<td></td>
<td></td>
<td>burden</td>
<td>Mass</td>
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<td>ii'a (Fr)</td>
<td>ii'a' (N∅)</td>
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<td>ear</td>
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<td>iiidí(g) (Mo)</td>
<td></td>
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<td>iikwu/a (Ft)</td>
<td>iikwu/uungw (Mo)</td>
<td></td>
<td>making rope, asking questions to get answers</td>
<td>Deverbal (source verb &lt;kwuú/&gt;)</td>
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<td>iimbilií(d) (Mo)</td>
<td>iimbilí (N∅)</td>
<td>iimbilíma' (N∅)</td>
<td>bird sp.</td>
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<td>limboo</td>
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<td>limboo</td>
<td>Personal Name (♀)</td>
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<tr>
<td>iimi (Fr)</td>
<td></td>
<td></td>
<td>people, mores</td>
<td>&lt;eemeé(d)&gt; is a related equivalent</td>
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<td>iimpee</td>
<td>iimpee (Fr)</td>
<td>iimpepu (NØ)</td>
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<td>lingamú</td>
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<td>lingigí</td>
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<td>lingigí</td>
<td>Personal Name; c.f. iingigí</td>
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<td>iingigimó (Mo)</td>
<td>iingigí (Ft)</td>
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<td>iinqwaari (Fr)</td>
<td>iinqwár (Mo)</td>
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<td>iinslahhumó (Mo)</td>
<td>iinslahhoo (Fr)</td>
<td></td>
<td>plant sp.</td>
<td>(Steganotaenia araliacea)</td>
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<td>iinslawumó (Mo)</td>
<td>iinslawámó (Mo)</td>
<td>iinslaweema' (NØ)</td>
<td>neighbour (♂,♀)</td>
<td>respectively</td>
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<tr>
<td>iintsahhatisa (Fr)</td>
<td>iintsahhatimis (Mo)</td>
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<td>teaching</td>
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<td>iintsahháy</td>
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<td>lintsahháy</td>
<td>Personal Name; c.f iintsahhatisa</td>
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<td>iintsu/i (Fr)</td>
<td>iintsu/áy (Mo)</td>
<td></td>
<td>supply tree bark, fashioned into cords</td>
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<tr>
<td>iirimbumó (Mo)</td>
<td>iirimbí (Mo)</td>
<td>iirimbáy (Mo)</td>
<td>bird sp.</td>
<td>any sp. of crested cuckoo</td>
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<td>iitsaangw (Mo)</td>
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<td>iitsaawé (Fr)</td>
<td>itseema' (NØ)</td>
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<td>il/arumó (Mo)</td>
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<td>il/aráy (Mo)</td>
<td>bird sp.</td>
<td>any sp. of Sparrow-Lark</td>
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<td>ila (Ft)</td>
<td>ila (NØ)</td>
<td>ila' (NØ)</td>
<td>eye</td>
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<td>ila (Ft)</td>
<td></td>
<td>iloo (NØ)</td>
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<td>ila'/awaákw (Mo)</td>
<td>ila'/awaakeema' (NØ)</td>
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<td>ila/aantsimó (Mo)</td>
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<td>ilahhoo’a (Fr)</td>
<td>Ila/aantsimó</td>
<td>Place Name</td>
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<td>ilimó (Mo)</td>
<td>ila (NØ)</td>
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<td>seed</td>
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<td>imbáy (Mo)</td>
<td></td>
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<td>silk (i.e. of corn)</td>
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<td>Imbillí(d) (Ft)</td>
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<td>Place Name</td>
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<td>impirimó (Mo)</td>
<td>impira (Mo)</td>
<td>impireema' (NØ)</td>
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<td>imu/u/uungw (Mo)</td>
<td>beginning</td>
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<td>Deverbal</td>
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<td>indaxaxu'umó (Mo)</td>
<td>indaxá' (Mo)</td>
<td>plant sp.</td>
<td>(Phyllanthus engleri)</td>
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<td>Ineeraa</td>
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<td>Personal Name; c.f. ineeraa</td>
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<td>ineeraa (Fr)</td>
<td>mosquito</td>
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<td>inkahhay (Mo)</td>
<td>inkahhi'i (Nø)</td>
<td>wound</td>
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<td>iree/imi (Ft)</td>
<td>ire/imáy (Mo)</td>
<td>iree/iiingw (Mo)</td>
<td>cosmetic scars</td>
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<td>irimba (Ft)</td>
<td>irimbadu (Nø)</td>
<td>thumb piano</td>
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<td>irindimó (Mo)</td>
<td>irindima' (Nø)</td>
<td>calf, bicep</td>
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<td>iringeé(d) (Fr)</td>
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<td>iringeduso'o (Fr)</td>
<td>iringedusee (Fr)</td>
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<td>Iroo</td>
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<td>Irqutu (Mo)</td>
<td>Iraqw (Nø)</td>
<td>person of Iraqw ethnicity (♂, ♀ respectively)</td>
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<td>Irquto'o (Fr)</td>
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<td>Iruqutu</td>
<td>Iruqutu</td>
<td>Personal Name (♂); c.f. Irqtu</td>
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<td>isa (Ft)</td>
<td>isoo (Nø)</td>
<td>neck</td>
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<td>isa'</td>
<td>isamó (Mo)</td>
<td>so-and-so</td>
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<td>isamá' (Nø)</td>
<td>breast</td>
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<td>itinmó (Mo)</td>
<td>itina (Fr)</td>
<td>insect sp.</td>
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<td>iwiwit (Mo)</td>
<td>sitting</td>
<td>Deverbal (source verb &lt;iwiwiît&gt;)</td>
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<td>Jabu</td>
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<td>Personal Name (♂)</td>
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<td>jangáy (Mo)</td>
<td>jangeema' (Nø)</td>
<td>mammal sp.</td>
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<td>jangedu (Nø)</td>
<td>Greater galago (Otolemur crassicaudatus), or squirrel sp.</td>
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<td>Jangwá</td>
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<td>Personal Name (♂); there is an intuition from speakers that this does not derive from the Swahili 'jangwa': 'desert'</td>
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<td>Jeela (Fr)</td>
<td>Jeeladu (NØ)</td>
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<td>Private room</td>
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<td>Jimbo (Fr)</td>
<td>Jimbodu (NØ)</td>
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<td>Julunjulu (Mo)</td>
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<td>Insect sp.</td>
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<td>Ka'ami (Fr)</td>
<td>Ka'eemo (Mo)</td>
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<td>Piece of sth. split</td>
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<td>Kaambay (Mo)</td>
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<td>Kaangaroo</td>
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<tr>
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<td></td>
<td>Kaangaroo (Fr)</td>
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<td>Door plank</td>
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<td>Kaanga (Fr)</td>
<td>Kaangadu (NØ)</td>
<td>Khanga (material)</td>
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<td>Kaanjuu (NØ)</td>
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<td>Skirt</td>
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<td>Kaanki'i (NØ)</td>
<td>Kaanke'eerí (NØ)</td>
<td>Reptile sp.</td>
<td>Any sp. of tortoise or terrapin</td>
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<td>Kaanki (Fr)</td>
<td>Kaankima' (NØ)</td>
<td>Edge</td>
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<td>Kaasi (Fr)</td>
<td></td>
<td></td>
<td>Work, labour</td>
<td>Mass</td>
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<td>Cabbage (i.e. as a chopped dish)</td>
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<td>kala/a (Fr)</td>
<td>kala/andoo (Fr)</td>
<td>kala/aangw (Mo)</td>
<td>kicking, stamping</td>
<td>Deverbal (source verb &lt;kalaá/&gt;); &lt;kala/andoo&gt; 'stamping'; &lt;kala/aangw&gt; 'kicking'</td>
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<td>kalameemo (N∅)</td>
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<td>kalay (Mo)</td>
<td>kali'i (N∅)</td>
<td>spot</td>
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<td>barren woman (exclusively ♀)</td>
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<td>kampaarto'o (Fr)</td>
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<td>kaniki (Fr)</td>
<td>kanikáy (Mo)</td>
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<td>short trousers</td>
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<td>karkeero (N∅)</td>
<td>part of the traditional house</td>
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<td>keesáy (Mo)</td>
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<td>kiinsororoquma’ (N∅)</td>
<td>snail</td>
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<td>kiinta (Mo)</td>
<td>kiinte’eeri (N∅)</td>
<td>kiintima’ (N∅)</td>
<td>scrub, brush</td>
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<td>kiintla/umó (Mo)</td>
<td>kiintla/i (Mo)</td>
<td>kiintla/áy (Mo)</td>
<td>bird sp.</td>
<td>any sp. of True Shrikes, and Boubous</td>
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<td>kiirkankumó (Mo)</td>
<td>kiirkanká (Mo)</td>
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<td>reptile sp.</td>
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<td>kijijima’ (N∅)</td>
<td>village</td>
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<td>kilaabu (Mo)</td>
<td>kilaabeemo (N∅)</td>
<td>club, drinking establishment</td>
<td>c.f. the Swahili 'kilabu', and the English 'club'</td>
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<td>kilo, weight</td>
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<td>kilaliq (Mo)</td>
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<td>Deverbal?</td>
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<td>kimolaa (Fr)</td>
<td>cornstalk waste</td>
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<td>Kimoli</td>
<td></td>
<td></td>
<td>Kimoli</td>
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<td>Kimoloo</td>
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<td>Kimoloo</td>
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<td>kinoo (Fr)</td>
<td>kinnu (N∅)</td>
<td>small clay water pot</td>
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<td>Place Name</td>
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<td>kipi’i (N∅)</td>
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<td>kipisi (Fr)</td>
<td>kipisáy (Mo)</td>
<td>kipiseema' (N∅)</td>
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<td>kitambadu (N∅)</td>
<td>fabric, rag</td>
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<td>kitangér (Mo)</td>
<td>kitangeerima' (N∅)</td>
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<td>kiyodu (N∅)</td>
<td>glass, mirror</td>
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<td>kookoomáy (Mo)</td>
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<td>African Hoopoe (Upupa africana)</td>
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Koomí: Personal Name (♀); c.f. koomi
Kooní: Personal Name (♂/♀); c.f. koopaa
Kureem: Personal Name (♂); c.f. kureem
Kureeri: Personal Name (♂); c.f. kureeri
Kusbi: Personal Name (♂); c.f. kusbi
Kuti: Personal Name (♂); c.f. kuti
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<td>kutú (Mo)</td>
<td>kutuutuma’ (NØ)</td>
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<tr>
<td>kuumbá’ (Mo)</td>
<td>kuumbi’i (NØ)</td>
<td>brother-in-law, other wife of brother-in-law</td>
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<td>kuunseeli (Fr)</td>
<td>kuunseeláy (Mo)</td>
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<td>kuunttoo (Fr)</td>
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<td>kwa/aangw (Mo)</td>
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<td>Kwaansiymó</td>
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<td>(Achyrathes aspera)</td>
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<td>Kwará/ (Fr)</td>
<td>kwarará/a (Fr)</td>
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<td>Kwara</td>
<td>Place Name</td>
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<td>kwasiyaangw (Mo)</td>
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<td>insect sp.</td>
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<td>Alternate pronunciation &lt;kwasiyaangw&gt;</td>
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<td>Laalí</td>
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<td>farming in the morning; Mass Deverbal (source verb &lt;laáw&gt;)</td>
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<td>lapiya (Fr)</td>
<td>cash (one piece); c.f. the Swahili 'rupia': 'coin', 'money' (dated)</td>
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<td>lawaalee (Fr)</td>
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<td>lawulu (NØ)</td>
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<td></td>
<td>laydu (NØ)</td>
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<td>layda (Mo)</td>
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<td>arduous errands; Mass</td>
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<td>lee'i (Fr)</td>
<td></td>
<td>aara (NØ)</td>
<td>goat</td>
<td>Personal Name (♂); there is an intuition among speakers that this words does not derive from the English word 'labour'</td>
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<td>Ileetlakutumó (Mo)</td>
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<td>leetlákw (M)</td>
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<td>Li/áy</td>
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<td>lalu (NØ)</td>
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<td>truth</td>
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<td>looi (Fr)</td>
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<td>lo/oo (Fr)</td>
<td>grass (one blade)</td>
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<td>loomó (Mo)</td>
<td>loomi'i (N∅)</td>
<td>plant sp.</td>
<td>(Trema orientalis; Grewia similis)</td>
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<td>loorí (Fr)</td>
<td>looráy (Mo)</td>
<td>truck, lorry</td>
<td>c.f. the Swahili 'lori', and the English 'lorry'</td>
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<td>loosí (Fr)</td>
<td>bean (one plant, one bean)</td>
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<td>lootitiingw (Mo)</td>
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<td>Deverbal (source verb &lt;loót&gt;)</td>
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<td>(Ximenia caffra)</td>
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<td>maamaháy (Mo)</td>
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<td>leftovers from making butter (i.e. watery milk), impurities left in the bottom of liquid butter after adding flour</td>
<td>Mass</td>
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<td>maami'i (N∅)</td>
<td>mother's brother</td>
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<td>maamba (Fr)</td>
<td>maambadu (N∅)</td>
<td>crocodile</td>
<td>c.f. the Swahili 'mamba': 'crocodile'</td>
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<td>person of Bantu ethnicity (♂, ♀ respectively)</td>
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<td>Maasay</td>
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<td>c.f. the Swahili 'machungwa': 'orange'</td>
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<td>c.f. the Swahili 'machungwa': 'orange'</td>
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<td>white person (♂, ♀ respectively)</td>
<td>c.f. the Swahili 'mzungu'</td>
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<td>Personal Name (♂/♀); c.f. migír</td>
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<td>migirimó (Mo)</td>
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<td>migír (Fr)</td>
<td>firewood</td>
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<td>Nouns</td>
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<td>Miirambí</td>
<td>Miirambí</td>
<td>Place Name</td>
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<tr>
<td>miitimó (Mo)</td>
<td>miiti (Fr)</td>
<td>tree; c.f. the Swahili 'miti': 'trees'</td>
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<td>mila (Fr)</td>
<td>tradition</td>
<td>Mass; c.f. the Swahili 'mila': 'tradition'</td>
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<td>Minjo</td>
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<td>Personal Name (♂)</td>
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<td>Minslay</td>
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<td>Personal Name (♂)</td>
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<td>Miomboni (Fr)</td>
<td>Miomboni</td>
<td>Place Name</td>
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<td>Miqay</td>
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<td>mishnarimó (Mo)</td>
<td>mishnarito'o (Fr)</td>
<td>missionary (♂, ♀ respectively)</td>
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<td>mishnarás (Mo)</td>
<td>mishnarát (Mo)</td>
<td>Alternate pronunciation &lt;mukowa&gt;; c.f. the Swahili 'mkoa': 'region'</td>
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<tr>
<td>mkowa (Fr)</td>
<td>mikoada (N∅)</td>
<td>region; c.f. the Swahili 'mkoa': 'region'</td>
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<td>Mkuyuni (Fr)</td>
<td>Mkuyuni</td>
<td>Place Name</td>
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<td>Moheé</td>
<td>Moheé</td>
<td>Personal Name (♂)</td>
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<tr>
<td>mokoki (Fr)</td>
<td>mokokoo (Fr)</td>
<td>earwax</td>
<td></td>
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<tr>
<td>mootumó (Mo)</td>
<td>mootó (Mo)</td>
<td>bird sp.; Swahili Sparrow (Passer suahelicus)</td>
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<tr>
<td>morongi (Fr)</td>
<td>morongaa (Fr)</td>
<td>plant sp.; (Zanthoxylum chalybeum)</td>
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<tr>
<td>Mororo/i (Ft)</td>
<td>Mororo/i</td>
<td>Place Name</td>
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<tr>
<td>motoka (Fr)</td>
<td>motkiingw (Mo)</td>
<td>scrubbing dirt; Deverbal (source verb ?)</td>
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<td>Mrár (Fr)</td>
<td>Mrár</td>
<td>Place Name</td>
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<td>Mudeeki</td>
<td>Mudeeki</td>
<td>Personal Name (♂); very rare</td>
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<td>mugugunumó (Mo)</td>
<td>mugugunát (Mo)</td>
<td>insect sp.</td>
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<td>Muhalé</td>
<td>Muhalé</td>
<td>Personal Name (♂)</td>
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<td>Muhanjá</td>
<td>Muhanjá</td>
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<td>Muhindi</td>
<td>Muhindi</td>
<td>Personal Name (♂); c.f. the Swahili 'muhindi': 'corn', or 'Mhindi': 'person of Indian origin'</td>
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<td>Nouns</td>
<td>General</td>
<td>Plural</td>
<td>Gloss</td>
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<td>Muhindimó (Mo)</td>
<td>Muhindáy (Mo)</td>
<td>Muhindima' (NØ)</td>
<td>person of Indian origin (♂, ♀ respectively)</td>
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<td>Muhindít’o’ (Fr)</td>
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<td>Mulhháy</td>
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<td>Mulhháy</td>
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<tr>
<td>mulhít’ gwandu (Fr)</td>
<td>mulhhár gwanda (Fr)</td>
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<td>plant sp. (Pupalia lapacea)</td>
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<td>Muli</td>
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<td>Muli</td>
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<td>Muloo</td>
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<tr>
<td>mulquomo (Mo)</td>
<td>mulqsee (Fr)</td>
<td>mulqsee (Fr)</td>
<td>friend (♂, ♀ respectively)</td>
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<tr>
<td>mulqíto’ (Fr)</td>
<td>mulqéé (Fr)</td>
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<tr>
<td>muluquómó (Mo)</td>
<td>muluquuma’ (Fr)</td>
<td></td>
<td>plant sp.</td>
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<td>Mumuyée</td>
<td></td>
<td>Mumuyée</td>
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<tr>
<td>Muni (Mo)</td>
<td>Munkáy (Mo)</td>
<td>Mulkéé (Fr)</td>
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<td>Muli</td>
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<td>mulkeé (Fr)</td>
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<td>Muloo</td>
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<td>mulqumo (Mo)</td>
<td>mulqsee (Fr)</td>
<td>mulqsee (Fr)</td>
<td>friend (♂, ♀ respectively)</td>
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<td>mulqíto’ (Fr)</td>
<td>mulqéé (Fr)</td>
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<tr>
<td>muluquómó (Mo)</td>
<td>muluquuma’ (Fr)</td>
<td></td>
<td>plant sp.</td>
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<tr>
<td>Muna (Mo)</td>
<td>muna (Fr)</td>
<td></td>
<td>refusing something</td>
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<tr>
<td>Munenee (Fr)</td>
<td>munenee (Fr)</td>
<td></td>
<td>anger</td>
<td>Mass</td>
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<td>Muri</td>
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<td>Musu (Mo)</td>
<td>Musu (Fr)</td>
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<td>pearl</td>
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<td>Musu (Mo)</td>
<td>mussee (Fr)</td>
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<tr>
<td>Musu (Mo)</td>
<td>musu (Fr)</td>
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<td>Mutuká (Fr)</td>
<td>Mutuká (Fr)</td>
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<td>Muumbalá (Mo/Fr)</td>
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<tr>
<td>Muuná (Mo)</td>
<td>Muunééma’ (NØ)</td>
<td></td>
<td>heart</td>
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<td>Muundari (Ft)</td>
<td>Muundaráy (Mo)</td>
<td></td>
<td>bracelet (spiral)</td>
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<td>Nouns</td>
<td>Singular</td>
<td>General</td>
<td>Plural</td>
<td>Gloss</td>
<td>Nota</td>
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<tr>
<td>Muundáy(Mo)</td>
<td>muundáy(Mo)</td>
<td>muungú(Mo)</td>
<td>chaff</td>
<td>Mass</td>
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<tr>
<td>Muungí(Fr)</td>
<td>muungi(Fr)</td>
<td>muungú(Mo)</td>
<td>gourd(i.e. plant, fruit)</td>
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<td>Muungú</td>
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<td>Personal Name (♂/♀); c.f. muungí</td>
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<td>Muquúsí</td>
<td>Muquúsí</td>
<td>Personal Name (♂/♀); c.f. muqúš</td>
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<td>Na/aa</td>
<td>Na/aa</td>
<td>Personal Name (♂); c.f. na/áy</td>
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<tr>
<td>na/aasa(Fr)</td>
<td>na/amís(Mo)</td>
<td>daubing a hut with mud</td>
<td>Deverbal (source verb &lt;na/aás&gt;)</td>
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<tr>
<td>Na/aasi</td>
<td>na/amís(Mo)</td>
<td>dish of corn and beans(Sw.'makande')</td>
<td>Mass</td>
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<tr>
<td>Na/amó</td>
<td>na/amó(Mo)</td>
<td>na/ameemoo(N∅)</td>
<td>feral cat</td>
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<tr>
<td>Na/aní(Fr)</td>
<td>na/eema'(N∅)</td>
<td>penis</td>
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<tr>
<td>na/arimo(Mo)</td>
<td>na/aroo(Fr)</td>
<td>green firewood(one piece)</td>
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<tr>
<td>na/armó(Mo)</td>
<td>na/ari(Fr)</td>
<td>na/ár(Mo)</td>
<td>grassy patch, small area where grass grows reliably (often wet)</td>
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<tr>
<td>na/ay(Mo)</td>
<td>na/i'i(N∅)</td>
<td>na/a'(N∅)</td>
<td>child</td>
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<td>Na/roo</td>
<td>Na/roo</td>
<td>Personal Name (♂); na/roo</td>
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<tr>
<td>na/roo(Fr)</td>
<td>na/roo(Fr)</td>
<td>small burn marks</td>
<td>Mass</td>
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<tr>
<td>na/uuma(Fr)</td>
<td>na/uuma(Fr)</td>
<td>childhood</td>
<td>Mass</td>
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<td>naada(Fr)</td>
<td>naadadu(N∅)</td>
<td>cattle market</td>
<td>c.f. the Swahili 'mnada': 'cattle market'</td>
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<td>Naalí</td>
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<td>Naambay</td>
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<tr>
<td>naana'i(Fr)</td>
<td>naaná'(Mo)</td>
<td>naana'áy(Mo)</td>
<td>k.o. gourd</td>
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<td>Nouns</td>
<td>Singular</td>
<td>General</td>
<td>Plural</td>
<td>Gloss</td>
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<td>Naanagí</td>
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<td>Naanagí</td>
<td>Personal Name; c.f. naanagí</td>
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<td>naanagumó (Mo)</td>
<td>naanagí (Ft)</td>
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<td>larva</td>
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<tr>
<td>naanagumó (Mo)</td>
<td>naanagaa (Fr)</td>
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<td></td>
<td>maggot</td>
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<td>Naandí</td>
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<td>Naangay</td>
<td>Personal Name (♂); c.f. exclam. &lt;naangáy&gt;</td>
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<td>Naani/oo</td>
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<td>Naani/oo</td>
<td>Personal Name (♂)</td>
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<tr>
<td>naanú (Mo)</td>
<td>naaneemo (N∅)</td>
<td></td>
<td></td>
<td>side-dish</td>
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<td>Nada</td>
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<td>Nada</td>
<td>Personal Name (♂/♀); c.f. nada</td>
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<tr>
<td>nafumó (Mo)</td>
<td>nafaa (Fr)</td>
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<td></td>
<td>plant sp.</td>
<td>(Bracystegia microphylla)</td>
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<td>Nagayo</td>
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<td>Personal Name (♂)</td>
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<td>Nahháy</td>
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<td>Nahháy</td>
<td>Personal Name (♂); c.f. v. &lt;nahhay&gt;: the act of goading or annoying someone (e.g. to provoke them to fight)</td>
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<td>Nakwa (Fr)</td>
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<td>Nakwa</td>
<td>Place Name</td>
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<td>Nakwá</td>
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<td>Nakwá</td>
<td>Personal Name (♂); c.f. Nakwa</td>
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<td>Nambari</td>
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<td>Nambari</td>
<td>Personal Name (♂/♀); c.f. the Swahili 'nambari': 'number'</td>
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<td>Nambo/orí</td>
<td>Personal Name (♂/♀); c.f. nambo/orí</td>
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<td>nambo/orumó (Mo)</td>
<td>nambo/orí (Fr)</td>
<td></td>
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<td>green vegetable sp.</td>
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<td>nanahaangw (Mo)</td>
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<td>nanahaangw</td>
<td>begging, cajoling Mass Deverbal (source verb &lt;nanaá'&gt;)</td>
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<td>nanahhumo (Mo)</td>
<td></td>
<td></td>
<td></td>
<td>nanahhuma' (N∅)</td>
<td>skull</td>
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<td>Nangara (Fr)</td>
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<td>Nangara</td>
<td>Place Name</td>
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<tr>
<td>nangarumó (Mo)</td>
<td>nangareré' (Mo)</td>
<td></td>
<td></td>
<td>bird sp.</td>
<td>any sp. of swift, martin, or swallow</td>
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<td>Nani</td>
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<td>Nani</td>
<td>Personal Name (♂); there is an intuition among speakers that this word does not derive from the Swahili 'nani': 'who'</td>
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<td>Naqalí</td>
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<td>Nouns</td>
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<td>General</td>
<td>Plural</td>
<td>Gloss</td>
<td>Nota</td>
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<td>Naqaloo</td>
<td>Naqaloo</td>
<td>Naqaloo</td>
<td>Naqaloo</td>
<td>Naqaloo</td>
<td>Personal Name ($\delta$/♀)</td>
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<tr>
<td>naqimó (Mo)</td>
<td>naaqáy (Mo)</td>
<td>naqima' (N∅)</td>
<td>canoe</td>
<td>canoe</td>
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<td>Naqo</td>
<td>Naqo</td>
<td>Naqo</td>
<td>Naqo</td>
<td>Naqo</td>
<td>Personal Name ($\delta$)</td>
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<tr>
<td>narkusumo (Mo)</td>
<td>narkusoo' (Fr)</td>
<td>narkusee (Fr)</td>
<td>poor person ($\delta$, $\varphi$ respectively)</td>
<td>poor person ($\delta$, $\varphi$ respectively)</td>
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<tr>
<td>nasmó (Mo)</td>
<td>nasma' (N∅)</td>
<td>Nawdá</td>
<td>Nawdá</td>
<td>Nawdá</td>
<td>Personal Name ($\delta$)</td>
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<tr>
<td>Nawe</td>
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<td>Nawe</td>
<td>Nawe</td>
<td>Nawe</td>
<td>Personal Name ($\delta$)</td>
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<tr>
<td>nawri (Fr)</td>
<td>Fare (e.g. bus, etc.)</td>
<td>Mass</td>
<td>Mass</td>
<td>Mass</td>
<td>Mass</td>
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<td>Naxi</td>
<td>Naxi</td>
<td>Naxi</td>
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<td>ndowadu (N∅)</td>
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<td>nee'ár (Mo)</td>
<td>nee'arma' (N∅)</td>
<td>Bird sp.</td>
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<td>Deverbal (source verb &lt;neét&gt;)</td>
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<td>Personal Name (♀); a small person, pygmy (?), or person exhibiting dwarfism</td>
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Commpihora (Commiphora africana)
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<td>gall, bile; poison</td>
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<td>Personal Name (♂); this was the name of a very prominent traditional doctor</td>
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<td>qata (Mo)</td>
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<td>qaqtatingw (Mo)</td>
<td>lying down</td>
<td>Deverbal (source verb &lt;qaát&gt;); &lt;qaqtatingw&gt; lying down in different places, beginning to lie down</td>
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<td>green vegetable sp.</td>
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<td>qoonqalima' (N∅)</td>
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<td>(Balearica regulorum)</td>
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<td>qoqoonadu (N∅)</td>
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<td>qulleesimó (Mo)</td>
<td>qulleesi (Fr)</td>
<td>qulleesima' (N∅)</td>
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<td>qururu/ (Mo)</td>
<td>qururu/eema' (NØ)</td>
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<td>any sp. of crake, swamphen, or moorhen</td>
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<td>quturma' (NØ)</td>
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<td>area below the navel (hypogastric region)</td>
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| qwala/ (Mo) | qwalala/ (Mo) |        |        | being happy | Deverbal (source verb <qwalaá/>)
| qwala/u (Mo) | qwala/amayee (Fr) |        |        | happiness | Deverbal (source verb <qwalaá/>)
<p>| qwambaqwariyoó(d) (Mo) | qwambaqwariyoodima' (NØ) |      |        | parrot | |
| qwanay (Mo) |          |         |        | loss | Mass |
| Qwanqwán |          |         |        | Qwanqwán |      |
| Qwaráy |          |         |        | Qwaráy |      |
| qwaree/imó (Mo) | qwaree/ima' (NØ) |        |        | k.o. gourd | |
| qvari (Mk) |          |         |        | hunger | Mass |
| Qwarí |          |         |        | Qwarí |      |
| Qwarsee |          |         |        | Qwarsee |      |
| Qwaru |          |         |        | Qwaru |      |
| Qwaryasi (Fr) |          |         |        | Qwaryasi | Place Name |
| qwaslarumo (Mo) | qwaslarito'o (Fr) | qwaslaree (Fr) |        | doctor (often traditional doctor) | |
| Qwasleema |          |         |        | Qwasleema |      |
| Qwasliiro |          |         |        | Qwasliiro |      |</p>
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<td>rendering fat, purifying butter</td>
<td>Deverbal (source verb &lt;qwasliím&gt;)</td>
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<td>qwetsu (Nø)</td>
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<td>ostrich (Struthio camelus)</td>
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<td>Salahoo</td>
<td>Salahoo</td>
<td>doing two things at the same time, the situation of two players in &lt;gange/&gt; hitting the hoop at the same time</td>
<td>Deverbal (source verb &lt;salangiím&gt;)</td>
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<td>salangiigw (Mo)</td>
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<td>samaki (Fr)</td>
<td>fish</td>
<td>c.f. the Swahili 'samaki': 'fish'</td>
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<td>samtaa (Fr)</td>
<td>mammal sp.</td>
<td>porcupine</td>
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<td>samuyú (Mo)</td>
<td>samiweema' (NØ)</td>
<td>bird sp.</td>
<td>any sp. of smaller bird with a prominent crest and long tail (prototypical sp. is the Speckled Mousebird (Colius striatus))</td>
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<td>Sandaa</td>
<td>sandaa (Fr)</td>
<td>sandadu (N∅)</td>
<td>Sandaa</td>
<td>cloth pouch</td>
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<td>Sandukumó (Mo)</td>
<td>sandukú (Mo)</td>
<td>sandukuma' (N∅)</td>
<td>Sanga</td>
<td>box, crate, chest</td>
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<td>Sangará (Fr)</td>
<td>Sangará</td>
<td>Sangayuw</td>
<td>Sani</td>
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<td>sapooní (Fr)</td>
<td>Saqarám (Mo)</td>
<td>saqar (Mo)</td>
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<td>Saqwaré</td>
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<td>Sarmee</td>
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<td>se'eengw (Mo)</td>
<td>Se/áy (Mo)</td>
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**Nota:**
- Nouns: Sandaa, Sangará, Sangayuw, Sanju, Sapoonimó, Saqarám, Sarahhamó, Sarame, Sarara, Saxumó, Saxwáy, Saydo, Sayni, Se'eemi, Se/áy.
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<th>Gloss</th>
<th>Nota</th>
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<td>coin</td>
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<td>seepáy (Mo)</td>
<td>seepi'i (N∅)</td>
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<td>k.o. gourd</td>
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<td>seesékw (Mo)</td>
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<td>bird sp.</td>
<td>any sp. of larger, long-legged fowl</td>
<td>(e.g. bustards, thick-knees, etc.)</td>
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<td>cape buffalo</td>
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<td>Singulatia tantum</td>
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<td>antelope sp.</td>
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<td>Mass; c.f. the Swahili 'shida': 'problem'</td>
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<td>shiliingimó (Mo)</td>
<td>shiliingi (Fr)</td>
<td>shiliingima' (N∅)</td>
<td>shilling</td>
<td>Alternative pronunciation: &lt;shiliimó&gt;; c.f. the Swahili 'shilingi': shilling (unit of currency)</td>
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<td>sidameedau (NØ)</td>
<td>sidameedu (NØ)</td>
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<td>Questioned form is &lt;sidameedeê&gt;</td>
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<td>sihu (Fr)</td>
<td>sihu (Fr)</td>
<td>sihu (Fr)</td>
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<td>siigan(d) (Mo)</td>
<td>siigan(d) (Mo)</td>
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<td>sido (NØ)</td>
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<td>sitsawuso'o (Fr)</td>
<td>sitsawusee (Fr)</td>
<td>searcher, researcher (♂, ♀ respectively)</td>
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<td>sla'asla' (Mo)</td>
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<td>fatigue (specifically that of a pregnant woman)</td>
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<td>(Acacia kirkii)</td>
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<td>slamahhandí daqwa</td>
<td>plant sp.</td>
<td>(Momordica foetia)</td>
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<td>Slamhí</td>
<td>Slamhí</td>
<td>Personal Name (♀); c.f. slamhasso</td>
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<tr>
<td>slangarehhimó</td>
<td>slangareréhh</td>
<td>any sp. of small lizard</td>
<td></td>
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<tr>
<td>slanú</td>
<td>slaneema'</td>
<td>reptile sp.</td>
<td>any sp. of python</td>
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<td>slaqamaye</td>
<td>fatigue</td>
<td>Mass</td>
<td>Deverbal (source verb &lt;slaqaat&gt;)</td>
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<tr>
<td>slaqankumó</td>
<td>slaqankay</td>
<td>slaqanke'eri</td>
<td>reptile sp.</td>
<td>any sp. of chameleon (esp. Flap-necked Chameleon (Chamaeleo dilepsis))</td>
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<tr>
<td>slaqasay</td>
<td>slaqasi'</td>
<td>example</td>
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<td>slaqoo</td>
<td>slaqoo</td>
<td>Personal Name (♂); c.f. slaqoo</td>
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<td>slaqwa</td>
<td>slaqoo</td>
<td>body</td>
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<td>slaqwaraa</td>
<td>slaqwaradu</td>
<td>war</td>
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<td>slaqwee</td>
<td>slaqwee</td>
<td>communal work</td>
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<tr>
<td>slarahhandí</td>
<td>slarahhandú</td>
<td>plant sp.</td>
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<td>Slarahhandí</td>
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<td>Personal Name (♂); c.f. slarahhandi</td>
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<td>Slarhí</td>
<td>Slarhí</td>
<td>Slarhí (Fr)</td>
<td>Slarhí</td>
<td>Personal Name (♂); c.f. slarhí</td>
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<tr>
<td>slarhumó (Mo)</td>
<td>slarhu (Mo)</td>
<td>slareemo (NØ)</td>
<td>slarhí</td>
<td>sedge</td>
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<tr>
<td>slawa (Ft)</td>
<td>slasu (Mo)</td>
<td>slaslaangw (Mo)</td>
<td>slawá (NØ)</td>
<td>getting</td>
<td>Deverbal (source verb &lt;sláw&gt;)</td>
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<tr>
<td>slee (Fr)</td>
<td>yikka (NØ)</td>
<td>yiikwá (NØ)</td>
<td>slee (Fr)</td>
<td>cow</td>
<td>Alternate Pl. pronunciation &lt;yiikwa&gt;</td>
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<tr>
<td>sleému (Mo)</td>
<td>yiikwá /aanta (NØ)</td>
<td>k.o. cow gift</td>
<td>Deverbal (source verb &lt;sláw&gt;)</td>
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<tr>
<td>sleé r/aanta (Fr)</td>
<td>yikkwá /aanta (NØ)</td>
<td>k.o. cow gift</td>
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<tr>
<td>sleé al/utloo (Fr)</td>
<td>yikkwá al/utloo (NØ)</td>
<td>k.o. cow gift</td>
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<tr>
<td>sleé duxoo (Fr)</td>
<td>yikkwá duxoo (NØ)</td>
<td>k.o. cow gift</td>
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<tr>
<td>sleé luki (Fr)</td>
<td>yikkwá ro (NØ)</td>
<td>k.o. cow gift</td>
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<tr>
<td>sleé sikhina (Fr)</td>
<td>yikkwá sikhina (NØ)</td>
<td>k.o. cow gift</td>
<td></td>
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<tr>
<td>Sleesoo</td>
<td>sleemis (Mo)</td>
<td>taking, picking up</td>
<td>Deverbal (source verb &lt;sleés&gt;)</td>
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<td>Sleesoo</td>
<td>sleheengw (Mo)</td>
<td>sleheeri (NØ)</td>
<td>moon, month</td>
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<td>Slehhi</td>
<td>Slehhi</td>
<td>Slehhi</td>
<td>Personal Name (♂); c.f. slehhi</td>
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<tr>
<td>slehhimó (Mo)</td>
<td>slehhi (Ft)</td>
<td>roof insulation</td>
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<tr>
<td>sli'imusumo (Mo)</td>
<td>sli'imusee (Fr)</td>
<td>fornicator, adulterer</td>
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<tr>
<td>sli'imosu'o (Fr)</td>
<td>sliimusee (Fr)</td>
<td>fornicator, adulterer</td>
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<tr>
<td>slihho (NØ)</td>
<td>nasal mucus</td>
<td>Mass</td>
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<tr>
<td>slinxaa (Fr)</td>
<td>slinxuxu (NØ)</td>
<td>bridge of nose</td>
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<tr>
<td>sloo/i (Fr)</td>
<td>sloó/áy (Mo)</td>
<td>husk (i.e. of corn)</td>
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<td>slooroo (Fr)</td>
<td>sloori (Fr)</td>
<td>bubble</td>
<td>Mass</td>
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<tr>
<td>slufay (Mo)</td>
<td></td>
<td>reputation</td>
<td>Mass</td>
<td>Deverbal (source verb &lt;sluúf&gt;)</td>
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<tr>
<td>slufay (Mo)</td>
<td>slufmis (Mo)</td>
<td>praising, blessing</td>
<td>Mass</td>
<td>Deverbal (source verb &lt;sluúf&gt;)</td>
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<td>slufi (Ft)</td>
<td>slufiya' (NØ)</td>
<td>lip</td>
<td>Mass</td>
<td>Deverbal (source verb &lt;sluúk&gt;)</td>
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<tr>
<td>sluka (Ft)</td>
<td>slukukuungw (Mo)</td>
<td>bribing</td>
<td>Deverbal (source verb &lt;sluúk&gt;)</td>
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<tr>
<td>slukuma (Fr)</td>
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<td>bribery</td>
<td>Mass Deverbal (source verb &lt;sluík&gt;)</td>
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<tr>
<td>sluma (Ft)</td>
<td>slumo (NØ)</td>
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<td>cattle enclosure</td>
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<td>Slumpa</td>
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<td>Personal Name (♂)</td>
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<td>sluqoo (Fr)</td>
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<td>Sluqoo</td>
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<td>Personal Name; c.f. sluqoo</td>
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<td>Sluqumáy</td>
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<td>Personal Name (♂); c.f. sluquum</td>
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<td>sogonimó (Mo)</td>
<td>sogonáy (Mo)</td>
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<td>Sohhi</td>
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<td>Personal Name (♀); c.f. sohhiya</td>
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<td>soksi (Mo)</td>
<td>sokseema' (NØ)</td>
<td>sokseemo (NØ)</td>
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<td>soo'ay (Mo)</td>
<td>soo'aawee (Fr)</td>
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<td>dog</td>
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<tr>
<td>soohhi (Fr)</td>
<td>soohhaa (Fr)</td>
<td></td>
<td></td>
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<td>plant sp.</td>
</tr>
<tr>
<td>sookitumó (Mo)</td>
<td>sookitáy (Mo)</td>
<td></td>
<td>sookitáy</td>
<td>green vegetable sp.</td>
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<tr>
<td>sookoo (Fr)</td>
<td>sookodu (NØ)</td>
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<td>sookdu</td>
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<td>Personal Name (♂)</td>
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<td>Personal Name (♂)</td>
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<td>Personal Name (♂)</td>
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<td>sooni (Fr)</td>
<td>soonáy (Mo)</td>
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<td>Soorá (Fr)</td>
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<td>sooxa (NØ)</td>
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<td>Place Name</td>
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<td>Sooya</td>
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<td>Sooya</td>
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<tr>
<td>soronsorohhumó (Mo)</td>
<td>soronsoróhh (Mo)</td>
<td></td>
<td></td>
<td>insect sp.</td>
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<tr>
<td>soxutumó (Mo)</td>
<td>soxutuma' (NØ)</td>
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<td>bladder</td>
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<td>Gloss</td>
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<tr>
<td>su/uma (Mo)</td>
<td>su/eemi (NØ)</td>
<td></td>
<td>small cow hide, piece of cow hide</td>
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<tr>
<td>Subeda</td>
<td></td>
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<td>Subeda</td>
<td></td>
<td>Personal Name (♀); c.f. the (typically female) Swahili name 'Zubeda'</td>
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<td>Subedá</td>
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<td>Subedá</td>
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<td>Personal Name (♀); c.f. the (typically female) Swahili name 'Zubeda'</td>
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<td>sufuriya (Fr)</td>
<td>sufuriyadu (NØ)</td>
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<td>metal pot</td>
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<td>c.f. the Swahili 'sufuria': 'metal pot'</td>
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<td>Suhhuláy</td>
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<td>Personal Name (♀); c.f. tsuhhulalá</td>
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<td>Sukaari (Fr)</td>
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<td>Sugar; Mass; c.f. the Swahili 'shule': 'school'</td>
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<tr>
<td>Sulee (Fr)</td>
<td>suledu (NØ)</td>
<td></td>
<td>school</td>
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<td>Sumuhhú</td>
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<td>Sukaari (Fr)</td>
<td>suumí'i (NØ)</td>
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<td>shoulder</td>
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<tr>
<td>Suumbi (Fr)</td>
<td>suumbáy (Mo)</td>
<td></td>
<td>crest (i.e. of bird); k.o. hairstyle (similar to a mohawk)</td>
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<tr>
<td>Suuri (Fr)</td>
<td>suudo (NØ)</td>
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<td>clay water jar</td>
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<tr>
<td>sweetumó (Mo)</td>
<td>sweetima' (NØ)</td>
<td></td>
<td>sweater</td>
<td></td>
<td>c.f. the Swahili 'sweta': 'sweater'</td>
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<td>Taabu</td>
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<td>Taabu</td>
<td></td>
<td>Personal Name; c.f. the Swahili 'taabu': 'trouble'</td>
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<tr>
<td>Taambi (Fr)</td>
<td>taambáy (Mo)</td>
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<td>rope</td>
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<td>Taandesumó (Mo)</td>
<td>taandés (Mo)</td>
<td>taandesí (Fr)</td>
<td>bird sp.</td>
<td></td>
<td>any sp. of Woodpecker</td>
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<tr>
<td>Tahha (Ft)</td>
<td>tahhaangw (Mo)</td>
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<td>hitting</td>
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<td>Deverbal (source verb &lt;tahhaángw&gt;)</td>
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<td>Personal Name; c.f. tahhahhaní</td>
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<td>Tahhahhanimó (Mo)</td>
<td>tahhahhání (Fr)</td>
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<td>red ant</td>
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<td>Tammó (Mo)</td>
<td>tamma' (NØ)</td>
<td></td>
<td>plant sp.</td>
<td></td>
<td>Ebony (Dahlbergia melanoxylon)</td>
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<td>Tan/ee (Fr)</td>
<td>tan/eedu (NØ)</td>
<td>tan/ee'ee (Fr)</td>
<td>crown of the head</td>
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<td>Tane/ee (Fr)</td>
<td>tana/e/edu (NØ)</td>
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<td>brain</td>
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<td>Taraa</td>
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<td>Personal Name (♂/♀); c.f. Taraa</td>
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<td>Tarantú</td>
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<td>Personal Name (♂); c.f. tarantú</td>
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<tr>
<td>tarantumó (Mo)</td>
<td>tarantú (Mo)</td>
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<td>plant sp.</td>
<td>(Ximenia americana)</td>
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<tr>
<td>Tarmo (Mo)</td>
<td></td>
<td></td>
<td>Taraa (Fr)</td>
<td>person of Barbaig ethnicity (♂, ♀ respectively)</td>
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<tr>
<td>Tarto'o (Fr)</td>
<td></td>
<td>Taraa (Fr)</td>
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<td>Tarto'o</td>
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<td>Personal Name (♀); c.f. Tarto'o</td>
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<td>tarumbeta (Fr)</td>
<td>tarumbetadu (N∅)</td>
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<td>trumpet</td>
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<td>Tatiya</td>
<td>Personal Name (♂)</td>
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<td>Te'esá</td>
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<td>Personal Name (♂); c.f. te'es</td>
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<td>te'esumó (Mo)</td>
<td>te'és (Mo)</td>
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<td>plant sp.</td>
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<td>teégí (Fr)</td>
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<td>birdlime</td>
<td>Mass</td>
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<td>Personal Name (♂)</td>
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<td>ti’itaa(ngw) (Mo)</td>
<td>ti’iteeri (N∅)</td>
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<td>plant sp.</td>
<td>Strangler Fig (Ficus thonningii)</td>
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<td>tiqiti (Fr)</td>
<td>tiqiteemo (N∅)</td>
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<td>titiwi (Mo)</td>
<td>titiwi (Mo)</td>
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<td>plant sp.</td>
<td>(Boscia mossambicensis)</td>
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<td>titiwi (Mo)</td>
<td>titiwo (Fr)</td>
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<td>Titiiwoo</td>
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<td>Personal Name (♂); titiiwoó</td>
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<td>tla/aangw (Mo)</td>
<td>tle/eeri (N∅)</td>
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<td>middle</td>
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<td>tla/afi (Fr)</td>
<td>tla/eefufu (N∅)</td>
<td></td>
<td>living quarters</td>
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<tr>
<td>tla/amó (Mo)</td>
<td>tla/ama’ (N∅)</td>
<td></td>
<td>ditch</td>
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<tr>
<td>tla/anó (Mo)</td>
<td>tla/e (N∅)</td>
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<td>stone</td>
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<td>Tla/arafáy</td>
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<td>tlaankumó (Mo)</td>
<td>tlaankima’ (N∅)</td>
<td></td>
<td>bridge</td>
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<tr>
<td>tlaaqati (Fr)</td>
<td>tlaaqát (Mo)</td>
<td>tlaaqataa (Fr)</td>
<td>bridge of nose</td>
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<tr>
<td>tlaatlakwaa (Fr)</td>
<td>tlaatláqw (Mo)</td>
<td>tlaatlqwadu (N∅)</td>
<td>pap, porridge</td>
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<td>tlafi (Fr)</td>
<td>tlafoo (N∅)</td>
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<td>cloud</td>
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<td>tlahhay (Mo)</td>
<td>tlahhi'i (NØ)</td>
<td></td>
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<td>clan</td>
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</tr>
<tr>
<td>tlakway (Mo)</td>
<td>tlakwi'i (NØ)</td>
<td></td>
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<td>bag, sack</td>
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<tr>
<td>tlamfi (Fr)</td>
<td>tlamfáy (Mo)</td>
<td></td>
<td></td>
<td>beeswax</td>
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<tr>
<td>tlamki (Fr)</td>
<td>tlamkkaa (Fr)</td>
<td></td>
<td></td>
<td>bird sp.</td>
<td>any sp. of Red Bishop</td>
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<tr>
<td>tlangasi (Fr)</td>
<td>tlangás (Mo)</td>
<td></td>
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<td>quiver</td>
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<td>tlanka (Mo)</td>
<td>tlanatlan (Mo)</td>
<td>tlankiingw (Mo)</td>
<td></td>
<td>arguing</td>
<td>Deverbal (source verb ? &lt;tlaánk&gt;)</td>
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<tr>
<td>tlapépe'i (Fr)</td>
<td>tlapépé/ (Mo)</td>
<td>tlapépé/áy (Mo)</td>
<td></td>
<td>reptile sp.</td>
<td>any sp. of Toad or Frog</td>
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<tr>
<td>tlapumó (Mo)</td>
<td>tlapéma' (NØ)</td>
<td></td>
<td></td>
<td>bird sp.</td>
<td>any small raptor, esp. falcons</td>
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<tr>
<td>tlap (Mo)</td>
<td>tlap (Mo)</td>
<td></td>
<td></td>
<td>cutting (i.e. a tree)</td>
<td>Deverbal (source verb &lt;tlaáq&gt;)</td>
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<tr>
<td>tlaqasi (Fr)</td>
<td>tlaqeesusu (NØ)</td>
<td></td>
<td></td>
<td>k.o. millet mash</td>
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<tr>
<td>Tlaqasí</td>
<td>Tlaqasí</td>
<td></td>
<td></td>
<td></td>
<td>Personal Name; c.f. tlaqasi</td>
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<tr>
<td>tlaqumó (Mo)</td>
<td>tlaqáy (Mo)</td>
<td></td>
<td></td>
<td>plant sp.</td>
<td>(Azanza garckeana)</td>
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<tr>
<td>Tlaramba'a</td>
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<td>Personal Name (♀)</td>
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<tr>
<td>tlataa (NØ)</td>
<td>tlataa (NØ)</td>
<td></td>
<td></td>
<td>vision (supernatural)</td>
<td>Mass</td>
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<td>Tlatla'á</td>
<td>Tlatla'á</td>
<td></td>
<td></td>
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<tr>
<td>tlatla'aangw (Mo)</td>
<td>tlatla'eeri (NØ)</td>
<td></td>
<td>afternoon</td>
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<td></td>
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<td>tlatu (Mo)</td>
<td>tlatetee (Fr)</td>
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<td></td>
<td>debt</td>
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<td>tlaw (Fr)</td>
<td>tlawoo (Fr)</td>
<td>tlawaa (Fr)</td>
<td></td>
<td>bird sp.</td>
<td>any sp. of pigeon</td>
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<tr>
<td>tlawi (Ft)</td>
<td>tlawáy (Mo)</td>
<td></td>
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<td>lake</td>
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<tr>
<td>tlawu (Mo)</td>
<td>tlaba' (NØ)</td>
<td>tlab'a (Na)</td>
<td></td>
<td>clothing (one piece)</td>
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<tr>
<td>tlaxoo (Fr)</td>
<td></td>
<td></td>
<td></td>
<td>price</td>
<td>Deverbal (source verb &lt;tlaáx&gt;)</td>
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<tr>
<td>tle'usmo (Mo)</td>
<td>tle'uso'o (Fr)</td>
<td>tle'usee (Fr)</td>
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<td>potter</td>
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<tr>
<td>Tleema'í</td>
<td>Tleema'í</td>
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<td></td>
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<tr>
<td>tleemú (Mo)</td>
<td>tlatlaangw (Mo)</td>
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<td>leaving</td>
<td>Deverbal (source verb &lt;tláw&gt;)</td>
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<td>Tleemú</td>
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<td>Plural</td>
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<tr>
<td>tleesa (Fr)</td>
<td>tleemis</td>
<td>tleemis</td>
<td>lifting onto the head,</td>
<td>Deverbal (source verb &lt;tleés&gt;)</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>(Mo)</td>
<td>to wake up</td>
<td></td>
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<tr>
<td>tleeso</td>
<td>?</td>
<td></td>
<td>bird sp.</td>
<td>any sp. of weaver</td>
<td></td>
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<tr>
<td>tleharumo</td>
<td>tlehár</td>
<td></td>
<td>plant sp.</td>
<td>(Acacia polygantha)</td>
<td></td>
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<tr>
<td>tlehha (Fr)</td>
<td>tlehhit</td>
<td>tlehhita (Mk)</td>
<td>making</td>
<td>Deverbal (source verb &lt;tleéhh&gt;)</td>
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<tr>
<td>tleheemu (Mo)</td>
<td>tleehemu</td>
<td></td>
<td>way in which sth. is</td>
<td>Deverbal (source verb &lt;tleéhh&gt;)</td>
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</tr>
<tr>
<td>tli/anti'umó (Mo)</td>
<td>tli/antli</td>
<td>tli/antli (Fr)</td>
<td>plant sp.</td>
<td>(Artemisia afra)</td>
<td></td>
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<tr>
<td>tli/isimó (Mo)</td>
<td>tli/isima' (N∅)</td>
<td>tli/iseri (N∅)</td>
<td>log</td>
<td></td>
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<tr>
<td>tliifusmo (Mo)</td>
<td>tliifusmo</td>
<td>tliifusee (Fr)</td>
<td>stupid person (♂,♀) respectively</td>
<td></td>
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</tr>
<tr>
<td>tliifuso'o (Fr)</td>
<td>tliifuso'o</td>
<td>tliifusee (Fr)</td>
<td>stupid person (♂,♀) respectively</td>
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<tr>
<td>Tlo/orí</td>
<td>Tlo/orí</td>
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<td>Personal Name (♂)</td>
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<tr>
<td>tolookoti (Fr)</td>
<td>tolookota</td>
<td>tolookotaa (Fr)</td>
<td>reptile sp.</td>
<td>any sp. of Python</td>
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<tr>
<td>tloomaa (Fr)</td>
<td>tloomi'i</td>
<td></td>
<td>hill, mountain</td>
<td></td>
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<tr>
<td>tluwá/ (Mo)</td>
<td>tluwe/e/ee (Fr)</td>
<td></td>
<td>upper arm</td>
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<tr>
<td>tluwáy (Fr)</td>
<td>tluwe</td>
<td></td>
<td>rain</td>
<td>Mass</td>
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<tr>
<td>Tluway</td>
<td>Tluway</td>
<td></td>
<td>Tluway</td>
<td>Personal Name (♂); c.f. tluway</td>
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<tr>
<td>To'á</td>
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<td>To'á</td>
<td>Personal Name (♀)</td>
<td></td>
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<tr>
<td>tofalimó (Mo)</td>
<td>tofali</td>
<td>matafari (Fr)</td>
<td>brick</td>
<td>c.f. the Swahili ‘tofali’: ‘brick’</td>
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<tr>
<td>too/ú (Mo)</td>
<td>too/eema' (N∅)</td>
<td></td>
<td>reptile sp.</td>
<td>any sp. of large, highly-venomous snake (esp. Cobras and the Black Mamba)</td>
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<tr>
<td>Toololí</td>
<td>Toololí</td>
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<td>Toololí</td>
<td>Personal Name (♀)</td>
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<tr>
<td>toqori (Fr)</td>
<td>toqoráy</td>
<td></td>
<td>toqoráy</td>
<td>crippled person</td>
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<tr>
<td>Torontoray</td>
<td>Torontoray</td>
<td></td>
<td>Torontoray</td>
<td>Personal Name (♂); c.f. torontoráy</td>
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<tr>
<td>torontoráy (Mo)</td>
<td>torontoráy</td>
<td></td>
<td>trials</td>
<td>Mass</td>
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<tr>
<td>tsa’a (Fr)</td>
<td>tsa’amilingw (Mo)</td>
<td></td>
<td>smelling, sensing</td>
<td>Deverbal (source verb &lt;tsaá'&gt;)</td>
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<td>tsa’asi (Ft)</td>
<td>tsa’asoo (Fr)</td>
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<td>torch</td>
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<td>Singular</td>
<td>General</td>
<td>Plural</td>
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<tr>
<td>tsa/asmó (Mo)</td>
<td>tsa/asma' (NØ)</td>
<td>tsa/asma' (NØ)</td>
<td>ladder</td>
<td></td>
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<tr>
<td>tsa/atay (Mo)</td>
<td>tsa/eetu (NØ)</td>
<td>tsa/eema' (NØ)</td>
<td>yolk of egg, placenta</td>
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<tr>
<td>tsa/ay (Mo)</td>
<td>tsa/i'i (NØ)</td>
<td>tsa/a' (NØ)</td>
<td>sole, palm</td>
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<tr>
<td>Tsa/ayo (Fr)</td>
<td>tsaa'asi (Fr)</td>
<td>tsaa'asáy (Mo)</td>
<td>flame</td>
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<td>Tsaaxwá</td>
<td>tsabumó (Mo)</td>
<td>tsabí (Fr)</td>
<td>plant sp.</td>
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<tr>
<td>tsagaara (Fr)</td>
<td>tsagadiingw (Mo)</td>
<td>tsagadidiingw (Mo)</td>
<td>bewitching</td>
<td>Deverbal (source verb &lt;tsagár&gt;); c.f. tságári</td>
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<tr>
<td>tsagani (Fr)</td>
<td>tsaganaa (Fr)</td>
<td>mammal sp.</td>
<td>squirrel, greater galago</td>
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<tr>
<td>tsala'ammó (Mo)</td>
<td>tsala'ammý (Mo)</td>
<td>insect sp.</td>
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<tr>
<td>tsaamási (Fr)</td>
<td>tsaamás (Mo)</td>
<td>giraffe</td>
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<td>Tsamasi (Fr)</td>
<td>tsaamási (Fr)</td>
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<td>Place Name</td>
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<td>Tsamasi</td>
<td>tsaamási (Fr)</td>
<td>Tsamasi</td>
<td>Personal Name (♂/♀); c.f. either tsamasi or Tsamasi</td>
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<td>Tsamfú</td>
<td>tsangusa (Fr)</td>
<td>tsangumis (Mo)</td>
<td>luring, beckoning</td>
<td>Deverbal (source verb &lt;tsanguús&gt;)</td>
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<tr>
<td>tsangweli (Fr)</td>
<td>tsangwalaa (Fr)</td>
<td>plant sp.</td>
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<td>Tsangweli</td>
<td>tsangweli (Fr)</td>
<td>Tsangweli</td>
<td>Personal Name (♂); c.f. tsangweli</td>
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<td>tsantsafumó (Mo)</td>
<td>tsantsafi (Fr)</td>
<td>tsantsáf (Mo)</td>
<td>plant sp.</td>
<td>Umbrella Thorn (Acacia tortilis); c.f. tsantsafimu</td>
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<tr>
<td>tsaapenimó (Mo)</td>
<td>tsapenáy (Mo)</td>
<td>plant sp.</td>
<td>(Commiphora mollis)</td>
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<td>tsaari (Fr)</td>
<td>tsariyoo (NØ)</td>
<td>clitoris</td>
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<td>tsarma'umó (Mo)</td>
<td>tsarma'i (Fr)</td>
<td>plant sp.</td>
<td>(Lannea schimperi)</td>
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<td>tsatay (Mo)</td>
<td>tsati'i (NØ)</td>
<td>knife</td>
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<td>tsawara (Fr)</td>
<td>tsawdidiingw (Mo)</td>
<td>choosing</td>
<td>Deverbal (source verb &lt;tsawár&gt;); c.f. tsawaí</td>
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<td>tsawawa (Fr)</td>
<td>tsabbaangw (Mo)</td>
<td>strangling</td>
<td>Deverbal (source verb ? &lt;tsáw&gt;)</td>
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<tr>
<td>tsawdito (Fr)</td>
<td>tsawdidiingw (Mo)</td>
<td>choosing, election</td>
<td>Deverbal (source verb &lt;tsawár&gt;)</td>
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<td>Nouns</td>
<td>Singular</td>
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<tr>
<td>tsawditoo (Fr)</td>
<td>tsawditoo (Fr)</td>
<td>tsawditoo (Fr)</td>
<td>choice, election</td>
<td>Deverbal (source verb &lt;tsawár&gt;)</td>
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<td>tsaxaara (Fr)</td>
<td>tsaxariingw (Mo)</td>
<td>tsaxariingw (Mo)</td>
<td>shooting (with arrow)</td>
<td>Deverbal (source verb &lt;tsaáx&gt;)</td>
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<tr>
<td>tsaxaraa (Fr)</td>
<td>tsaxaru (NØ)</td>
<td>tsaxaru (NØ)</td>
<td>blood-drawing arrow</td>
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<td>tsaxway (Mo)</td>
<td>tsaxwi’i (NØ)</td>
<td>tsaxwi’i (NØ)</td>
<td>insect sp.</td>
<td>grasshopper</td>
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<tr>
<td>tsaxweelí (Fr)</td>
<td>tsaxwelí (Mo)</td>
<td>tsaxwelí (Mo)</td>
<td>trap (spring trap)</td>
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<tr>
<td>tse’esimó (Mo)</td>
<td>tse’esima’ (NØ)</td>
<td>tse’esima’ (NØ)</td>
<td>leftovers</td>
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<tr>
<td>Tse/imá</td>
<td>Tse/imá</td>
<td>Tse/imá</td>
<td>Personal Name (♂/♀); c.f. sunshine</td>
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<tr>
<td>tsee/a (NØ)</td>
<td>tsee/a (NØ)</td>
<td>tsee/a (NØ)</td>
<td>faraway place</td>
<td>Mass</td>
<td></td>
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<tr>
<td>tseega (Fr)</td>
<td>tsegit (Mo)</td>
<td>tsegit (Mo)</td>
<td>closing, tying up</td>
<td>Deverbal (source verb &lt;tseék&gt;)</td>
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<tr>
<td>tseehhaa (Fr)</td>
<td>tsehhu (NØ)</td>
<td>tsehhu (NØ)</td>
<td>k.o. manure</td>
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<td>Tseeree</td>
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<td>Personal Name (♂); c.f. tseeree</td>
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<td>tseeree (Fr)</td>
<td>tseerdu (NØ)</td>
<td>tseerdu (NØ)</td>
<td>blood</td>
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<tr>
<td>tseheeyimo (Mo)</td>
<td>tseheeyaa (Fr)</td>
<td>tseheeyaa (Fr)</td>
<td>young man</td>
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<td>Tsehha</td>
<td>Tsehha</td>
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<td>Personal Name (♂); c.f. tsehha</td>
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<td>tsetse/imi (Fr)</td>
<td>tsetse/imi (Fr)</td>
<td>tsetse/imi (Fr)</td>
<td>open place</td>
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<td>tsetsee/i (Fr)</td>
<td>tsetsee/i (Fr)</td>
<td>tsetsee/i (Fr)</td>
<td>star</td>
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<td>Tsi’i</td>
<td>Tsi’i</td>
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<td>Personal Name; c.f. tsiistii’</td>
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<td>Tso'i</td>
<td>tsoobú (Mo)</td>
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<td>liquid honey</td>
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<td>tsoyo (Mo)</td>
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<td>tsoyeemo (NØ)</td>
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<td>Personal Name (♂/♀); c.f. &lt;tsoxolí&gt;: a protuberance</td>
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<td>dikdik</td>
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<td>tsoyo (Mo)</td>
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<td>tsu/uti (Fr)</td>
<td>tsu/utó (Mo)</td>
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<td>killing</td>
<td>Deverbal (source verb &lt;tsuú/&gt;);</td>
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<td>lower back</td>
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<td>tsuhhulalá' (Mo)</td>
<td>tsuhhulaladima' (N∅)</td>
<td>mongoose</td>
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<td>tsukúr (Mo)</td>
<td>tsukuruma' (N∅)</td>
<td>k.o. gourd</td>
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<td>tsunqu'u (N∅)</td>
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<td>Tsutsi</td>
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<td>Tsutsi</td>
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<td>Personal Name (♂); reportedly a rare name</td>
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<td>tsutsunqi (Fr)</td>
<td>tsutsunqaa (Fr)</td>
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<td>bird sp.; plant sp.</td>
<td>any sp. of beeeaters; Lion’s Ear (Leonotis nepetifolia)</td>
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<td>tsuunqa (N∅)</td>
<td>tu'i (Fr)</td>
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<td>saliva, blessing</td>
<td>Mass</td>
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<td>Tu'i</td>
<td></td>
<td>Tu'i</td>
<td>scavenged meat</td>
<td>Mass</td>
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<tr>
<td>tu/a (Ft)</td>
<td>tuutu/uungw (Mo)</td>
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<td>uprooting</td>
<td>Deverbal (source verb &lt;tuú/&gt;</td>
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<tr>
<td>Tu/tu/i</td>
<td>Tu/tu/i</td>
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<td>'tilling weeds'</td>
<td>Personal Name (♂); c.f. v. &lt;tu/tu/&gt;</td>
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<tr>
<td>Tuku/oo</td>
<td>Tuku/oo</td>
<td></td>
<td></td>
<td></td>
<td>Personal Name (♂); c.f. v. &lt;tuku/uut&gt;: to have tired joints (arthritis?) to the point of not being able to walk</td>
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<td>Tulumbú</td>
<td>tunáy (Mo)</td>
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<td>dried honey</td>
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<td>tuumbebee (Fr)</td>
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<td>tuutukuma (Fr)</td>
<td>tuutukumadu (N∅)</td>
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<td>stopper, plug</td>
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<td>tuweerimó (Mo)</td>
<td>tuwér (Mo)</td>
<td>tuweerima’ (N∅)</td>
<td>mammal sp.</td>
<td>African wild dog (Canis pictus)</td>
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<td>u’i (Fr)</td>
<td>u’umo (Mo)</td>
<td>cry for help</td>
<td>Deverbal</td>
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<td>udamoroó(d) (Mo/Fr)</td>
<td>udamoroooduma’ (N∅)</td>
<td>mammal sp.</td>
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<td>udanjalı (Fr/Ft)</td>
<td>udanjalidima’ (N∅)</td>
<td>mammal sp.</td>
<td>Ground pangolin (Smutsia temminckii)</td>
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<td>ufa (Mo)</td>
<td>uffee (Fr)</td>
<td>pile (esp. of manure)</td>
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<td>Ufa (Mo)</td>
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<td>Place Name</td>
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<td>Personal Name; c.f. ufaní</td>
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<td>ufanimó (Mo)</td>
<td>ufaní (Fr)</td>
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<td>uhumó (Mo)</td>
<td>uheemi (N∅)</td>
<td>internal house post</td>
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<td>uma (Mo)</td>
<td>umi’i (N∅)</td>
<td>name</td>
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<td>umali (Fr)</td>
<td>umalaa (Fr)</td>
<td>cry (of pain)</td>
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<td>Umali</td>
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<td>Umbá</td>
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<td>Personal Name; c.f. the Swahili 'mbwa': 'dog'</td>
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<td>unkuri (Fr)</td>
<td>unkuráy (Mo)</td>
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<td>urru’usa (Fr)</td>
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<td>urús (Mo)</td>
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<td>urdu (N∅)</td>
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<td>uumtuso'o (Fr)</td>
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<td>nurturer (♀)</td>
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<td>k.o. gourd</td>
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<td>uunú (Mo)</td>
<td>uunudu (N∅)</td>
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<td>uwanjedu (N∅)</td>
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<td>wa’ami (Fr)</td>
<td>wa’emoo (N∅)</td>
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<td>wa/aangw (Mo)</td>
<td>we/eeri (N∅)</td>
<td>arroyo, canyon</td>
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</table>
|       | wa/ari (N∅) | vomit | Mass; Deverbal (source verb <waá/>)
<p>| Wado  | waha (Ft) | wahaangw (Mo) | drinking | Deverbal (source verb &lt;wāh&gt;) |
| Wahá  | wahasa (Fr) | wahasasu (N∅) | soot |
|       | wahhahha'amó (Mo) | wahhahha'ama' (N∅) | mammal sp. | Bush hyrax (heterohyrax brucei) |
|       | wakaari (Fr) | wakawak (Mo) | hating | Deverbal (source verb &lt;waák&gt;) |
|       | wakalelu’uma (Fr) | yaareema' (N∅) | unity |
|       | wakari (Fr) | wakaráy (M) | chin | Alternative forms &lt;kawri&gt; (Fr); &lt;kawráy&gt; (Mo) |
|       | wakti (Ft) | hate, interdiction | Mass; Deverbal (source verb &lt;waák&gt;) |
|       | wakusumo (Mo) | wakusee (Fr) | enemy (♂, ♀ respectively) |
| Walangí | walo/i (Fr) | walo/aa (Fr) | plant sp. |
|       | walo/i (Fr) | Walo/i | Personal Name (♂); c.f. walo/i |
| Wambi  | waqasai (Fr) | waqás (Mo) | waqasu (N∅) | ceiling beam |
|       | waqaát (Mo) | waqaatetee (Fr) | intestines |
| Wara/eé | waqasí (Fr) | waqás (Mo) | waqasu (N∅) | ceiling beam |
|       | waqaát (Mo) | waqaatetee (Fr) | intestines |
|       | Wara/eé | Wara/eé | Personal Name (♂); c.f. wara/usee |
|       | wara/usmo (Mo) | wara/usee (Fr) | escort for bride (♂, ♀ respectively) |
|       | wara/uso'o (Fr) | wara/usee (Fr) | escort for bride (♂, ♀ respectively) |
|       | warahhasmó (Mo) | warahhasma' (N∅) | ford |
|       | warinkakamó (Mo) | warinkaká (Mo) | bird sp. | any sp. of Ground Barbet |
| Warqasoo | Warqasoo | Warqasoo | Personal Name (♂); c.f. warqeesa |</p>
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<tr>
<td>warqeemu (Mo)</td>
<td>manner of turning around</td>
<td>Mass</td>
<td>Deverbal (source verb &lt;warqee&gt;.)</td>
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<tr>
<td>warqeesa (Fr)</td>
<td>warqeemis (Mo)</td>
<td>turning around</td>
<td>Deverbal (source verb &lt;warqees&gt;.)</td>
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<td>Personal Name (♂)</td>
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<td>wawereri (Fr)</td>
<td>wawdu (N∅)</td>
<td>house section (front-to-back)</td>
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<td>wawi (Fr)</td>
<td>wawoo (Fr)</td>
<td>insect sp.</td>
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<td>wawitumou (Mo)</td>
<td>wawitá (N∅)</td>
<td>ruler, chief (♂, ♀ respectively)</td>
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<td>Personal Name; c.f. wawi</td>
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<td>weemo (Fr)</td>
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<td>Deverbal (source verb &lt;weém&gt;.)</td>
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<td>weemumou (Mo)</td>
<td>weemusee (Fr)</td>
<td>wanderer (♂, ♀ respectively)</td>
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<td>weerusumou (Mo)</td>
<td>weerussee (Fr)</td>
<td>fornicator</td>
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<td>Welwel</td>
<td>Welwel</td>
<td>Personal Name (♂)</td>
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<td>Wirasi</td>
<td>Wirasi</td>
<td>Personal Name (♂); c.f. the Swahili 'viazi', 'potato'</td>
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<td>xa'anó (Mo)</td>
<td>xaa'i (N∅)</td>
<td>tree</td>
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<tr>
<td>xa'anó amatu/imó (Mo)</td>
<td>xa'anó amatu/i (Fr)</td>
<td>plant sp. (Datura stramonium)</td>
<td>&lt;xa'anó amatu/i&gt; collective</td>
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<td>xafa (Fr)</td>
<td>xafit (Mo)</td>
<td>brushing hair</td>
<td>Deverbal (source verb &lt;xafa&gt;)</td>
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<td>Personal Name (♂); c.f. xaafa</td>
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<td>Personal Name (♂)</td>
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<tr>
<td>xaaxáy (Mo)</td>
<td>desert</td>
<td>Mass</td>
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<tr>
<td>xawo (Fr)</td>
<td>xawoo (Fr)</td>
<td>charcoal</td>
<td>Personal Name (♀); c.f. &lt;xawo&gt;: matrimony</td>
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<th>Nouns</th>
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<td>xadi (Ft)</td>
<td>xadáy (Mo)</td>
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<td>Xafahandí</td>
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<td>xafxafa (Ft)</td>
<td></td>
<td></td>
<td>xafxafiingw (Mo)</td>
<td>being makeshift</td>
<td>Deverbal (source verb &lt;afxaafa&gt;)</td>
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<tr>
<td>Xalili</td>
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<td>Xalili</td>
<td>Personal Name (♂); c.f. the Arabic 'Xalil', and the Swahili 'Khalili'</td>
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<td>xam'i'i (Fr)</td>
<td>xam'áy (Mo)</td>
<td></td>
<td></td>
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<td>deaf person</td>
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<td>Xambáy</td>
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<td>Personal Name (♂)</td>
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<td>xarmó (Mo)</td>
<td>xareemi (N∅)</td>
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<td>horn</td>
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<td>xawa (Mo)</td>
<td>xaweb'ee (Fr)</td>
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<td></td>
<td></td>
<td>k.o. manure</td>
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<tr>
<td>xawoo (Fr)</td>
<td></td>
<td>xabibiingw (Mo)</td>
<td>marrying</td>
<td></td>
<td>Deverbal; &lt;xabibiingw&gt; many marriages (many couples, or many marriages over time)</td>
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<td>Xeera</td>
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<td>xeeawa (Fr)</td>
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<td>Personal Name; c.f. xeeeraangw</td>
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<td>xeeraangw (Mo)</td>
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<td>Xeeru</td>
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<td>Xeeru</td>
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<td>Xee (f)</td>
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<tr>
<td>xiingarumó (Mo)</td>
<td></td>
<td></td>
<td></td>
<td>insect sp.</td>
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<td>Xindáy</td>
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<td>xirantlumó (Mo)</td>
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<td></td>
<td></td>
<td>mammal sp.</td>
<td>Zorilla (Ictonyx striatus)</td>
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<tr>
<td>xirfu (Mo)</td>
<td></td>
<td></td>
<td></td>
<td>praise</td>
<td>Mass</td>
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<tr>
<td>Xongumó (Mo)</td>
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<td></td>
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<td>Xongumó</td>
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<tr>
<td>xoo'arumó (Mo)</td>
<td>xoo'ár (Mo)</td>
<td>xoo'aráy (Mo)</td>
<td>bird sp.</td>
<td>any sp. of Crow</td>
<td></td>
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<tr>
<td>xoosla (Fr)</td>
<td></td>
<td>xoosliingw (Mo)</td>
<td>grinding millet</td>
<td></td>
<td>Deverbal (source verb &lt;xoósli&gt;)</td>
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<tr>
<td>xooslumó (Mo)</td>
<td></td>
<td></td>
<td>vessel, tool</td>
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<tr>
<td>Xooxáy</td>
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<tr>
<td>xooxoo'i (Fr)</td>
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<tr>
<td>xooyaangw (Mo)</td>
<td>xooyaawee (Fr)</td>
<td>bird sp.</td>
<td>any sp. of francolin or spurfowl</td>
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<td>Xooyaangw</td>
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<td>xooyarimi (Fr/Ft)</td>
<td>xooyár (Mo)</td>
<td>xooyarimáy (Mo)</td>
<td>bird sp.</td>
<td>any sp. of quail</td>
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<tr>
<td>xorxormó (Mo)</td>
<td>xorxormá (N∅)</td>
<td>mammal sp.</td>
<td>any sp. of large mongoose</td>
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<td>xotloompi (Fr)</td>
<td>xotloompaa (Fr)</td>
<td>trap (box trap)</td>
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<tr>
<td>xufoo (Fr)</td>
<td>xufifingw (Mo)</td>
<td>xufta (Fr)</td>
<td>drinking party, drinking (alcohol)</td>
<td>Deverbal (source verb, &lt;xuúf&gt;)</td>
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<td>Xufoo</td>
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<td>xufto (Fr)</td>
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<td>Xumpu'umó</td>
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<td>xundurufumó (Mo)</td>
<td>xundurúf (Mo)</td>
<td>insect sp.</td>
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<tr>
<td>xuuntlú (Mo)</td>
<td>xuuntláy (Mo)</td>
<td>xuuntlaawee (Fr)</td>
<td>unusual protuberance (usually as a result of an injury)</td>
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<tr>
<td>xuuxeemó (Mo)</td>
<td>xuuxú (Mo)</td>
<td>insect</td>
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<tr>
<td>xwaaslangsli (Fr)</td>
<td>xwaslangsley (Mo)</td>
<td>xwaanslangsley (Mo)</td>
<td>garbage; rough ground millet flour (reserved from grinding for beer) with honey added; wilderness</td>
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<td>Xwantláy</td>
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<td>xwaxumó (Mo)</td>
<td>xwaxuma' (N∅)</td>
<td>palate</td>
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<td>progeny</td>
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<td>xwaylito'mó (Mo)</td>
<td>xwaylitoee (Fr)</td>
<td>parent (♂, ♀ respectively)</td>
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<td>xweera (N∅)</td>
<td>xweerdu (N∅)</td>
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<td>ya'eemi (Fr)</td>
<td>ya'eema' (N∅)</td>
<td>stream</td>
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<td>Ya'eér Daangi</td>
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<td>ya/abusumó (Mo)</td>
<td>ya/abuso'o (Fr)</td>
<td>ya/abusee (Fr)</td>
<td>messenger, emissary (♂, ♀ respectively)</td>
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<td>ya/ama (N∅)</td>
<td></td>
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<td>permission</td>
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<td>ya/ata' (N∅)</td>
<td>ya/eetoo (N∅)</td>
<td>shoe, footwear</td>
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<td>Ya/aw</td>
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<td>ya'u (N∅)</td>
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<td>Yaagú</td>
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<td>yaa'hay (Mo)</td>
<td>rain (soft)</td>
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<td>yaamu (N∅)</td>
<td>yaami'i (N∅)</td>
<td>earth, land</td>
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<td>yaqamba (Mo)</td>
<td>yaqambee (Fr)</td>
<td>buck</td>
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